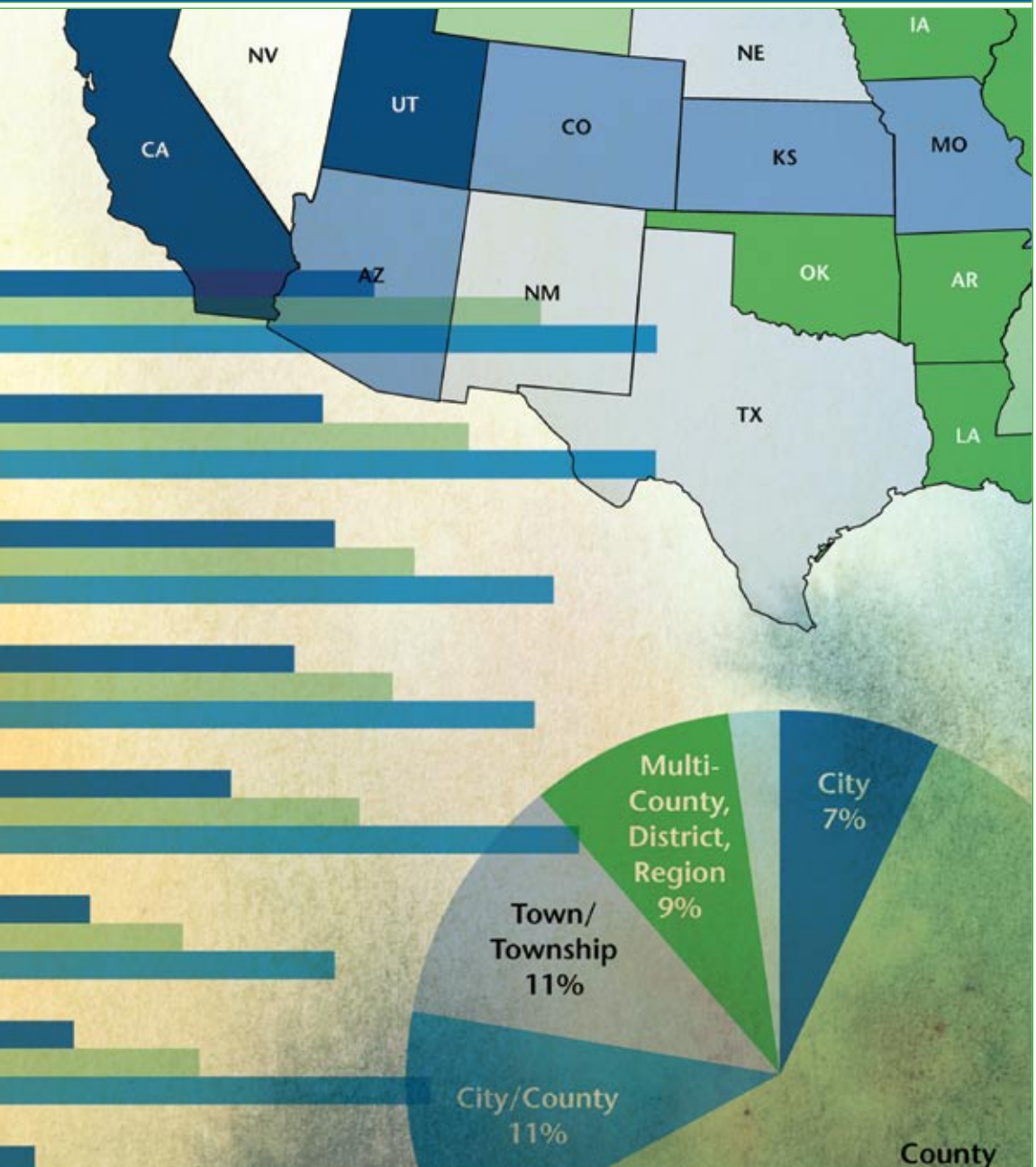
NACCHO

National Association of County & City Health Officials

The National Connection for Local Public Health

2008 NATIONAL PROFILE *of* LOCAL HEALTH DEPARTMENTS



NACCHO
National Association of County & City Health Officials
The National Connection for Local Public Health

1100 17th Street, NW
2nd Floor
Washington, DC 20036
P (202) 783-5550
F (202) 783-1583
http://www.naccho.org

About NACCHO

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.

Funding for this project was provided by the Centers for Disease Control and Prevention (under cooperative agreements U50/CCU302718 and U38/HM000449-01) and the Robert Wood Johnson Foundation® in Princeton, New Jersey. The contents of this document are solely the responsibility of NACCHO and do not necessarily represent the official views of the sponsors.

©2009. All rights reserved.

NACCHO

National Association of County & City Health Officials

The National Connection for Local Public Health

2008 NATIONAL PROFILE *of* LOCAL HEALTH DEPARTMENTS

July 2009

Acknowledgments

2008 National Profile of Local Health Departments

Barbara Laymon, MPH

The 2008 National Profile of Local Health Departments study was in many ways a typical local public health effort: a broad-based collaborative approach with contributions from a diverse set of stakeholders.

First and foremost, the LHD top agency executives and staff who completed Profile questionnaires were essential partners; and their sustained commitment to local public health was the foundation of the 2008 Profile study.

The members of the Profile Workgroup, a dedicated group of public health professionals including both researchers and practitioners, advised and assisted throughout the design, fielding, and analysis phases.

Many public health leaders around the country, particularly state association of local health officials and state health agency representatives, encouraged LHD top agency executives to complete the questionnaire. As champions of the Profile study, they made an important contribution to the Profile study's high response rate. At the conclusion of the study, all champions received copies of *The Cartographies of Disease: Maps, Mapping, and Medicine*, by Tom Koch, provided by ESRI.

Dave Gutzman of CustomInsight.com developed the Web-based interface for the Profile questionnaire and provided technical support. Hua Lu, a geographer with the Centers for Disease Control and Prevention, provided valuable GIS data related to LHD population estimates. Phyllis Jask did copyediting and Mary Argodale handled graphic design.

Many NACCHO staff contributed to the Profile study. Carol Brown provided key oversight, and Carolyn Leep was a source of remarkable knowledge and support in both administrative and analytic matters. Questionnaire content advisors and report reviewers—and study advocates, encouraging LHDs to complete questionnaires—included Zarnaaz Bashir, Ramon Bonzon, Eli Briggs, Donna Brown, Heidi Deutsch, Julia Joh Elligers, Constanza Galastri, Grace Gorenflo, Jack Hermann, Richard Hofrichter, Jennifer Li, Valerie Rogers, and Jessica Solomon. Advice and assistance with LHD database details were provided by Sarah Manwell and Mary Haas. Finally, Profile team members, both past and present, were Vivian Levy, Nathalie Robin, Marisela Rodela, Gulzar Shah, LaTanya Simpson, and Samuel Yu. These public health professionals embody all that is good about the field.

The support of the Centers for Disease Control and Prevention and the Robert Wood Johnson Foundation made the Profile study possible and is gratefully acknowledged.

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 *2008 National Profile of Local Health Departments* (the Profile), a signature effort of NACCHO.

The Profile is the nation's best and most complete source of data about local health departments (LHDs) in the United States. As such, it supports the activities of those working in public health practice, research, education, policy development, and advocacy. The combined efforts of this workforce protect and improve the health of all people and all communities.

The 2008 Profile is the fifth release over a two-decade period, the first having begun in 1989. With each release, NACCHO has worked in an increasingly coordinated manner on definitional issues, data coordination, and survey administration with the Association of State and Territorial Health Officials and the National Association of Local Boards of Health.

The Profile is made possible through the continued support of the Centers for Disease Control and Prevention and the Robert Wood Johnson Foundation. We greatly appreciate their support. We also wish to thank LHD executives and staff whose participation made the 2008 Profile possible. Many others also assured the success of the 2008 Profile through their contributions of time, energy, and thoughtful suggestions. From across the country, these include NACCHO workgroup members and staff, representatives from state associations of county and city health officials, and other leaders in local public health practice.

We welcome your comments and also your continued interest in and use of these data. Visit us online at www.naccho.org/profile or email us at profile@naccho.org.

Sincerely,

Bruce Dart, PhD, MS
NACCHO President (2009–2010)
Lincoln-Lancaster County (Nebraska) Health Department

Robert M. Pestronk, MPH
Executive Director
NACCHO

July 2009

Robert Wood Johnson Foundation

Dear Colleague:

We are pleased to release this report with our valued partner, the National Association of County and City Health Officials (NACCHO), to provide you with the 2008 National Profile of Local Health Departments. We hope you find this report useful in understanding more about the important work and challenges faced by local public health departments. This is an important time for this research to come to light. From the rise in chronic diseases like obesity to the threat of pandemic flu, the work of local health departments is as vital and necessary as ever to protect us from health threats and to help all Americans lead healthier lives.

This Profile is of tremendous value to the growing field of public health systems and services research (PHSSR), a field that RWJF is proud to have helped build and strengthen in partnership with many others in the public health field. The fundamental questions in PHSSR of how to best organize, manage, finance and administer public health systems and services cannot be answered without the data contained in this report. But the data are only the first step. I urge you to help us put this evidence into action–always with our eye on the goal of improving the health of all Americans. Strong, credible evidence is fundamental to demonstrating impact and accountability to the communities served by public health departments.

I would like to thank the many, dedicated local health department staff who participated in this survey and the staff at NACCHO who managed the planning, execution, and analysis reflected here. The 83 percent response rate is testament to your commitment to continuous improvement in your service to the members of your communities and we are tremendously grateful. I often talk about a "New Public Health" that thrives on partnerships and a public health system that rests on a foundation of accreditation, quality improvement, performance standards, advocacy, and evidence. I am encouraged by the progress we've made so far and by the ongoing commitment toward that goal. This report is an important resource for our work together moving forward and a testimony to the work of local health departments nationally as an essential part of that public health system.

Risa Lavizzo-Mourey, M.D., M.B.A.
President and CEO
Robert Wood Johnson Foundation

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Centers for Disease Control
and Prevention

JUL 20 2009

Dear Colleague,

The Centers for Disease Control and Prevention has been pleased to support the National Association of County and City Health Officials (NACCHO) in its ongoing work on the National Profile of Local Health Departments. This 2008 Profile report will undoubtedly serve as a valuable resource that local and state health departments, policymakers, federal agencies, governing bodies, researchers, and many others can use to better understand our nation's current local public health infrastructure.

The 2008 Profile report provides comprehensive data about local health department structures, workforce, financing, governance, activities, and services. These data would not be nearly as valuable and informative without the impressive 83% response rate; we commend both NACCHO and all respondents for their dedication and contributions to such an important effort.

As we have seen with the previous Profile reports, these data are absolutely critical for effectively describing and advocating for local public health. Further, the Profile has historically been one of the foremost resources for public health systems researchers as they seek to explore practice, policy and infrastructure issues. We anticipate that the 2008 Profile will provide similar opportunities for informing practice, research, and advocacy.

The Office of the Chief of Public Health Practice, and our close collaborators in the Office of Workforce and Career Development, appreciate our long standing relationship with NACCHO and our collective work to strengthen local public health partners. In this respect, we look forward to seeing how the wealth of data presented in this report can contribute to a stronger understanding of our nation's local health departments and the important role they play in creating a healthier nation.

Sincerely,

Stephanie Bailey, MS, MD
Chief of Public Health Practice

2008 National Profile of Local Health Departments Workgroup

NACCHO Representatives

Joan Ellison, RN, MPH
Livingston County Department of Health

Steven Gold, MPH
Macomb County Health Department

Lea Morgan, MPH
San Bernardino County Department of Public Health

Lee Thielen, MPA
The Colorado Association of Local Public Health Officials

Academic Advisors

E. Richard Brown, PhD
Center for Health Policy Research
University of California, Los Angeles

Kristine Gebbie, DrPH, RN
Center for Health Policy
Columbia University

Glen Mays, PhD, MPH
University of Arkansas for Medical Sciences

Bernard Turnock MD, MPH
Center for Public Health Practice
University of Illinois at Chicago
School of Public Health

Partner Organization Representatives

Dennis Lenaway, PhD, MPH
Office of Chief of Public Health Practice
Centers for Disease Control and Prevention

Charles Moon, PhD
National Association of Local Boards of Health

Jeff Jones, PhD
University of Kentucky

Katie Sellers, DrPH
Association of State and Territorial Health Officials

Table of Contents

Chapter 1: *Introduction* 1

Chapter 2: *Overview of LHDs: Jurisdiction and Governance* 9

Chapter 3: *Financing* 15

Chapter 4: *LHD Leaders* 23

Chapter 5: *LHD Workforce* 29

Chapter 6: *Emergency Preparedness* 39

Chapter 7: *LHD Activities* 47

Chapter 8: *Community Health and Health Disparities* 65

Chapter 9: *Quality Improvement and Accreditation* 75

Chapter 10: *Information Technology and Management* 81

Chapter 11: *Conclusion* 89

List of Figures

Chapter 1: Introduction

1.1 Essential Public Health Services 3
1.2 Questionnaire Topics 4
1.3 Total Number of LHDs in Study Population, Number of LHDs Completing Questionnaire, and Response Rates, for All LHDs and by State 5
1.4 Response Rates by State (Map) 6
1.5 Response Rate, Total Number of LHDs in the Study Population, and Number of LHDs Completing Questionnaire, by Size of Population Served 6
1.6 Number of LHDs Included in Module Samples, by Size of Population Served 7
1.7 Response Rate for Core Questionnaire and Additional Modules 7

Chapter 2: Overview of LHDs: Jurisdiction and Governance

2.1 Percentage Distribution of LHDs, by Size of Population Served 10
2.2 Percentage of LHDs and Percentage of U.S. Population Served, by Size of Population Served 10
2.3 Percentage Distribution of LHDs, by Type of Geographic Jurisdiction 11
2.4 LHD Governance Type, by State (Map) 11
2.5 Percentage of LHDs with a Local Board of Health, by Size of Population Served 12
2.6 Percentage of LHDs with a Local Board of Health, by State (Map) 12
2.7 Percentage of LHDs with Selected Local Board of Health Functions 13
2.8 Percentage of LHDs, by Process of Selection of Local Board of Health Members 13

Chapter 3: Financing

3.1 Percentage Distribution of LHDs, by Total Annual LHD Expenditures Category 16
3.2 Mean and Quartiles of Total Annual LHD Expenditures for All LHDs, by Size of Population Served 17
3.3 Mean Annual per Capita and Median Annual per Capita for All LHD Expenditures and LHD Expenditures Excluding Third-Party Payments, by Selected LHD Characteristics 17
3.4 Median Annual per Capita LHD Expenditures, by State (Map) 18
3.5 Percentage Distribution of Total Annual LHD Revenues, by Revenue Source 19
3.6 Mean Percentage of Total LHD Revenues from Selected Sources, by Size of Population Served 19
3.7 Mean Percentage of Total LHD Revenues from Selected Sources, by Type of LHD Governance 20
3.8 Percentage Distribution of Total LHD Revenues by Source of Revenue, by State 21

Chapter 4: LHD Leaders

4.1 Percentage of Top Agency Executives by Selected Characteristics, 2005 and 2008 24
4.2 Percentage of Top Agency Executives by Race, 2005 and 2008 24
4.3 Percentage Distribution of Top Agency Executives, by Age Category 25
4.4 Percentage Distribution of Top Agency Executives, by Highest Degree Obtained 25
4.5 Percentage Distribution of Top Agency Executive Highest Degree Obtained, by LHD Size of Population Served 26
4.6 Mean Years of Tenure of Top Agency Executives, by Selected LHD Characteristics 26
4.7 Percentage of Top Agency Executive Selected Demographic Characteristics, by Experience Level 27

Chapter 5: LHD Workforce

5.1 Percentage Distribution of FTE Positions at LHDs 30
5.2 Mean and Median Number of Employees and FTEs at LHDs, by Size of Population Served 31
5.3 Percentage of LHD Staff, by Selected Characteristics 31
5.4 Percentage of LHDs with Employees in Selected Occupations 32
5.5 Percentage of LHDs with Employees in Selected Occupations, by Size of Population Served 33
5.6 Median Number of FTEs Employed in Selected Occupations, by Size of Population Served 34
5.7 Median FTEs and Staffing Patterns for LHDs, by Size of Population Served 35
5.8 Estimated Size and Composition of LHD Workforce 36
5.9 Percentage Distribution of Occupations in the LHD Workforce 37

Chapter 6: Emergency Preparedness

6.1 Percentage Distribution of LHDs with CDC Emergency Preparedness Funding, by Funding Level and Type of Fund....40

6.2 Mean and Median CDC Emergency Preparedness Funding to LHDs, by Type of Fund and Size of Population Served....41

6.3 Median per Capita Funding of CDC Emergency Preparedness Funding to LHDs for All Preparedness Funds by Type, by Selected LHD Characteristics....41

6.4 Mean per Capita CDC Emergency Preparedness Funding to LHDs, by State (Map)....42

6.5 Percentage Distribution of LHDs with FTEs Supported by CDC Emergency Preparedness Funding, by Number of FTEs....43

6.6 Percentage of LHDs with Selected Emergency Preparedness Activities in the Past Year....44

6.7 Percentage of LHDs with Selected Emergency Preparedness Efforts, by Size of Population Served....45

6.8 Percentage of LHDs with an Emergency Operations Center (EOC) Activated in the Past Year, by Reason for Activation....46

6.9 Percentage of LHDs with an EOC Activated in the Past Year for Emergency Events, by Type of Emergency....46

Chapter 7: LHD Activities

7.1 Percentage of LHD Jurisdictions with 10 Most Frequent Activities and Services Available Through LHDs Directly....49

7.2 Percentage of LHD Jurisdictions with 10 Most Frequent Activities and Services Available Through LHD Contracts....49

7.3 Percentage of LHD Jurisdictions with 10 Most Frequent Activities and Services Available Through Other Local Governmental Agencies....50

7.4 Percentage of LHD Jurisdictions with 10 Most Frequent Activities and Services Available Exclusively Through NGOs....50

7.5 Percentage of LHDs with Adult and Childhood Immunization Services, by Size of Population Served....50

7.6 Percentage of LHD Jurisdictions with Screenings for Selected Diseases and Conditions Provided by Governmental Agencies....51

7.7 Percentage of LHD Jurisdictions with Screenings for Selected Diseases and Conditions Provided by LHDs, by Size of Population Served....52

7.8 Percentage of LHD Jurisdictions with Communicable Disease Treatment Provided by Governmental Agencies for Selected Diseases....52

7.9 Percentage of LHD Jurisdictions with Selected Communicable Disease Treatment Provided by LHDs, by Size of Population Served....53

7.10 Percentage of LHD Jurisdictions with Selected Maternal and Child Health Services Provided by Governmental Agencies....53

7.11 Percentage of LHD Jurisdictions with Selected Maternal and Child Health Services Provided by LHDs, by Size of Population Served....54

7.12 Percentage of LHD Jurisdictions with Other Health Services Provided by Governmental Agencies....54

7.13 Percentage of LHDs Providing Other Health Services, by Size of Population Served....55

7.14 Percentage of LHD Jurisdictions with Selected Population-Based Primary Prevention Services Provided by Organizations....55

7.15 Percentage of LHD Jurisdictions with Selected Population-Based Primary Prevention Services Provided by LHDs, by Size of Population Served....56

7.16 Percentage of LHD Jurisdictions with Surveillance and Epidemiology Provided by Organizations....57

7.17 Percentage of LHD Jurisdictions with Surveillance and Epidemiology Provided by LHDs, by Size of Population Served....57

7.18 Percentage of LHD Jurisdictions with Selected Environmental Health Activities Provided by Organizations....58

7.19 Percentage of LHD Jurisdictions with Selected Environmental Health Activities Provided by LHDs, by Size of Population Served....59

7.20 Percentage of LHD Jurisdictions with Selected Regulation, Inspection, and/or Licensing Activities Provided by Organizations....60

7.21 Percentage of LHD Jurisdictions with Selected Regulation, Inspection, and/or Licensing Activities Provided by LHDs, by Size of Population Served 61
7.22 Percentage of LHD Jurisdictions with Other Public Health Activities Provided by Organizations 62
7.23 Percentage of LHD Jurisdictions with Other Public Health Activities Provided by LHDs, by Size of Population Served 63

Chapter 8: Community Health and Health Disparities

8.1 Percentage of LHDs with Community Health Assessment and Community Health Improvement Planning Activities 66
8.2 Percentage Distribution of LHDs, by Roles in Community Health Assessment 66
8.3 Percentage of LHDs with Completed Community Health Assessment and Community Health Improvement Plans, by Size of Population Served 67
8.4 Percentage of LHDs Using Selected Community Health Assessment and Planning Tools, by Type of Use 68
8.5 Percentage of LHDs with Selected Activities to Address Health Disparities 69
8.6 Percentage of LHDs with Selected Activities to Address Health Disparities, by Size of Population Served 70
8.7 Percentage of LHDs with Collaborative Efforts, by Type of Partnering Organization and Type of Effort 71
8.8 Percentage of LHDs with Interactions with Academic Institutions, by Type of Interaction and Institution 72
8.9 Percentage of LHDs with Selected Policy Making and Advocacy Activities, by Size of Population Served and Type of Governance 73
8.10 Percentage of LHDs with Selected Activities to Address Access to Healthcare Services, by Activity, All LHDs, and by Size of Population Served 74

Chapter 9: Quality Improvement and Accreditation

9.1 Operational Definition of a Functional Local Health Department 76
9.2 Percentage of LHDs with Participation in a Formal Performance Improvement Activity, for All LHDs and by Size of Population Served 77
9.3 Percentage of LHDs with Selected Performance Improvement Activity Areas 77
9.4 Percentage Distribution of LHD Management with Formal Training in Quality Improvement 78
9.5 Percentage of LHDs, by Selected Quality Improvement Techniques over the Past Two Years 78
9.6 Percentage of LHDs with Awareness of Operational Definition, by Level of Awareness, for All LHDs and by Size of Population Served 79
9.7 Percentage Distribution of LHDs, by Familiarity with a Voluntary National Accreditation Program 79
9.8 Percentage of LHDs, by Level of Agreement with Statements on Seeking Voluntary National Accreditation Overall and Within the Next Two Years 80
9.9 Percentage of LHDs, by Level of Agreement with Statements on Seeking Voluntary National Accreditation in Unspecified Time, by Size of Population Served 80

Chapter 10: Information Technology and Management

10.1 Percentage of LHDs, by Level of Implementation of Selected Information Technologies 82
10.2 Percentage of LHDs, by Types of Record Keeping for Selected Program Areas 83
10.3 Percentage Distribution of LHDs, by Record Keeping Systems for Selected Program Areas 83
10.4 Percentage of LHDs, by Availability of Data Sources 84
10.5 Percentage of LHDs, by Data Sources and Types of Information Accessed 85
10.6 Percentage of LHDs with Web Sites 85
10.7 Percentage of LHDs with Selected Web Site Attributes 86
10.8 Percentage of LHDs with Selected Public Health Promotional Strategies, by Frequency of Strategies 87
10.9 Percentage of LHDs Sharing Resources, by Size of Population Served 87
10.10 Percentage of LHDs Sharing Resources, by Service or Function Where Resources Shared 88

Chapter 1: Introduction

To the dedicated public health professionals at local health departments across America.

Anyone who completes a Profile questionnaire makes an important contribution to the field of public health.

—Carolyn Leep, Director of Research and Evaluation, NACCHO

Background

The study of local public health infrastructure and practice in the United States can be traced to 1850, when Lemuel Shattuck, who has been called the original architect of the governmental public health infrastructure, wrote his *Report of the Sanitary Commission of Massachusetts*.[1] Although the report was ignored for some time, by the late nineteenth century it was influencing the development of state and local public health activities. In the United States, state and local governments were quite varied in structure, size of population served, and in historic development; the local public health system reflected that variety in different governance structures and statutory frameworks. By the turn of the century, there were health departments in most states and many large cities. County-based local health departments (LHDs) began to appear in 1911.

In 1914, the American Medical Association's Council of Health and Public Instruction commissioned Charles Chapin to conduct a survey of the public health activities in state health departments. By 1923, the American Public Health Association's Committee on Administrative Practice (CAP) collected data from 83 city health departments. The committee continued to operate during the next 20 years, developing appraisal forms used to collect information on public health practices and provide feedback to health officers. In 1943, CAP published *Health Practice Indices*, containing data on 178 LHDs in 31 states and four Canadian provinces.[2]

A different approach was taken in 1945 by Haven Emerson, MD, chairman of the CAP, when he released *Local Health Units for the Nation,* in which he both described the current system and advocated for an ideal local health system. His theory was that local health systems could be most effectively organized to serve no fewer than 50,000 people, and he estimated the total number of local units (at that time, 1,197) that would be required to create this ideal system. The report also identified six core public health activities that were to constitute the minimum services expected from the local units: vital statistics, sanitation, communicable disease control, maternal and child health, health education, and laboratory services.

The next study of local public health systems, published in 1949,[3] focused on the medical care activities of full-time LHDs. Milton Terris, MD, and Nathan Kramer, identified a total of 1,385 LHDs in the United States, and canvassed them through a questionnaire. They documented a shift from purely preventive services to therapeutic and diagnostic services, with a smaller group of LHDs reporting general medical care programs. In addition to this information about LHD activities, they also reported on working relationships between hospitals and LHDs, and a trend at that time toward joint housing of hospitals and LHDs.

Although LHDs continued to grow in the 1950s, interest in studying local public health diminished, and the CAP was disbanded. In the 1960s, the Public Health Service conducted two studies on the medical activities provided by LHDs. The 1970s saw the emergence of work by C. Arden Miller, whose research over four decades began with a 1977 survey of LHDs and their directors. Miller's body of work includes summary data concerning jurisdictions, organization, finance, functions, and staffing of LHDs, along with local health officers' training and salaries. Miller also led the field by recognizing that LHDs often served a unique role as the governmental presence in health and shaped an understanding of the important role played by LHDs in their communities.

Previous Profile Studies

The role of community health planning was formative in the development of NACCHO's National Profile of Local Health Departments study. The first of these studies, conducted in 1989–1990, was born out of an effort to collect information related to the Assessment Protocol for Excellence in

Public Health (APEX-PH). The first Profile study was quite timely in the broader history of public health. Coming soon after the publication of the landmark 1988 Institute of Medicine (IOM) Report, the Profile was, however unintentionally, quite responsive to the IOM's wake-up call to the public health community that included the comment that "…data on the activities of local health departments are hard to come by."

The first Profile study began by addressing a problem that had plagued all previous studies of local public health systems: defining an LHD. For the purposes of the first and all subsequent Profile studies, an LHD has been defined as the following:

> 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.

Including the 2008 study, NACCHO has conducted five National Profile of Local Health Departments studies—1989, 1992–1993, 1996–1997, and 2005—with response rates ranging from 72 percent (1992–1993 study) to 88 percent (1996–1997 study). All Profile studies have been funded by the Centers for Disease Control and Prevention (CDC), and beginning in 2007, funding was also received from the Robert Wood Johnson Foundation (RWJF). In addition, NACCHO conducted the 1999 Local Public Health Agency Infrastructure study, a large sample survey with topics similar to the Profile study and funded by RWJF.

In many ways, all Profile studies have contained themes similar to the earlier local public health infrastructure studies described above: a close look at the funding, staffing, governance, and activities of LHDs, and an emphasis on understanding how these patterns vary across the country and by size of the population served by the LHD. In some ways, the more recent Profile studies reflect emerging developments in history and local public health, with data gathering in areas such as emergency preparedness and accreditation.

The 2008 National Profile of Local Health Departments Study

Purpose

The purpose of the 2008 National Profile of Local Health Departments study (Profile study) was to advance and support the development of a database for LHDs to describe and understand their structure, function, and capacities. With increased knowledge and awareness of LHD infrastructure, practice, and capacity, both research and local public health advocacy efforts would be enhanced to advise both the development of evidence-based practices related to LHD capacity and infrastructure and changes in policy, practice, structure, and funding at the systemic level. With a strengthened LHD capacity to deliver the 10 essential public health services (Figure 1.1), an overall improvement in population-based health outcomes would be seen.

FIGURE 1.1 Essential Public Health Services

1.	Monitor health status to identify and solve community health problems.
2.	Diagnose and investigate health problems and health hazards in the community.
3.	Inform, educate, and empower people about health issues.
4.	Mobilize community partnerships and action to identify and solve health problems.
5.	Develop policies and plans that support individual and community health efforts.
6.	Enforce laws and regulations that protect health and ensure safety.
7.	Link people to needed personal health services and assure the provision of health care when otherwise unavailable.
8.	Assure competent public and personal health care workforce.
9.	Evaluate effectiveness, accessibility, and quality of personal and population-based health services.
10.	Research for new insights and innovative solutions to health problems.

Methodology

The 2008 Profile questionnaire was piloted in May and June 2008. The final questionnaire was fielded on July 16, 2008, through an e-mail sent to the top agency executive (or, in some cases, a designated alternate) of every LHD in the study population. The e-mail included a link to a Web-based questionnaire, individualized with preloaded identifying information specific to the LHD. The fielding phase of the study closed on October 30, 2008. Paper copies of the questionnaire were available upon request and were also mailed in mid-August to a subset of small LHDs with a "not started" status; about 3 percent of the completed questionnaires were paper versions. Extensive efforts to encourage participants to complete the questionnaire included follow-up with non-respondents by NACCHO staff and a nationwide group of Profile study advocates, coupled with technical support offered through an e-mail address and telephone hotline.

Questionnaire Design

The 2008 Profile study questionnaire included a set of core questions sent to all LHDs in the United States; additionally, supplemental questions were grouped into three modules, one of which was included in the questionnaire for a random sample of the study population. Topics contained in each section of the questionnaire are shown in Figure 1.2. Many questions in the core questionnaire have been used in previous Profile studies and provide an ongoing data set for comparative analysis. Most new items were placed in modules; some had been pretested in a small scale survey of candidate questions conducted in 2007. The Profile workgroup was extensively involved in the development of the 2008 questionnaire.

FIGURE 1.2 Questionnaire Topics

Core	Activities Community Health Assessment and Planning Emergency Preparedness Funding Governance Health Disparities Jurisdictional Information Workforce (Top Executive and Overall)
Module 1	LHD Web Site Operational Definition & Accreditation Preparation Performance and/or Quality Improvement Promoting Public Health and Local Health Departments
Module 2	Core Competencies Information Technology Internal Agency Strategic Planning LHD Interaction with Academic Institutions Regionalization Workforce and Human Resources
Module 3	Access to Healthcare Services Community Health Assessment and Health Improvement Planning Essential Services and Activities Land Use Planning Partnership and Collaboration Policy Making and Advocacy

Study Population

To identify the study population for the 2008 Profile study, NACCHO began with the same definition for 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—used in every Profile study. NACCHO's database of LHDs, results from the 2005 Profile study, and consultations with state health agencies and state associations of local health officials were used to develop the final count of 2,794 LHDs as the 2008 Profile study population. Hawaii and Rhode Island were excluded from the study, because state health departments operate on behalf of local public health and have no sub-state units. A detailed chart of the study population of LHDs in each state and the number completing the questionnaire is shown in Figure 1.3.

Response Rates

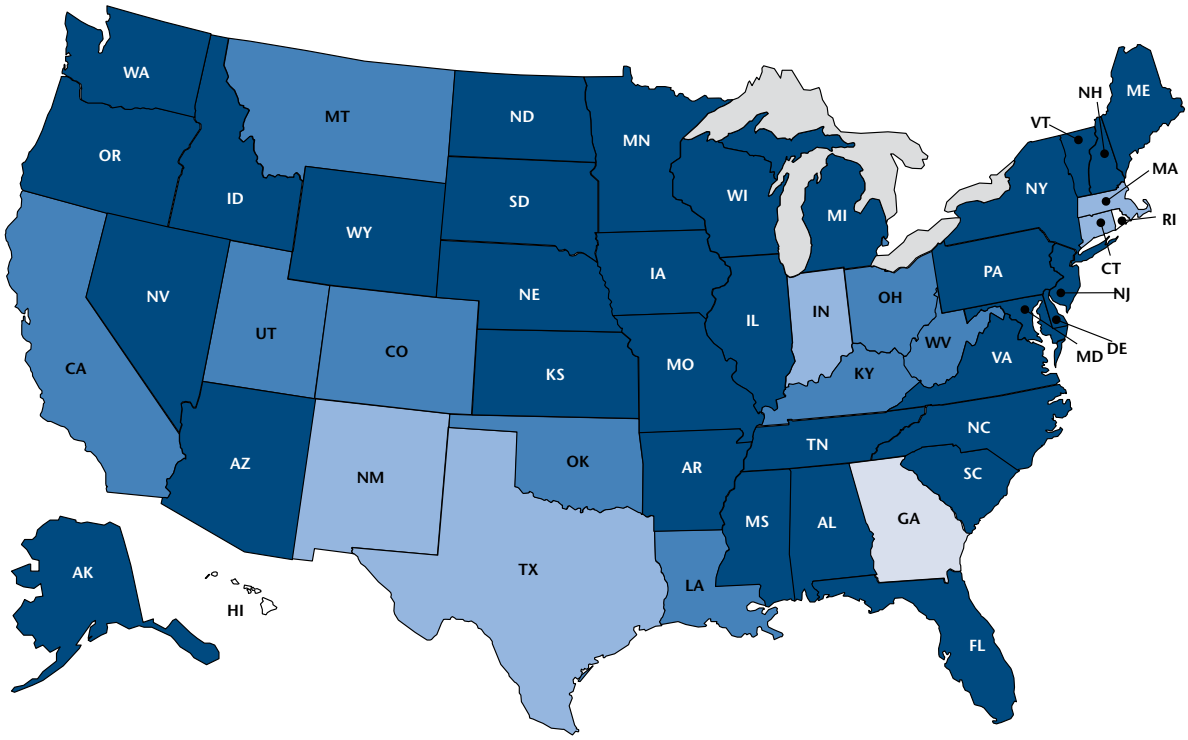
Figure 1.3 also shows the response rate overall and by state. Overall, the study had a response rate of 83 percent, or 2,332 of 2,794 LHDs. With one exception—Georgia—all states had a response

FIGURE 1.3 Total Number of LHDs in Study Population, Number of LHDs Completing Questionnaire, and Response Rates, for All LHDs and by State

	Total Number of LHDs	Number of Respondents	Response Rate
All	*2,794*	*2,332*	*83%*
Alabama	67	67	100%
Alaska	8	8	100%
Arizona	15	15	100%
Arkansas	78	78	100%
California	62	48	77%
Colorado	65	58	89%
Connecticut	80	59	74%
Delaware	2	2	100%
Florida	67	67	100%
Georgia	158	77	49%
Idaho	7	7	100%
Illinois	93	93	100%
Indiana	93	63	68%
Iowa	102	94	92%
Kansas	100	93	93%
Kentucky	56	45	80%
Louisiana	10	8	80%
Maine	10	10	100%
Maryland	24	24	100%
Massachusetts	353	211	60%
Michigan	45	41	91%
Minnesota	74	74	100%
Mississippi	9	9	100%
Missouri	114	103	90%
Montana	51	38	75%
Nebraska	24	23	96%
Nevada	14	14	100%
New Hampshire	2	2	100%
New Jersey	111	110	99%
New Mexico	5	3	60%
New York	58	54	93%
North Carolina	85	83	98%
North Dakota	28	28	100%
Ohio	129	98	76%
Oklahoma	69	60	87%
Oregon	34	31	91%
Pennsylvania	16	15	94%
South Carolina	8	8	100%
South Dakota	8	8	100%
Tennessee	95	95	100%
Texas	107	68	64%
Utah	12	9	75%
Vermont	12	12	100%
Virginia	35	35	100%
Washington	34	31	91%
Washington, DC	1	1	100%
West Virginia	49	41	84%
Wisconsin	92	88	96%
Wyoming	23	23	100%

rate of more than 50 percent. Massachusetts, with a response rate of 60 percent, actually had the highest number of respondents (211) due to the unique structure of its local public health system. A total of 21 states and Washington, DC, had response rates of 100 percent. (See map, Figure 1.4.)

FIGURE 1.4 Response Rates by State (Map)



90–100% 75–89% 60–74% 0–59% Non-participants: Hawaii and Rhode Island

Response rates by the size of the population served by the LHD are shown in Figure 1.5. The lowest response rate (76%) was among LHDs serving populations less than 25,000; the highest were among LHDs serving large populations (97% response among LHDs serving populations between 500,000 and 999,999; 95% for LHDs serving populations of one million or more). Because there are fewer jurisdictions with large populations (and fewer corresponding LHDs), the higher response rates in these groups are important to the analytic capacity of the study data.

FIGURE 1.5 Response Rate, Total Number of LHDs in the Study Population, and Number of LHDs Completing Questionnaire, by Size of Population Served

Size of Population Served	Response Rate	Total LHDs	LHDs Completing Questionnaire
<25,000	76%	1,200	912
25,000–49,999	85%	586	501
50,000–99,999	91%	414	376
100,000–249,999	92%	331	303
250,000–499,999	86%	132	114
500,000–999,999	97%	91	88
1,000,000+	95%	40	38
Total	*83%*	*2,794*	*2,332*

Sampling

Every LHD in the study population received a core questionnaire. One of three sets of supplemental questions or modules was included in the questionnaire for randomly selected LHDs. Stratified random sampling (without replacement) was used to assign LHDs to modules, with strata defined by the population size of the jurisdiction served by the LHD. In Figure 1.6, the number of LHDs assigned to receive each module is shown.

Response rates for the Profile study core questionnaire and additional modules are shown in Figure 1.7. All versions of the questionnaire (core only or core plus one module) achieved a response rate of 82 percent or more.

FIGURE 1.6 Number of LHDs Included in Module Samples, by Size of Population Served

	Module		
Size of Population Served	**1**	**2**	**3**
<25,000	181	178	177
25,000–49,999	109	108	110
50,000–99,999	91	92	92
100,000–249,999	82	82	81
250,000–499,999	43	43	43
500,000–999,999	27	29	30
1,000,000+	12	14	14
Total LHDs	*545*	*546*	*547*

FIGURE 1.7 Response Rate for Core Questionnaire and Additional Modules

Instrument	Response Rate
Core Questionnaire Only	83%
Core and Module 1	82%
Core and Module 2	87%
Core and Module 3	83%

Survey Weights and National Estimates

Unless otherwise stated, national statistics presented in this report were computed using appropriate estimation weights. Estimation weights for the items from the core questionnaire (sent to all LHDs) were developed to account for dissimilar non-response by size of population served. Because module questions were administered only to a sample of LHDs, the estimation weights used to produce statistics from modules also accounted for sampling. By using estimation weights, the Profile study provides, for the first time, national estimates for all LHDs in the United States. Any 2005 statistics included in this report were also weighted for non-response. Comparisons with statistics from the 2005 Profile report should be made with caution, because weights accounting for non-response were not used to produce statistics for core questionnaire items reported there.

Categorizing LHDs by Degree of Urbanization

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 uses 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.[4] For this study, LHDs were classified by matching their zip codes to the zip code approximations for RUCAs.[5] RUCAs 1–3.99 were classified as urban, 4–6.99 as suburban/micropolitan, and 7–10.99 as rural/small town. The zip codes used in this classification represent the physical location of the LHD as a proxy for the jurisdiction served by the LHD.

Notes

1 Bernard J. Turnock and Priscilla A. Barnes, "History Will Be Kind," *Journal Public Health Management and Practice*, 2007, 13(4), 337–341.

2 NACCHO, *The National Profile of Local Health Departments*: 1990 (Washington, DC: NACCHO).

3 Milton Terris and Nathan Kramer, "Medical Care Activities of Full-Time Health Departments," *American Journal of Public Health*, 1949, 39(9), 1129–1135.

4 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.

5 RUCA version 2.0 (July 2005) is based on 2004 zip codes and 2000 Census commuting data. Retrieved March 2009 from http://depts.washington.edu/uwruca/download.html.

Chapter 2: Overview of LHDs: Jurisdiction and Governance

What Size Populations Did LHDs Serve?

What Types of Jurisdictions Did LHDs Serve in the United States?

What Level of Government Had Authority over LHDs?

How Many LHDs Had a Local Board of Health?

What States Had Local Boards of Health?

What Did Local Boards of Health Do?

How Were Local Board of Health Members Selected?

Background

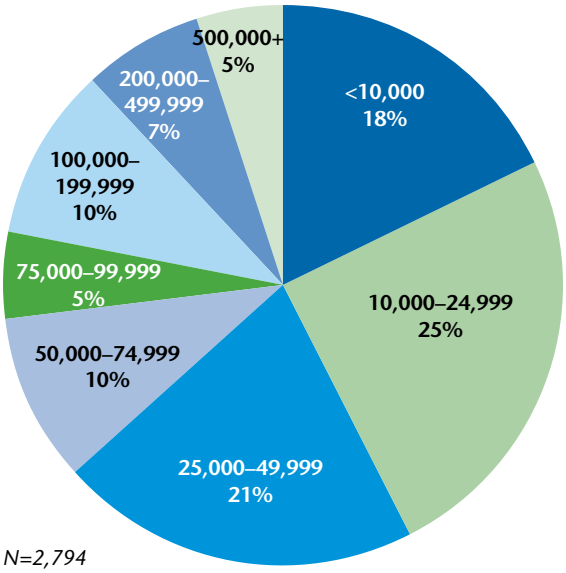
Chapter 2 begins with an analysis of the population sizes served by LHDs. These findings are based on Profile study findings and additional secondary data regarding respondent and non-respondent LHD size of population served, and thus include all 2,794 LHDs in the study population. Additionally, information presented here regarding LHD governance was obtained by a review of several fields in the Profile questionnaire, combined with other sources of background information available to NACCHO. All other national data shown in the chapter (and in the rest of the report, as well) are taken from the 2008 Profile study questionnaires and weighted to represent all LHDs.

What Size Populations Did LHDs Serve?

Among the 2,794 total LHDs in the United States, the largest numbers of LHDs served jurisdictions with small populations. About 64 percent served populations less than 50,000 persons (Figure 2.1). Another 15 percent served populations from 50,000 to 99,999, and 17 percent served populations from 100,000 to 499,999. Five percent served populations of 500,000 or more.

Figure 2.2 shows both the percent of all LHDs by population category and the percent of the U.S. population served. About 5 percent of all LHDs covered 46 percent of the U.S. population, whereas 31 percent of all LHDs covered 41 percent of the U.S. population and 64 percent covered 12 percent of the U.S. population.

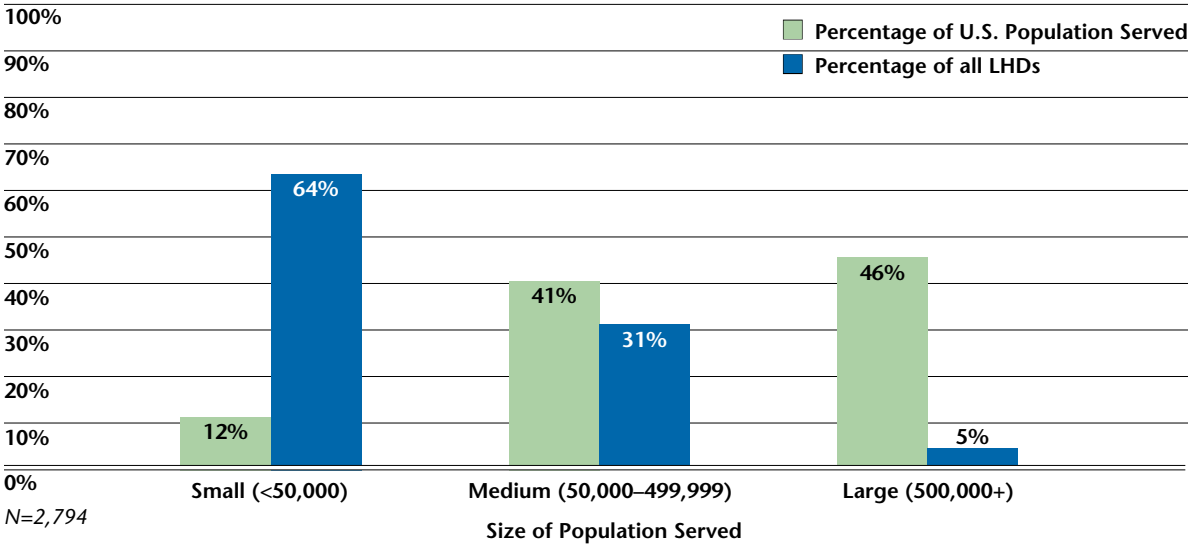
FIGURE 2.1 Percentage Distribution of LHDs, by Size of Population Served



N=2,794

Note: Due to rounding, percentages do not add to 100.

FIGURE 2.2 Percentage of LHDs and Percentage of U.S. Population Served, by Size of Population Served

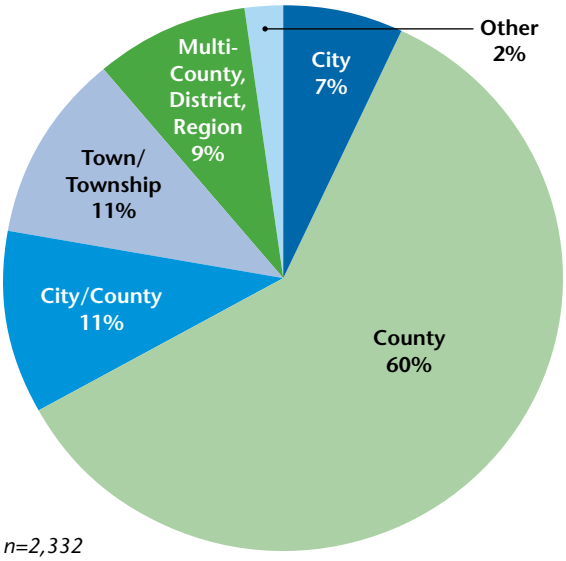


N=2,794

What Types of Jurisdictions Did LHDs Serve in the United States?

As Figure 2.3 shows, most LHDs in the United States (60%) were county based. An additional 11 percent served combined city-county jurisdictions; whereas 9 percent served multi-county or other district or regional levels. Some 7 percent were organized to serve cities and 11 percent were based in towns and townships.

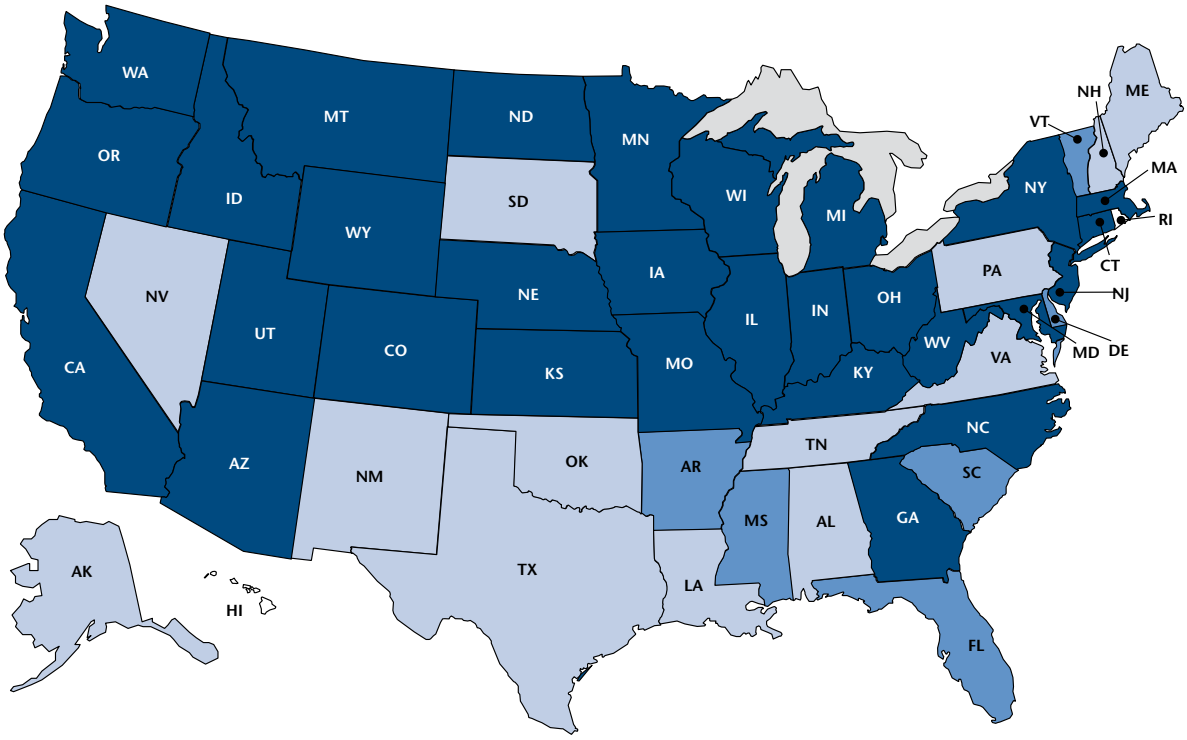
FIGURE 2.3 Percentage Distribution of LHDs, by Type of Geographic Jurisdiction



What Level of Government Had Authority over LHDs?

LHDs can be governed by local authorities (e.g., local board of health, county or city elected officials) or by the state health agency, or both. Figure 2.4 shows a simplified governance categorization scheme for LHDs. If all LHDs in a state were governed *primarily* by local authorities, the state was categorized as local governance. If all LHDs in a state were governed *primarily* by the state health agency, the state was characterized as state governance. If some LHDs

FIGURE 2.4 LHD Governance Type, by State (Map)



- All LHDs in the state are units of local government
- All LHDs in the state are units of state government
- Some LHDs in the state are units of local government and others are units of state government
- Non-participants: Hawaii and Rhode Island

within a state were governed by a state authority and others were governed by a local authority, the state was categorized as mixed governance. In practice, LHD governance is shared between local and state authorities in some states (e.g., Maryland). LHDs in 29 states had local governance, whereas six states and Washington, DC, had state governance and 13 had mixed governance.

How Many LHDs Had a Local Board of Health?

About 80 percent of all LHDs had an associated local board of health (Figure 2.5). In general, the frequency of local boards of health decreased with increasing jurisdictional size, ranging from 87 percent of LHDs serving a population of less than 10,000 to 38 percent of LHDs serving more than one million.

FIGURE 2.5 Percentage of LHDs with a Local Board of Health, by Size of Population Served

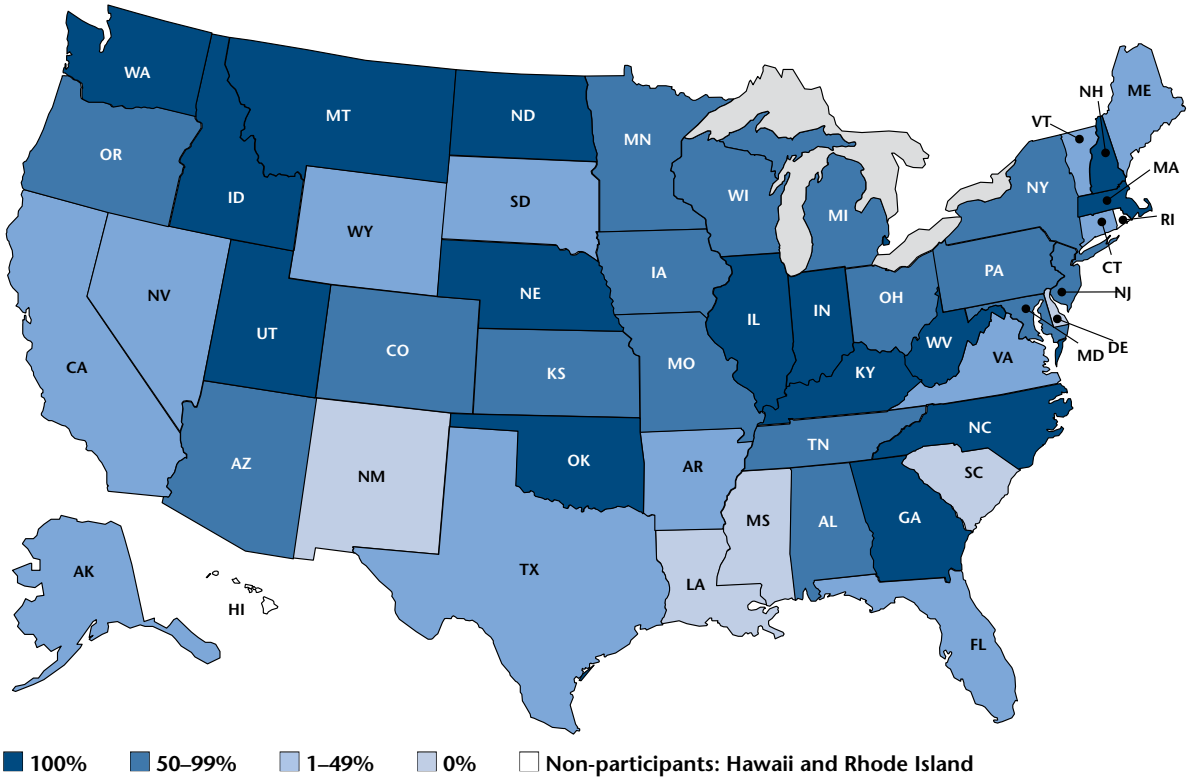
Size of Population Served	Percent with Local Board of Health
All LHDs	*80%*
<10,000	87%
10,000–24,999	82%
25,000–49,999	87%
50,000–74,999	81%
75,000–100,000	79%
100,000–199,999	74%
200,000–499,999	59%
500,000–999,999	59%
1,000,000+	38%

n=2,244

What States Had Local Boards of Health?

In 15 states, all LHDs had an associated local board of health; in another 16 states, 50–99 percent of the LHDs had an associated local board of health; and in another 12 states, 1–49 percent had an associated local board of health (Figure 2.6). Five states and Washington, DC, had no local boards of health.

FIGURE 2.6 Percentage of LHDs with a Local Board of Health, by State (Map)



What Did Local Boards of Health Do?

Local boards of health served many functions: adopting public health regulations, setting and imposing fees, approving the LHD budget, hiring or firing the top agency administrator, and requesting a public health levy. Figure 2.7 shows the percentage of local boards of health with specific functions performed. Adopting public health regulations (73%) and setting and imposing fees (68%) were the two most common functions.

How Were Local Board of Health Members Selected?

Members of local boards of health may have been elected, appointed, or designated based on an elected or non-elected position. Among LHDs reporting a local board of health within the jurisdiction, fully two-thirds reported that members were appointed to local boards of health (Figure 2.8). Another 36 percent reported designation based on an elected position, with 18 percent designated based on a non-elected position and 14 percent elected. Because some boards of health use more than one method to select members, response categories total to a percentage greater than 100 percent.

FIGURE 2.7 Percentage of LHDs with Selected Local Board of Health Functions*

Functions Performed	Percent of LHDs
Adopt Public Health Regulations	73%
Set and Impose Fees	68%
Approve the LHD Budget	59%
Hire or Fire Agency Head	56%
Request a Public Health Levy	32%
Impose Taxes for Public Health	17%

n=1,794

**Among LHDs with a LBOH.*

FIGURE 2.8 Percentage of LHDs, by Process of Selection of Local Board of Health Members*

LBOH Selection Processes	Percent of LHDs
Members Appointed	66%
Members Elected	14%
Members Designated Based on Elected Position	36%
Members Designated Based on Non-Elected Position	18%

n=1,794

**Among LHDs with a LBOH.*

Chapter 3: Financing

What Were LHD Total Annual Expenditures?

What Were the Average Expenditures of LHDs?

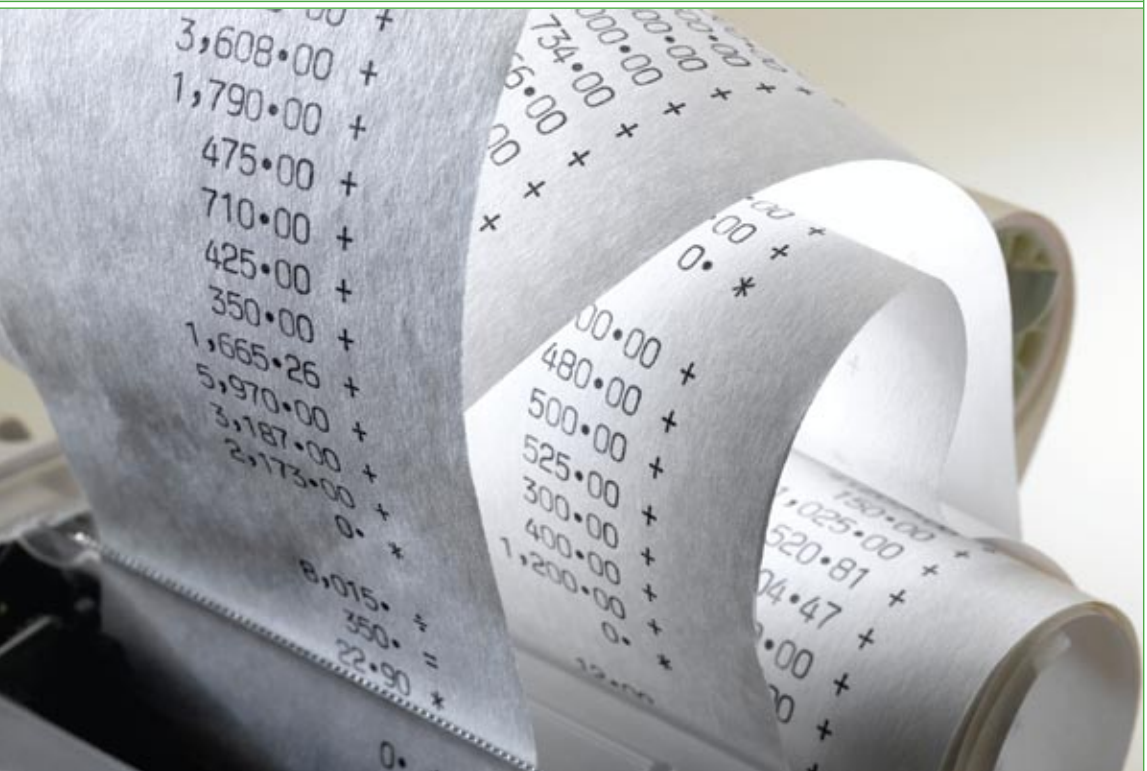
What Were per Capita Expenditures for LHDs?

Did LHD per Capita Expenditures Differ by State?

What Were the Sources of LHD Revenues?

Did Revenue Sources Vary by the Size of the Population Served by the LHD?

What Were the LHD Revenue Sources for Each State?



Background

The 2008 Profile questionnaire asked LHDs to provide total revenues and total expenditures for their most recently completed fiscal year and to detail the revenues received by the following categories: city/township sources, county sources, state direct sources (revenues received through allocations, grants, and/or contracts with state government agencies, excluding federal pass-through sources), federal pass-through sources (revenue received by an LHD from a state agency where the revenue originated as an award to that state agency from federal sources), federal direct sources (revenues received directly from the federal government, excluding Medicaid/Medicare reimbursements), Medicaid, Medicare, private foundations, private health insurance, patient personal fees, regulatory fees, tribal sources, and other.

Collecting data on LHD financing that are comparable across the United States is very challenging. Consequently, the data reported in this chapter should be interpreted with some caution for several reasons. First, there are missing data considerations. Some LHDs skipped the funding section of the questionnaire entirely. Other LHDs reported some numbers (such as overall expenditures and revenues) but skipped the more detailed breakout of revenue sources. Where relevant, the number of observations on which statistics are computed is reported throughout this chapter. Some states are excluded from the analyses by state due to insufficient data, particularly as related to component breakouts of revenue sources.

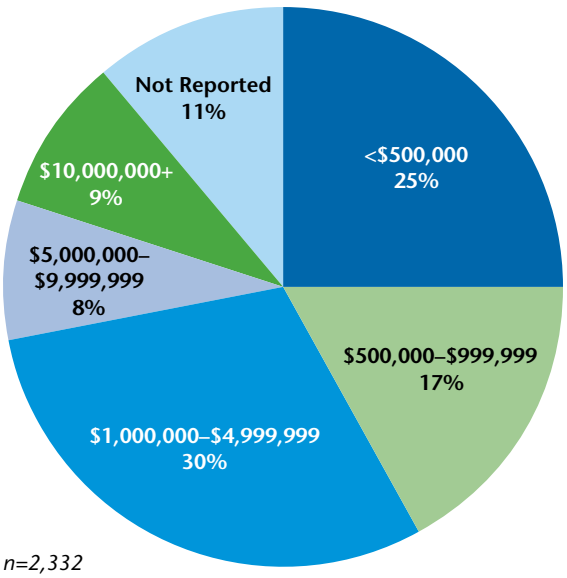
Second, early analyses and follow-up with LHDs regarding the revenue source data suggest that some LHDs that did provide data on revenue sources had difficulty reporting this information according to the categories in the questionnaire. In particular, many LHDs reported difficulty distinguishing between state direct and federal pass-through revenue sources. Additionally, a large number of LHDs included some funds in the "other" category, and specific classification is missing for these amounts. In some cases, "other" revenues represent funding streams that are not included as specific categories in the Profile questionnaire (e.g., vital statistics fees, interest income, donations). In other cases, the "other" category includes one or more of the specific revenue sources that the responding LHD could not separate into the questionnaire categories.

Finally, LHD fiscal years do not all operate on the same cycle. For 36 percent of LHDs, the most recently completed fiscal year ended December 31, 2007, or earlier. Another 23 percent reported data from a fiscal year ending January 31, 2008; the remaining 41 percent reported data from a fiscal year ending after January 2008.

What Were LHD Total Annual Expenditures?

Figure 3.1 shows the distribution of reported total annual LHD expenditures for all LHDs. Forty-two percent had expenditures of less than $1 million, 30 percent had expenditures of $1 to $4.9 million, and 17 percent had expenditures of $5 million or more. Data on this item were unreported for 11 percent of LHDs.

FIGURE 3.1 Percentage Distribution of LHDs, by Total Annual LHD Expenditures Category



n=2,332

What Were the Average Expenditures of LHDs?

Figure 3.2 shows the mean and quartiles of total annual expenditures for all LHDs by population category. Due to high outliers in each jurisdictional population group, the average expenditures were much higher than the 50th percentile (median) figures. The median annual expenditure for all LHDs was $1,120,000 and ranged from $408,000 for LHDs serving populations of less than 25,000 to $69 million for LHDs serving populations of one million or more.

FIGURE 3.2 Mean and Quartiles of Total Annual LHD Expenditures for All LHDs, by Size of Population Served

Size of Population Served	Mean	25th Percentile	50th Percentile	75th Percentile
All LHDs	*$8,350,000*	*$443,000*	*$1,120,000*	*$3,520,000*
<25,000	$683,000	$204,000	$408,000	$790,000
25,000–49,999	$2,130,000	$614,000	$1,080,000	$1,950,000
50,000–99,999	$3,220,000	$1,340,000	$2,420,000	$4,200,000
100,000–249,999	$6,760,000	$3,100,000	$5,440,000	$8,570,000
250,000–499,999	$18,200,000	$6,850,000	$12,100,000	$19,900,000
500,000–999,999	$77,800,000	$13,100,000	$26,200,000	$47,500,000
1,000,000+	$189,000,000	$44,000,000	$69,000,000	$193,000,000

n=2,095

What Were per Capita Expenditures for LHDs?

In Figure 3.3, unadjusted and adjusted mean and median per capita LHD expenditures are displayed by size of population served and type of governance.

FIGURE 3.3 Mean Annual per Capita and Median Annual per Capita for All LHD Expenditures and LHD Expenditures Excluding Third-Party Payments, by Selected LHD Characteristics

	Adjusted*		Unadjusted	
LHD Characteristics	Median	Mean	Median	Mean
All LHDs	*$28*	*$50*	*$36*	*$64*
Size of Population Served				
<25,000	$29	$67	$39	$76
25,000–49,999	$24	$33	$32	$63
50,000–99,999	$27	$35	$35	$46
100,000–249,999	$31	$36	$35	$43
250,000–499,999	$32	$47	$35	$51
500,000–999,999	$36	$85	$41	$112
1,000,000+	$39	$55	$42	$88
Type of Governance				
Unit of Local Government	$29	$52	$35	$66
Unit of the State Health Agency	$25	$38	$41	$60
	n=1,557		*n=2,097*	

**Adjusted by subtracting third-party payments including Medicare, Medicaid, and private insurance, as well as patient fees.*

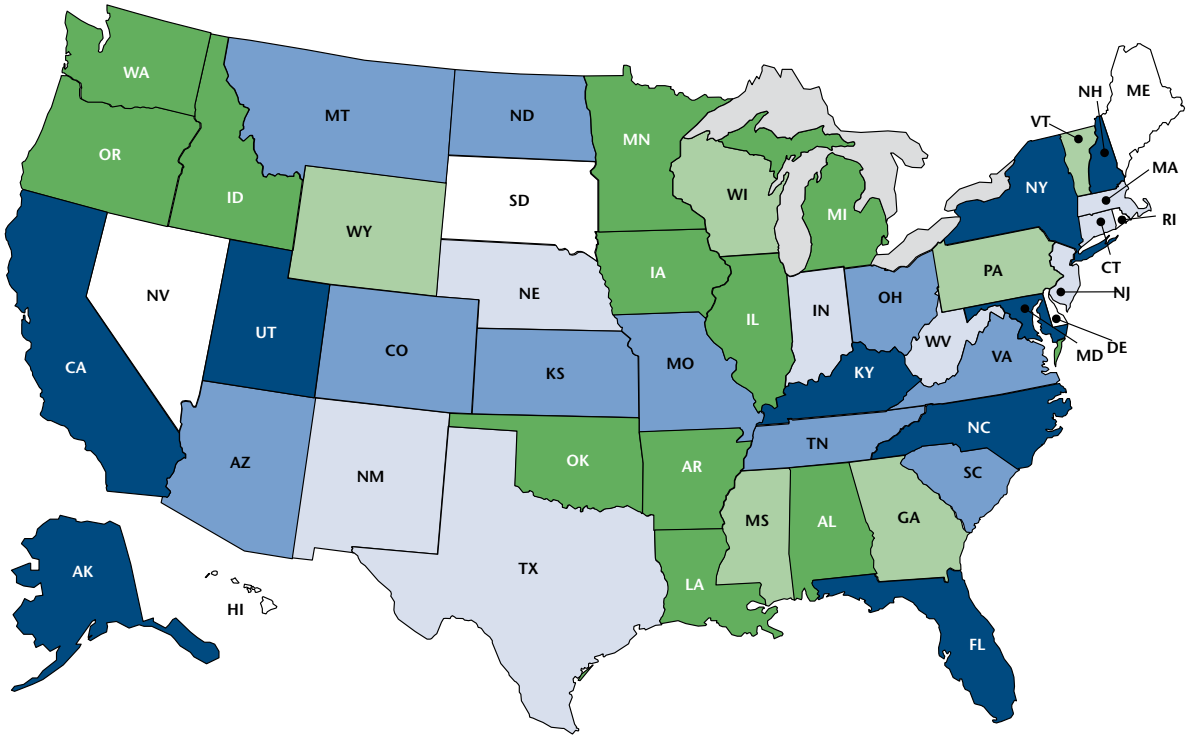
Overall, the unadjusted median per capita LHD expenditures was $36, and ranged from a low of $32 per person for LHDs serving jurisdictions of 25,000 to 49,999 to $42 per person for LHDs serving populations of one million or more. Expenditures by type of governance show that units of local government had an adjusted median annual per capita expenditure of $35, while units of state government had an adjusted median annual per capita expenditure of $41.

To assist in further comparisons of LHDs, adjusted expenditures are also shown, with reductions for third-party payments (Medicare, Medicaid, and private insurance) and patient fees (which were deducted from total figures). Other differences among LHDs, however, remain—including the extent of environmental health services offered by an LHD, whether third-party payments were used by the LHD to subsidize other LHD services, and the need for public health services in a particular community—and limit the comparability and interpretation of these numbers. Additionally, larger numbers of missing data for the adjusted expenditures limit its usefulness. Nevertheless, after adjusting for third-party payments, the differences between median per capita expenditures for units of the state health agency ($25) and units of local government ($29) are much smaller than the unadjusted numbers.

Did LHD per Capita Expenditures Differ by State?

The differences in median annual per capita LHD expenditures by state are displayed in Figure 3.4. LHDs in nine states had median per capita expenditures of less than $20. LHDs in 10 states

FIGURE 3.4 Median Annual per Capita LHD Expenditures, by State* (Map)



$50.00+ | $40.00–$49.99 | $30.00–$39.99 | $20.00–$29.99 | <$20.00

Non-participants: Hawaii and Rhode Island
None or insufficient data for Delaware, Maine, Nevada, and South Dakota.

n=2,097

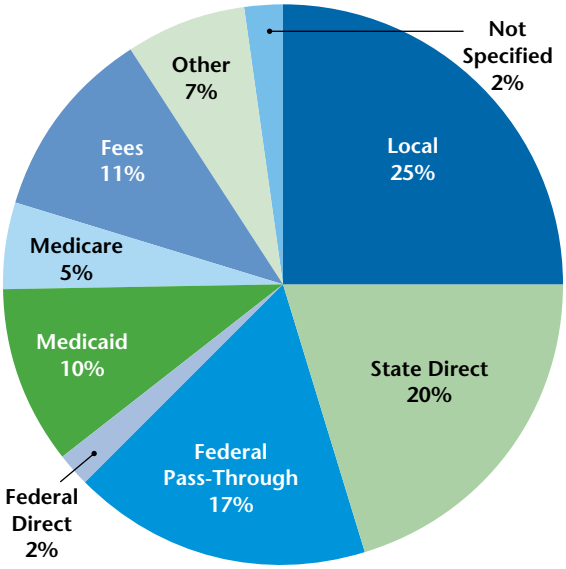
**Based on a low response rate (44-60%) for these items in Georgia, Indiana, Massachusetts, New Mexico, and Texas.*

and Washington, DC, had median per capita expenditures totaling more than $50.

What Were the Sources of LHD Revenues?

The 2008 Profile questionnaire asked LHDs to detail the revenues received by the following categories: city/township sources, county sources, state direct sources, federal pass-through sources, federal direct sources, Medicaid, Medicare, private foundations, private health insurance, patient personal fees, regulatory fees, tribal sources, and other. For Figure 3.5, city/township and county sources were combined and categorized as "Local"; regulatory and patient personal fees as "Fees," and all other sources, including private foundations and tribal sources, as "Other." Local funds were the highest source of revenue for LHDs, comprising 25 percent of all revenues, followed by state direct (20%), and federal pass-through (17%).

FIGURE 3.5 Percentage Distribution of Total Annual LHD Revenues, by Revenue Source*



n ranged from 1,458 to 1629 by revenue source

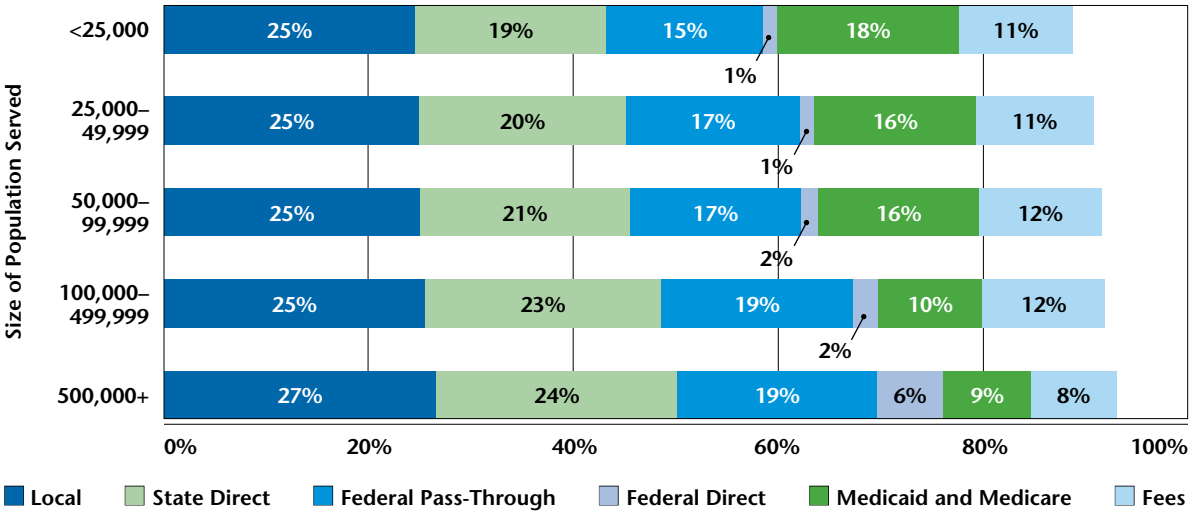
Note: Due to rounding, percentages do not add to 100.

**Among LHDs reporting detailed revenue data.*

Did Revenue Sources Vary by the Size of the Population Served by the LHD?

LHDs were remarkably similar in the proportion of local LHD revenues according to the size of the jurisdictional population (Figure 3.6). However, in other categories, revenues varied with the size of the population served by the LHD. The smaller the population of the jurisdiction served, the greater the proportion of revenues from Medicaid and Medicare, with LHDs serving

FIGURE 3.6 Mean Percentage of Total LHD Revenues from Selected Sources, by Size of Population Served

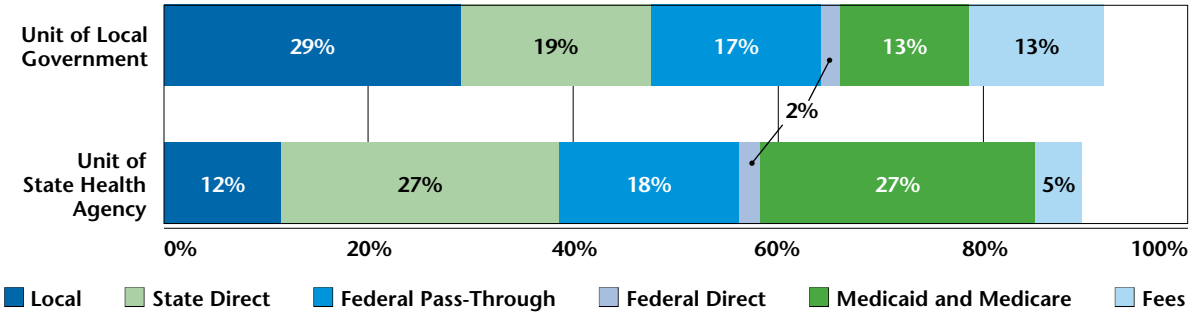


n=1,629

populations less than 25,000 having 18 percent of revenues from Medicaid and Medicare, versus 9 percent of LHDs serving populations 500,000 or more.

More variation can be seen in the mean percentage of LHD revenues from selected sources by type of governance (Figure 3.7). LHDs that are units of local government had a higher percentage of revenues from local government (29%) than LHDs that were units of state health agencies

FIGURE 3.7 Mean Percentage of Total LHD Revenues from Selected Sources, by Type of LHD Governance



n=1,629

(12%). Units of state health agencies had a higher proportion of revenues from state direct (27%) than units of local government (19%) and a higher proportion of revenues from Medicare and Medicaid (27%) than units of local government (13%).

What Were the LHD Revenue Sources for Each State?

Total LHD revenues from selected sources are shown by state in Figure 3.8. Due to lower reporting for the detailed revenue data fields, these items must be viewed with some caution. However, in general, it can be said that LHD revenues from local, state, federal pass-through and Medicare and Medicaid as a percent of total revenues varied widely by state.

FIGURE 3.8 Percentage Distribution of Total LHD Revenues by Source of Revenue, by State

State	Local	State Direct	Federal Pass-Through	Federal Direct	Medicare and Medicaid	Other Sources
Alabama	6%	11%	16%	2%	60%	7%
Alaska	8%	50%	5%	7%	27%	3%
Arizona	30%	17%	36%	2%	2%	13%
Arkansas†	7%	21%	n/a	0%	n/a	0%
California	12%	43%	17%	4%	5%	18%
Colorado	20%	23%	23%	1%	6%	26%
Connecticut*	55%	13%	11%	2%	1%	19%
Florida	8%	40%	12%	3%	17%	20%
Idaho	13%	18%	41%	2%	5%	20%
Illinois	19%	32%	18%	2%	15%	14%
Iowa	15%	22%	10%	1%	38%	15%
Kansas*	33%	13%	19%	1%	11%	23%
Kentucky*	19%	18%	18%	2%	26%	16%
Maine	3%	39%	59%	0%	0%	0%
Maryland	22%	41%	18%	4%	8%	10%
Michigan	22%	21%	21%	3%	12%	21%
Minnesota	23%	17%	19%	6%	23%	12%
Mississippi	9%	17%	43%	0%	27%	5%
Missouri	36%	10%	21%	1%	12%	20%
Nebraska	10%	37%	32%	5%	3%	14%
New Jersey*	61%	9%	8%	0%	4%	18%
New York	6%	42%	5%	2%	27%	17%
North Carolina	29%	13%	8%	0%	32%	17%
North Dakota	33%	9%	36%	1%	8%	14%
Ohio*	31%	5%	20%	2%	7%	35%
Oregon	21%	15%	21%	5%	14%	20%
Pennsylvania*	14%	55%	21%	4%	3%	4%
South Carolina	2%	40%	13%	13%	25%	5%
Tennessee	10%	30%	21%	2%	16%	19%
Virginia*	34%	34%	13%	0%	6%	13%
Washington	21%	26%	20%	3%	6%	24%
Washington, DC	34%	0%	0%	8%	56%	2%
West Virginia	10%	42%	19%	0%	8%	20%
Wisconsin	39%	7%	25%	1%	9%	19%
Wyoming	30%	9%	26%	0%	19%	14%

Non-Participants: Hawaii and Rhode Island.

None or insufficient data for Delaware, Georgia, Indiana, Louisiana, Massachusetts, Montana, New Hampshire, New Mexico, Nevada, Oklahoma, South Dakota, Texas, Utah, Vermont.

†No data available for Federal Pass-Through, Medicaid, and Medicare sources.

**Based on low response rates (51%–60%).*

Chapter 4: LHD Leaders

What Were the Demographic Characteristics of LHD Top Agency Executives?

Did Characteristics of Top Executives Change Between 2005 and 2008?

How Old Were Most LHD Top Executives?

What Was the Education Level of LHD Top Executives?

How Long Have Top Executives Worked at LHDs?

Were New Top Executives Different from Experienced Top Executives?

Background

The 2008 Profile questionnaire included a set of questions regarding the characteristics of the LHD's top executive. These questions were, in most cases, identical to questions in the 2005 Profile questionnaire, and some comparisons between the data from the two study years are made below. These items, however, were not tested for significant differences. It should also be noted that 2000 Census categories were used in questionnaire items regarding race and ethnicity.

What Were the Demographic Characteristics of LHD Top Agency Executives?

Most top executives in LHDs worked full-time in their position (Figure 4.1). More than half were female (56.3%). A total of 7 percent reported a race other than white. About 2 percent reported Hispanic ethnicity.

Did Characteristics of Top Executives Change Between 2005 and 2008?

Characteristics of top executives have varied modestly since 2005. The percentage of part-time top executives, female top executives, and top executives reporting a race other than white all decreased slightly from 2005 to 2008, while the percent reporting a Hispanic ethnicity increased slightly during the same time frame.

Figure 4.2 shows more detail on the race and ethnicity of top agency executives in 2005 and 2008. In 2005, 90.8 percent of top agency executives were white, while in 2008, 93.5 percent were white. The percent reporting black or African-American top agency executives changed slightly, from 4.5 percent in 2005 to 4.3 percent in 2008.

FIGURE 4.1 Percentage of Top Agency Executives by Selected Characteristics,* 2005 and 2008

Characteristic	Percentage of Top Executives	
	2005	2008
Part-time	14.4%	13.8%
Female	56.4%	56.3%
Race Other Than White*	7.8%	7.0%
Hispanic Ethnicity	1.3%	2.0%

n ranged from 2,202 to 2,299 (2005)
n ranged from 2,229 to 2,276 (2008)

**Respondents could report more than one race.*

FIGURE 4.2 Percentage of Top Agency Executives by Race,* 2005 and 2008

Top Executive Race	Percentage of Top Executives	
	2005	2008
White	90.8%	93.5%
Black	4.5%	4.3%
American Indian or Alaska Native	1.5%	0.5%
Asian	0.9%	1.1%
Native Hawaiian or Pacific Islander	3.1%	0.3%
Other	0.6%	0.9%

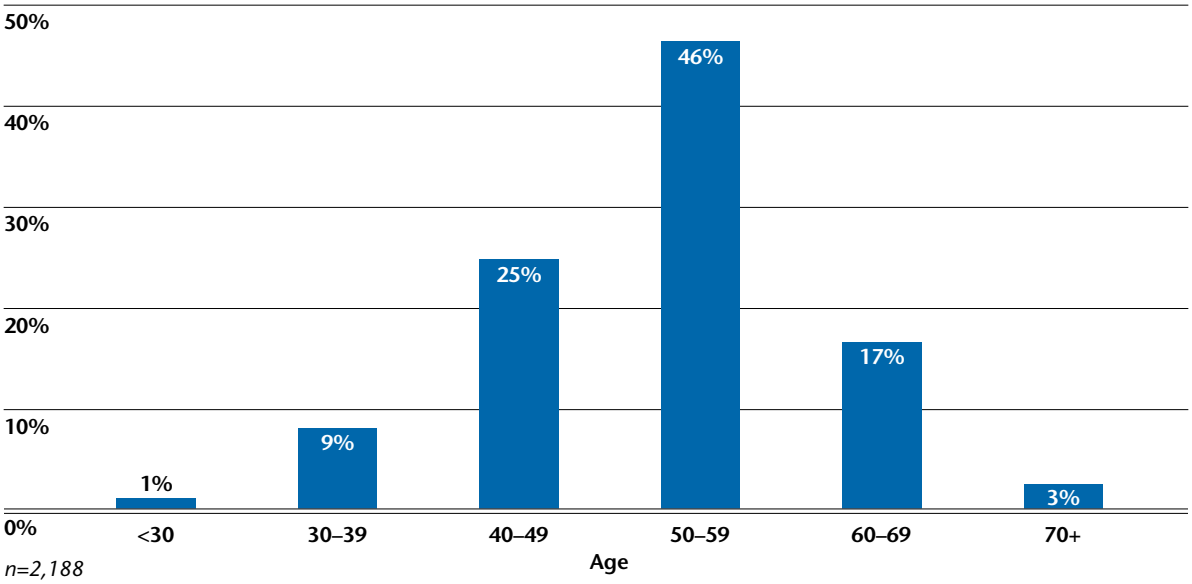
n=2,299 (2005)
n ranged from 2,229 to 2,274 (2008)

**Respondents could report more than one race.*

How Old Were Most LHD Top Executives?

Figure 4.3 shows that almost half of LHD top executives (46%) were 50 to 59 years old, while 25 percent were 40 to 49 years old, 10 percent were under 40 years old, and 20 percent were 60 years old and older. The median age of LHD top executives in 2008 was 53 years.

FIGURE 4.3 Percentage Distribution of Top Agency Executives, by Age Category



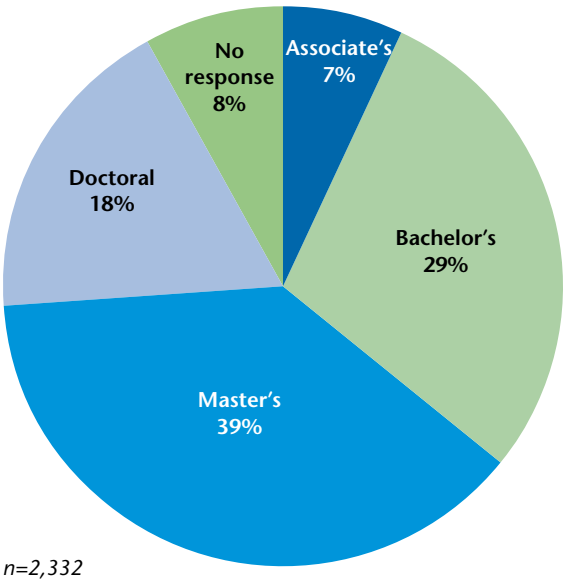
n=2,188

What Was the Education Level of LHD Top Executives?

The 2008 Profile questionnaire included a series of questions on all degrees received by the top agency executive that was used to assess the highest degree received (Figure 4.4). The series of questions was skipped about 8 percent of the time; about 36 percent had an associate's or bachelor's degree as the highest degree; 39 percent a master's degree, and 18 percent a doctoral level degree.

Among the 153 total top executives with an associate's degree (not necessarily as the highest degree), 122 also reported licensure as a registered nurse (not shown).

FIGURE 4.4 Percentage Distribution of Top Agency Executives, by Highest Degree Obtained

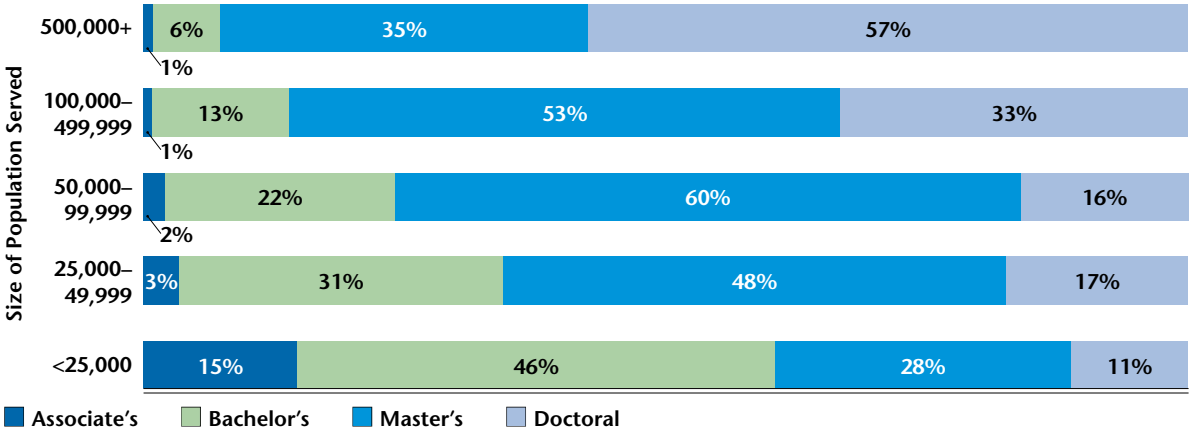


n=2,332

Note: Due to rounding, percentages do not add to 100.

The education level of the top agency executives varied greatly by LHD size. For LHDs serving a population less than 25,000, about 60 percent reported either an associate's or a bachelor's degree as the highest degree. Among LHDs serving populations of 500,000 or more, less than 10 percent of top executives had a bachelor's degree or less, and 57 percent had a doctoral level degree.

FIGURE 4.5 Percentage Distribution of Top Agency Executive Highest Degree Obtained, by LHD Size of Population Served



n=2,156

How Long Have Top Executives Worked at LHDs?

The average tenure for an LHD top executive was 8.7 years (Figure 4.6). The tenure varied modestly by size of populations served, type of jurisdiction, and type of governance. Average tenure for top executives in jurisdictions of 500,000 or more was shorter than that of their counterparts serving smaller jurisdictions. Average tenure for top executives in LHDs that were units of state health agencies was shorter than for top executives in LHDs that were units of local government.

FIGURE 4.6 Mean Years of Tenure of Top Agency Executives, by Selected LHD Characteristics

LHD Characteristics	Mean Tenure (Years)
All LHDs	*8.7*
Size of Population Served	
<25,000	8.6
25,000–49,999	9.5
50,000–99,999	9.1
100,000–499,999	8.5
500,000+	6.3
Type of Jurisdiction	
City	8.8
County	8.5
City/County	9.4
Town/Township	9.2
Multi-County, District, Region	8.2
Type of Governance	
State	7.3
Local	9.1

n=2,207

Were New Top Executives Different from Experienced Top Executives?

Most current top executives—more than three in four—were in their first positions as LHD top executives. Among them, 27 percent had held their position for less than two years. These less experienced LHD top executives in their first positions were different from all other LHD top executives in several ways. First-time top executives starting July 2006 or later were more likely to be female, to report a race other than white, and to report Hispanic ethnicity than were their more experienced counterparts (Figure 4.7).

FIGURE 4.7 Percentage of Top Agency Executive Selected Demographic Characteristics,* by Experience Level

Characteristic	Top Executives with Two or More Years Experience in Current Position or Previously Held Position	First Time Top Executives Starting July 2006 or Later
Female	55.7%	63.0%
Race Other Than White	6.5%	9.1%
Hispanic Ethnicity	1.6%	3.1%

n ranged from 2,229 to 2,288

**Respondents could report more than one race.*

Chapter 5: LHD Workforce

How Many FTE Positions Were Employed by LHDs?

Did the Average Numbers of Employees and FTEs Vary by Size of the Population Served by the LHD?

What Were the Demographic Characteristics of LHD Staff?

What Kinds of Job Functions Were Most Often Included at LHDs?

Did Occupations at the LHD Vary by the Size of the Population Served?

What Were the Average Numbers of Staff Persons at LHDs?

What Were the Typical Staffing Patterns of LHDs?

Has the Workforce Size and Composition Changed Between 2005 and 2008?

What Was the Overall Distribution of the LHD Workforce?

Background

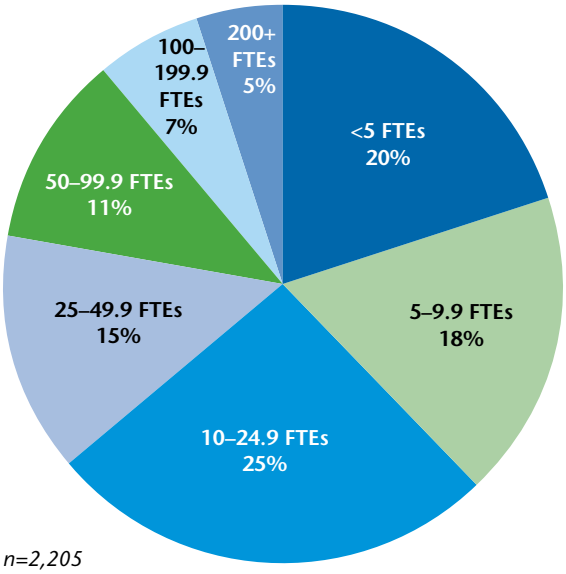
The 2008 Profile questionnaire included questions on the total number of LHD staff and the total number of full-time equivalents (FTEs) in the LHD workforce. Respondents were instructed to include all regular full-time, part-time, and contractual employees. The questionnaire also included items on age, race, ethnicity, and gender of LHD staff; race and ethnicity categories corresponded with 2000 Census definitions.

The workforce section of the questionnaire also included a set of questions on occupational categories staffed at LHDs and numbers of FTEs currently employed. The occupational category section was not intended to be an exhaustive set of all positions at LHDs. Categories included in the questionnaire were manager/director, nurse, physician, administrative or clerical personnel, environmental health (EH) specialist (sanitarian), other EH scientist, epidemiologist, health educator, nutritionist, information systems (IS) specialist, public information (PI) specialist, and behavioral health (BH) professional.

How Many FTE Positions Were Employed by LHDs?

The 2008 Profile questionnaire included items on the total number of employees and the total number of FTE positions in the LHD's workforce. Figure 5.1 displays the number of FTEs reported by LHDs. Most LHDs (89%) had less than 100 FTEs. About 20 percent of LHDs had less than five FTEs; 5 percent had 200 or more FTEs.

FIGURE 5.1 Percentage Distribution of FTE Positions at LHDs



n=2,205

Note: Due to rounding, percentages do not add to 100.

Did the Average Numbers of Employees and FTEs Vary by Size of the Population Served by the LHD?

Both the mean and the median numbers of employees and FTEs are shown by LHD size of population served in Figure 5.2. Because of high outliers in each population category, the mean number of employees and FTEs tended to be higher than the medians.

The total median number of FTEs ranged from three (for LHDs serving populations less than 10,000) to 585 (for LHDs serving populations of one million or more). The total median number of staff ranged from five (for LHDs serving populations less than 10,000) to 692 (for LHDs serving populations of one million or more). FTEs as a percent of all employees gradually increased from 60 percent among LHDs serving populations less than 10,000 to 92 percent among LHDs serving populations 500,000 to 999,999, indicating a decreasing reliance on part-time workers as size of population served increased, with LHDs serving very large populations (one million or more) the only exception.

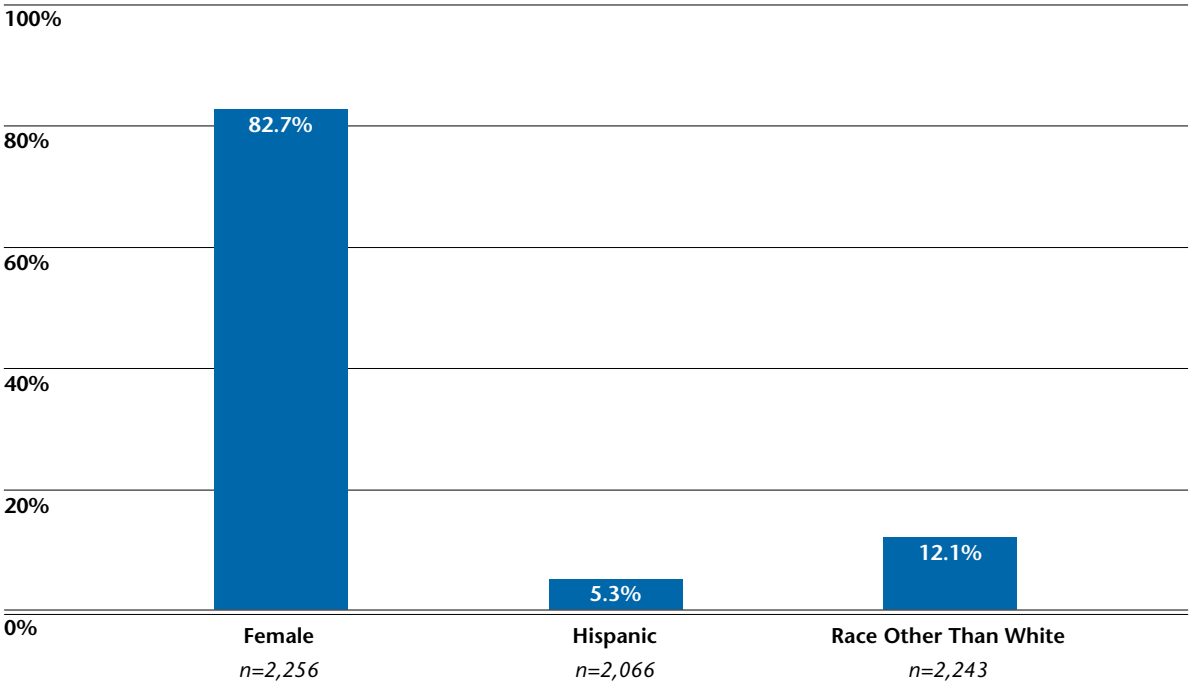
FIGURE 5.2 Mean and Median Number of Employees and FTEs at LHDs, by Size of Population Served

Size of Population Served	Number of Employees		Number of FTEs	
	Mean	Median	Mean	Median
<10,000	8	5	5	3
10,000–24,999	16	10	13	8
25,000–49,999	26	18	22	15
50,000–99,999	50	35	42	31
100,000–249,999	90	74	80	66
250,000–499,999	185	160	168	147
500,000–999,999	494	331	430	305
1,000,000+	1,080	692	994	585
All LHDs	*66*	*18*	*58*	*15*
	n=2,234		*n=2,205*	

What Were the Demographic Characteristics of LHD Staff?

Gender, race, and ethnicity of LHD staff are found in Figure 5.3. Nearly 83 percent of LHD staff were female, about 12 percent were a race other than white, and 5 percent were Hispanic. Race other than white was determined by grouping black or African-American; American Indian or Alaska Native; Asian; Native, Hawaiian, or Other Pacific Islander; some other race; or two or more races into one category.

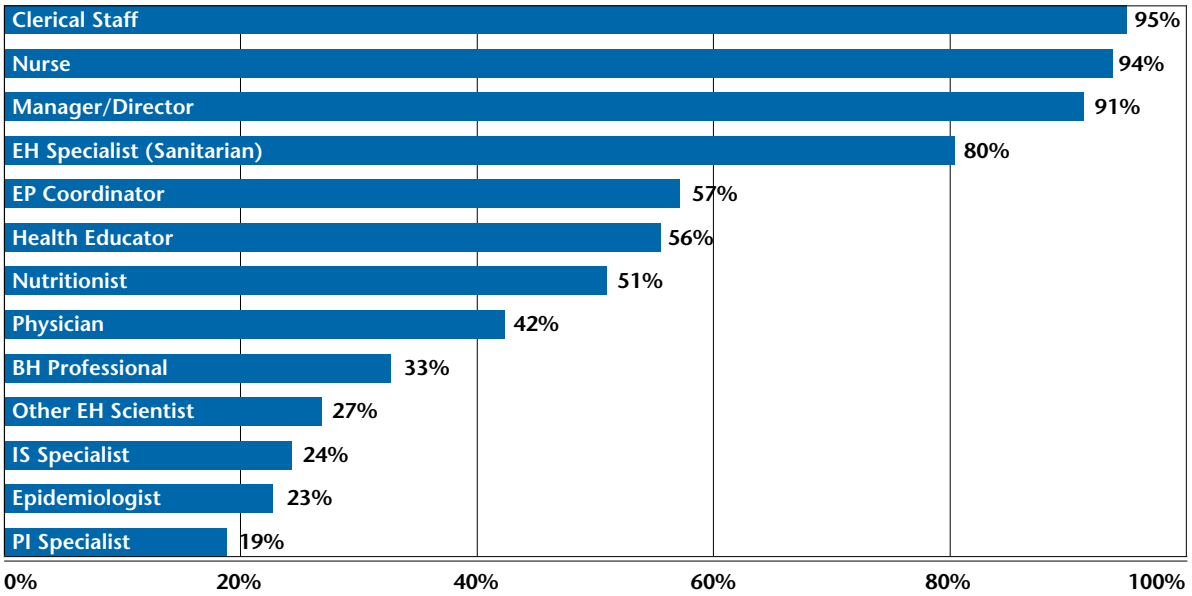
FIGURE 5.3 Percentage of LHD Staff, by Selected Characteristics



What Kinds of Job Functions Were Most Often Included at LHDs?

The 2008 Profile questionnaire included a section on selected categories of LHD workers. For certain occupations (not intended to include all employees), respondents indicated whether the LHD employed staff in this area and, if yes, the number of FTEs that were currently employed. Figure 5.4 indicates that more than 90 percent of LHDs employed clerical staff, nurses, and managers. Environmental health workers, emergency preparedness coordinators, health educators, and nutritionists were employed by more than 50 percent of all LHDs.

FIGURE 5.4 Percentage of LHDs with Employees in Selected Occupations



n ranged from 1,983 to 2,260 based on occupation

Did Occupations at the LHD Vary by the Size of the Population Served?

A detailed table of LHD employees in selected occupations by the size of the population served is shown in Figure 5.5. Among LHDs serving the smallest populations, 85 percent employed clerical staff and 82 percent employed nurses; among LHDs serving the largest populations, all (100%) employed staff in these categories. Environmental health specialists were employed by 54 percent of LHDs serving the smallest and 88 percent of LHDs serving the largest populations. A wide range of employment was shown for health educators and nutritionists. About one-fourth of the LHDs serving populations of less than 10,000 employed these health professionals, whereas almost all LHDs (97%) serving populations of one million or more reported employment of health educators and 88 percent reported employment of nutritionists.

FIGURE 5.5 Percentage of LHDs with Employees in Selected Occupations, by Size of Population Served

Occupation	All LHDs	<10,000	10,000–24,999	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	95%	85%	95%	97%	97%	100%	100%	100%	100%
Nurse	94%	82%	94%	96%	97%	98%	100%	97%	100%
Manager/ Director	91%	79%	89%	94%	96%	97%	100%	97%	100%
EH Specialist (Sanitarian)	80%	54%	78%	86%	90%	92%	93%	88%	88%
EP Coordinator	57%	38%	43%	52%	66%	77%	94%	96%	100%
Health Educator	56%	25%	40%	57%	70%	78%	87%	96%	97%
Nutritionist	51%	23%	35%	50%	64%	76%	85%	85%	88%
Physician	42%	15%	24%	41%	52%	69%	79%	85%	94%
BH Professional	33%	6%	22%	26%	47%	49%	68%	80%	71%
Other EH Scientist	27%	7%	17%	24%	32%	41%	65%	69%	70%
IS Specialist	24%	4%	9%	16%	24%	49%	69%	86%	88%
Epidemiologist	23%	4%	7%	11%	19%	50%	78%	91%	100%
PI Specialist	19%	6%	7%	12%	20%	30%	50%	80%	88%

n ranged from 1,983 to 2,260 based on occupation

What Were the Average Numbers of Staff Persons at LHDs?

Figure 5.6 shows the overall picture of local public health staff and occupations, for all LHDs and by size of population served. Medians instead of mean averages are used throughout this section to avoid the impact of high outliers. First, the median number of all FTE positions employed by LHDs is shown. Next, the figure displays the median number of FTEs for selected occupations.

For all LHDs, the median number of FTEs was 15, which included five nurses, four clerical staff, one manager, one environmental health specialist, and one health educator on staff. As size of the population served increased, LHDs tended to have more occupations represented in staffing patterns, with one emergency preparedness coordinator and at least one nutritionist at LHDs serving 50,000 or more, and at least one physician at LHDs serving 100,000 or more.

FIGURE 5.6 Median Number of FTEs Employed in Selected Occupations, by Size of Population Served

	All LHDs	<10,000	10,000–24,999	25,000–49,999	50,000–99,999	100,000–249,999	250,000–499,999	500,000–999,999	1,000,000+
Median Number of FTEs in All Staff Positions	15	3	8	15	31	66	147	305	585
Median FTEs of Selected Occupations									
Clerical Staff	4	1	2	4	7	16	31	67	136
Nurse	5	1	3	5	8	14	25	52	86
Manager/Director	1	1	1	1	1	4	7	12	18
EH Specialist (Sanitarian)	1	0	1	2	3	8	16	20	31
EP Coordinator	0	0	0	0	1	1	1	1	1
Health Educator	1	0	0	1	1	1	4	5	9
Nutritionist	0	0	0	0	1	2	4	8	19
Physician	0	0	0	0	0	1	1	1	7
BH Professional	0	0	0	0	0	0	3	8	11
Other EH Scientist	0	0	0	0	0	0	1	3	6
IS Specialist	0	0	0	0	0	0	1	3	5
Epidemiologist	0	0	0	0	0	0	1	2	5
PI Specialist	0	0	0	0	0	0	0	1	1

n ranged from 1,794 to 1,992 based on occupation

What Were the Typical Staffing Patterns of LHDs?

When viewed by the size of the population served, LHD staffing patterns were quite different (Figure 5.7). LHDs serving populations from 10,000 to 24,999 typically had eight FTE positions, including among others a manager, three nurses, two clerical staff, and one environmental health specialist. LHDs serving populations from 50,000 to 99,999 usually had about 31 FTE positions, including among others one manager, eight nurses, seven clerical staff, three environmental health specialists, one nutritionist, one health educator, and one emergency preparedness coordinator. LHDs serving populations from 100,000 to 499,999 had an average of 81 FTEs, including among others five managers, 17 nurses, 18 clerical staff, nine environmental health specialists, three nutritionists, two health educators, one emergency preparedness coordinator, one physician, one epidemiologist, one information system specialist, and one behavioral health professional.

FIGURE 5.7 Median FTEs and Staffing Patterns for LHDs, by Size of Population Served

Serving 10,000–24,999	Serving 50,000–99,999	Serving 100,000–499,999
8 FTEs, including:	31 FTEs, including:	81 FTEs, including:
1 Manager/Director	1 Manager/Director	5 Managers/Directors
3 Nurses	8 Nurses	17 Nurses
2 Clerical Staff	7 Clerical Staff	18 Clerical Staff
1 EH Specialist	3 EH Specialists	9 EH Specialists
	1 Nutritionist	3 Nutritionists
	1 Health Educator	2 Health Educators
	1 EP Coordinator	1 EP Coordinator
		1 Physician
		1 Epidemiologist
		1 IS Specialist
		1 BH Professional

n ranged from 1,794 to 1,992 based on occupation

Note: Numbers do not add to totals because listed occupational categories were not exhaustive of all LHD occupations.

Has the Workforce Size and Composition Changed Between 2005 and 2008?

The estimated size and composition of the LHD workforce in 2005 and 2008 are shown in Figure 5.8. The figure also shows the confidence interval for each estimate. The estimated overall LHD workforce has remained the same (155,000) from 2005 and 2008. Within specific occupational categories, most estimates have remained the same or declined slightly; none of the differences are statistically significant.

FIGURE 5.8 Estimated Size and Composition of LHD Workforce

	2005			2008		
	Best Estimate	95% Confidence Interval	Percentage of All LHD Staff	Best Estimate	95% Confidence Interval	Percentage of All LHD Staff
All LHD Staff	*155,000*	*140,000–171,000*	*100%*	*155,000*	*135,000–174,000*	*100%*
Manager/Director	9,900	8,600–11,000	6.4%	9,500	8,400–11,000	6.2%
Nurse	38,000	34,000–41,000	24.4%	33,000	29,000–36,000	21.3%
Physician	2,000	1,600–2,500	1.3%	2,000	1,500–2,400	1.3%
EH Specialist (Sanitarian)	12,000	11,000–14,000	8.0%	12,000	10,000–13,000	7.5%
Other EH Scientist	3,400	2,600–4,300	2.2%	3,200	2,400–3,900	2.0%
Epidemiologist	1,300	950–1,600	0.8%	1,200	900–1,500	0.8%
Health Educator	4,500	3,800–5,100	2.9%	4,400	3,800–4,900	2.8%
Nutritionist	4,400	3,900–5,000	2.8%	4,300	3,700–4,900	2.8%
IS Specialist	1,700	1,400–2,000	1.1%	1,600	1,100–2,000	1.0%
PI Specialist	450	370–520	0.3%	430	350–510	0.3%
BH Professional	N/A	N/A	N/A	7,100	5,400–8,700	4.6%
EP Coordinator	1,400	1,300–1,500	0.9%	1,400	1,300–1,500	0.9%
Clerical Staff	40,000	36,000–44,000	25.8%	36,000	31,000–40,000	23.1%

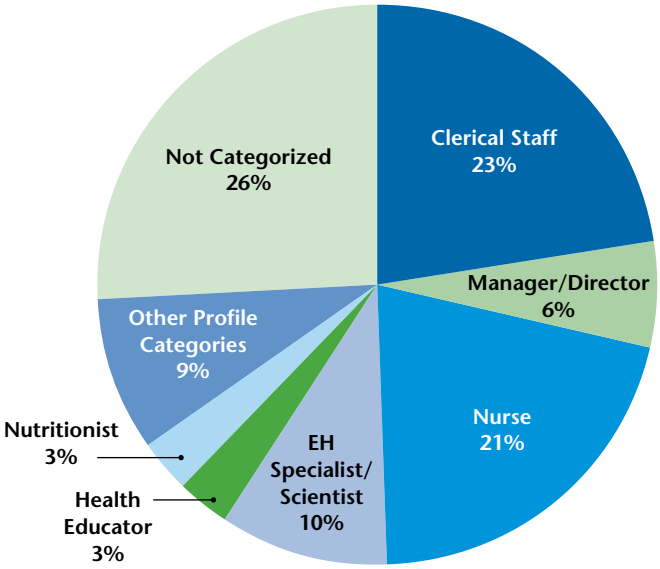
n ranged from 1,794 to 2,205 based on occupation

Note: Numbers do not add to totals because listed occupational categories were not exhaustive of all LHD occupations.

What Was the Overall Distribution of the LHD Workforce?

Figure 5.9 shows that almost half of the LHD workforce consisted of clerical staff (23%) and nurses (21%). An additional 26 percent of LHD staff were not categorized; these were LHD staff included in the total FTEs but not identified in the selected occupational categories listed in the questionnaire.

FIGURE 5.9 Percentage Distribution of Occupations in the LHD Workforce



n ranged from 1,794 to 2,205 based on occupation

Note: Due to rounding, percentages do not add to 100.

Chapter 6: Emergency Preparedness

What Kinds of Centers for Disease Control and Prevention (CDC) Funding Did LHDs Receive for Emergency Preparedness Activities?

Did Funding Vary by the Size of the Population Served by the LHD?

What Was the Funding per Capita for Emergency Preparedness Activities in LHD Jurisdictions?

What Were the per Capita Levels of CDC Funding to LHDs for Emergency Preparedness by State?

How Many LHDs Had Staff Salaries Paid with Emergency Preparedness Funding?

What Kinds of Emergency Preparedness Planning Activities Were Conducted by LHDs?

What Were the Reasons for Activating an Emergency Operations Center (EOC)?

What Percentage of LHDs Responded to Specific Emergency Events?

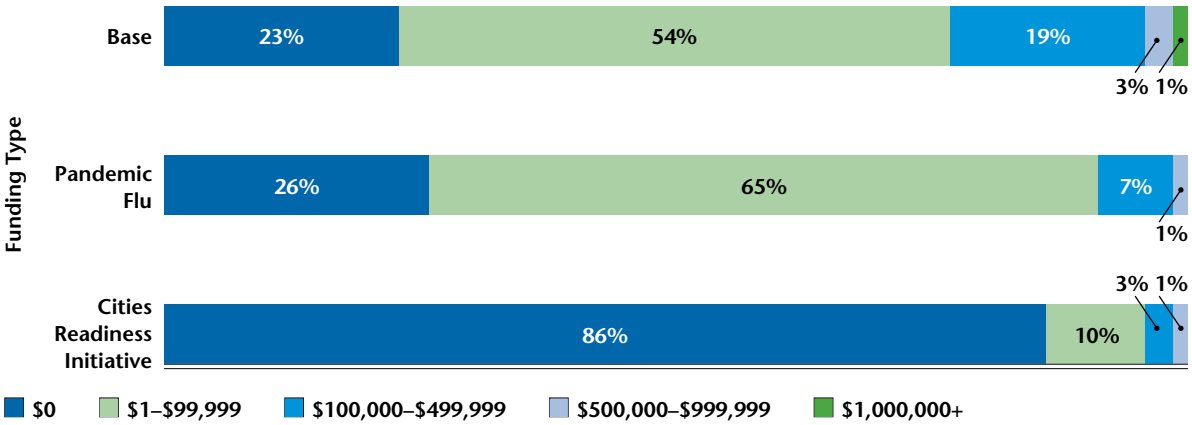
Background

Centers for Disease Control and prevention (CDC) funding for emergency preparedness came to LHDs through state health agencies in three funding streams: base funding, pandemic flu funding, and cities readiness initiative (CRI) funding. In the 2008 Profile questionnaire, respondents were asked to report funds received during the most recently completed cooperative agreement year (August 31, 2006–August 30, 2007). Respondents were also directed to include only those funds received directly by the LHDs (not including funds spent or retained by the state health agency for the benefit of LHDs). All funding data are reported with rounding to three significant digits. Because data for these items were unreported in about 20 percent of the questionnaires, the findings on emergency preparedness funding (Figures 6.1–6.4) should be interpreted with some caution.

What Kinds of CDC Funding Did LHDs Receive for Emergency Preparedness Activities?

Figure 6.1 shows that 23 percent of LHDs received zero dollars for base emergency preparedness, 54 percent received less than $100,000 and 23 percent received $100,000 or more. Pandemic flu funding showed a fairly similar pattern: 26 percent received zero dollars, 65 percent received less than $100,000, and 8 percent received $100,000 or more. CRI funding, targeted to major cities and metropolitan areas, showed a much different distribution with 14 percent of LHDs having received any funding through the program.

FIGURE 6.1 Percentage Distribution of LHDs with CDC Emergency Preparedness Funding, by Funding Level and Type of Fund



n=1,877

Did Funding Vary by the Size of the Population Served by the LHD?

In Figure 6.2, funding levels for preparedness activities are shown by the size of the population served by the LHD. Both the mean (average) and median funding levels are displayed. Due to high outliers in every population group, means are higher than medians in each category and each funding source.

Overall, mean total emergency preparedness funding for all LHDs was $191,000 and median funding was $45,700. Mean total funding ranged from $36,100 for LHDs with populations of less than 25,000 to $3,450,000 for LHDs with populations of more than one million, whereas median funding ranged from $21,000 to $1,910,000. For all LHDs, the mean base funding was

$128,000; mean pandemic flu funding was $42,900; and mean CRI funding was $19,700 (not shown).

FIGURE 6.2 Mean and Median CDC Emergency Preparedness Funding to LHDs, by Type of Fund and Size of Population Served

Size of Population Served	Number of LHDs	Total Funding	
		Mean	Median
All LHDs	*1,876*	*$191,000*	*$45,700*
<25,000	674	$36,100	$21,000
25,000–49,999	406	$103,000	$50,500
50,000–99,999	322	$94,600	$74,100
100,000–249,999	266	$229,000	$178,000
250,000–499,999	98	$476,000	$383,000
500,000–999,999	75	$843,000	$719,000
1,000,000+	35	$3,450,000	$1,910,000

What Was the Funding per Capita for Emergency Preparedness Activities in LHD Jurisdictions?

Figure 6.3 shows the median per capita funding for emergency preparedness activities among LHDs with any CDC preparedness funding (base, pandemic flu, and/or CRI). Medians were used because high outliers within each population group strongly influenced mean per capita by LHD. Among all LHDs receiving any CDC preparedness revenues (base, pandemic flu, and/or CRI), the total median revenue per capita was $1.59. Among LHDs receiving any base funding, the median per capita base funding amount was $1.15; among LHDs receiving any pandemic flu funding, the median per capita pandemic flu funding amount was $0.46; among LHDs receiving any CRI funding, the median per capita CRI funding was $0.24. Total median funding generally decreased as population size increased, with $2.36 in funding per capita for LHDs serving

FIGURE 6.3 Median per Capita Funding of CDC Emergency Preparedness Funding to LHDs for All Preparedness Funds by Type, by Selected LHD Characteristics

LHD Characteristics	Total*	Base**	Pandemic Flu**	Cities Readiness Initiative**
All LHDs	*$1.59*	*$1.15*	*$0.46*	*$0.24*
Size of Population Served				
<25,000	$2.36	$1.69	$0.85	$0.33
25,000–49,999	$1.55	$1.12	$0.46	$0.25
50,000–99,999	$1.28	$0.97	$0.33	$0.25
100,000–249,999	$1.32	$0.90	$0.33	$0.18
250,000–499,999	$1.18	$0.81	$0.26	$0.24
500,000–999,999	$1.08	$0.67	$0.29	$0.17
1,000,000+	$1.27	$0.81	$0.28	$0.28
Degree of Urbanization				
Urban	$1.07	$0.81	$0.33	$0.23
Suburban/Micropolitan	$1.48	$1.07	$0.41	$0.24
Small Town/Rural	$2.36	$1.70	$0.75	$0.33
Type of Governance				
Unit of Local Government	$1.65	$1.19	$0.47	$0.24
Unit of the State Health Agency	$1.02	$0.85	$0.36	$0.19
	n=1,599	*n=1,457*	*n=1,400*	*n=276*

**Among LHDs receiving any funding in one or more preparedness categories (base, pandemic flu, or CRI).*

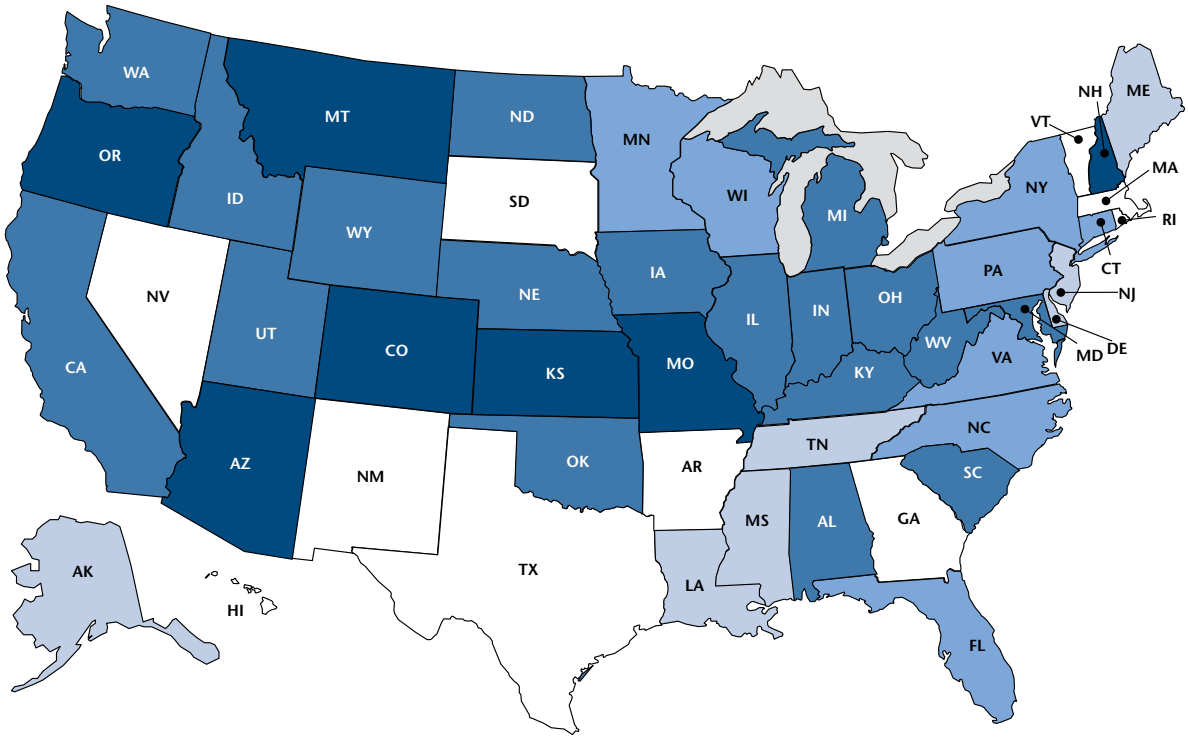
***Among LHDs receiving funding within the specified category.*

populations less than 25,000 to $1.27 for LHDs serving populations more than one million. LHDs serving urban areas received lower per capita funding than LHDs serving suburban or rural areas. Finally, LHDs that were units of local government had much higher funding ($1.65 per capita) than LHDs that were units of state government ($1.02).

What Were the per Capita Levels of CDC Funding to LHDs for Emergency Preparedness by State?

In order to compare total CDC emergency preparedness funding to LHDs in each state, per capita mean levels of CDC emergency preparedness funds (base, pandemic flu, and CRI) funding were computed (Figure 6.4). The highest per capita funding levels ($5 or more per person) were found Arizona, Colorado, Kansas, Missouri, Montana, New Hampshire, Oregon, and Washington, DC; the lowest per capita funding levels (less than $1) were found in Alaska, Delaware, Louisiana, Maine, Mississippi, New Jersey, and Tennessee. Data for these items were insufficient or not reported for several states; for several others, data should be approached with some caution due to lower responses (50–60%) for these questionnaire items.

FIGURE 6.4 Mean per Capita CDC Emergency Preparedness Funding to LHDs, by State* (Map)



$5 or more | $2–$4.99 | $1–$1.99 | <1

Non-participants: Hawaii and Rhode Island
None or insufficient data: Arkansas, Georgia, Massachusetts, New Mexico, Nevada, South Dakota, Vermont, and Texas

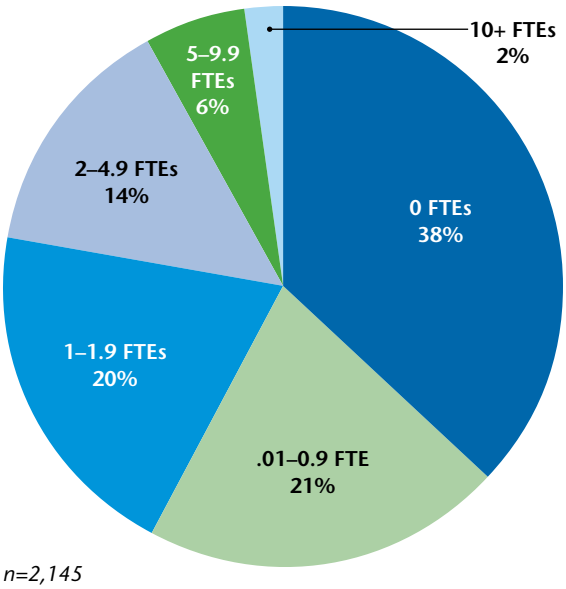
*Based on relatively low (51–60%) statewide response rates in California, Connecticut, Kentucky, Indiana, Louisiana, and Montana.

How Many LHDs Had Staff Salaries Paid with Emergency Preparedness Funding?

The Profile questionnaire asked whether any LHD staff salaries (regular or contract) were supported with funds received from the state health agency through any of the CDC public health emergency preparedness cooperative agreement funds, and, if so, how many staff were supported (number of staff were reported as FTEs).

Figure 6.5 shows that 38 percent of all LHDs had no FTEs supported by CDC emergency preparedness funding. An additional 21 percent had less than one FTE supported with emergency preparedness funding, 20 percent with one to less than two FTEs, and 22 percent with two or more FTEs.

FIGURE 6.5 Percentage Distribution of LHDs with FTEs Supported by CDC Emergency Preparedness Funding, by Number of FTEs



n=2,145

Note: Due to rounding, percentages do not add to 100.

What Kinds of Emergency Preparedness Planning Activities Were Conducted by LHDs?

The Profile questionnaire included a list of emergency preparedness planning activities and asked if these activities had been conducted during the past year. Three types of drills or exercises were specified: tabletop (a scenario based discussion), functional (a scenario-based execution of selected tasks or activities within a functional area of an Emergency Operations Plan), or full-scale (a scenario-based exercise that includes all or most of the functions and complex activities of the Emergency Operations Plan). An exercise After Action Report (AAR)—conducted after the drills named above—and related planning were also items in the questionnaire, as was National Incident Management System (NIMS) compliance. Additional items related to the assessment of LHD staff emergency preparedness competencies and emergency preparedness training for staff.

Figure 6.6 shows the emergency preparedness planning activities conducted by LHDs during the past year. More than 80 percent of LHDs had developed or updated a pandemic flu preparedness plan, participated in a tabletop drill or exercise, and/or provided emergency preparedness training to staff.

The Profile questionnaire also asked about three other emergency preparedness efforts: development or enhancement of a local Medical Reserve Corps, development of mutual aid agreements with neighboring or regional LHDs, and the selection of a method or methods for mass prophylaxis. For this item, no time period was specified, so that the overall prevalence of these efforts could be identified, not only those that had occurred within the past year.

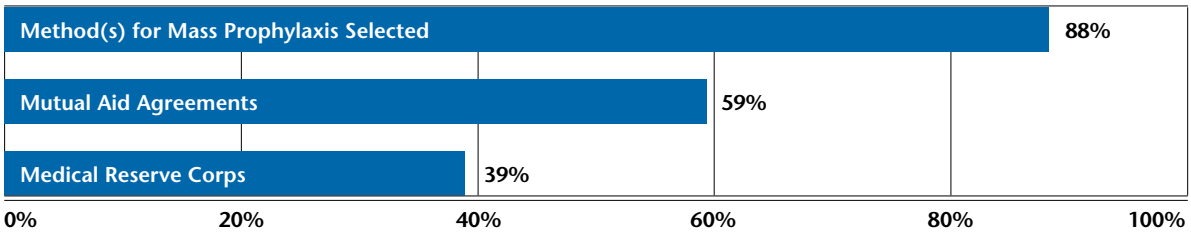
FIGURE 6.6 Percentage of LHDs with Selected Emergency Preparedness Activities in the Past Year

Activity	Percent
Developed or Updated Pandemic Flu Preparedness Plans	89%
Participated in Drills or Exercises: Tabletop	86%
Provided Emergency Preparedness Training to Staff on NIMS Compliance	85%
Updated a Written Emergency Response Plan Based on Recommendations from an Exercise After Action Report (AAR)	76%
Participated in Drills or Exercises: Functional	72%
Reviewed Relevant Legal Authorities to Isolate and/or Quarantine	68%
Participated in Drills or Exercises: Full-Scale	49%
Assess Emergency Preparedness Competencies of Staff Based on the Nine Core Emergency Preparedness Competencies and the Agency's All-Hazards Response Plan	46%
None of the Above	1%

n=2,301

Figure 6.7 shows the general emergency preparedness efforts of LHDs. Most LHDs had selected a method for mass prophylaxis. Mutual aid agreements had been developed by 59 percent of LHDs overall. Medical Reserve Corps development was reported by 39 percent of all LHDs, and varied from 29 percent of LHDs serving populations of less than 25,000 to 76 percent of LHDs serving populations of one million or more (not shown).

FIGURE 6.7 Percentage of LHDs with Selected Emergency Preparedness Efforts, by Size of Population Served



n=2,279

What Were the Reasons for Activating an Emergency Operations Center (EOC)?

The 2008 Profile questionnaire included an item on the general reasons for activating a jurisdictional or LHD EOC. An EOC has been defined in the Federal Emergency Management Agency's *National Response Framework* as "the physical location at which the coordination of information and resources to support incident management (on-scene operations) activities normally takes place." An EOC may be a temporary facility or may be located in a more central or permanently established facility, perhaps at a higher level of organization within a jurisdiction. EOCs may be organized by major functional disciplines (e.g., fire, law enforcement, medical services), by jurisdiction (e.g., federal, state, regional, tribal, city, county), or some combination thereof. EOCs are activated during emergencies as well as during exercises.

Figure 6.8 shows that in the past year, 22 percent of LHDs did not activate an EOC, whereas 27 percent activated for an emergency response, 28 percent for a non-emergency event, and 62 percent for drills or exercises.

FIGURE 6.8 Percentage of LHDs with an Emergency Operations Center (EOC) Activated in the Past Year, by Reason for Activation

EOC Activation	Percent
Drills or Exercises	62%
Non-Emergency Event	28%
Emergency Response	27%
No Activation	22%

n=2,249

What Percentage of LHDs Responded to Specific Emergency Events?

The Profile questionnaire included a question designed to capture the activation of the EOCs for actual public health emergency events in a "check all that apply" format. About 27 percent of LHDs activated a jurisdictional or LHD EOC for an emergency event, and these events are described in Figure 6.9. Most EOC activations for emergency events were related to natural disasters or severe weather (80%), followed by infectious diseases (14%), and chemical spills or releases (11%).

FIGURE 6.9 Percentage of LHDs with an EOC Activated in the Past Year for Emergency Events, by Type of Emergency*

Emergency Type	Percent
Natural Disasters and Severe Weather	80%
Infectious Disease	14%
Chemical Spills or Releases	11%
Food-Borne Outbreaks	8%
Other	7%
Water-Borne Outbreaks	5%
Exposure to Biological Agent	2%
Radioactive Material Spill or Leak	1%

n=613

**Includes LHDs with activation of EOC for emergencies only (no drills or pre-planned events).*

Chapter 7: LHD Activities

What Public Health Activities and Services Were Provided Most Often by LHDs and Others?

What Percentage of LHDs Provided Immunization Services?

What Percentage of Jurisdictions Had Screenings Available for Diseases and Conditions?

What Percentage of Jurisdictions Had Treatment Available for Communicable Diseases?

What Percentage of Jurisdictions Had Services Available for Maternal and Child Health (MCH)?

What Percentage of Jurisdictions Had Other Personal Health Services Available?

What Percentage of Jurisdictions Had Services Available for Primary Prevention?

What Percentage of Jurisdictions Had Activities Provided for Surveillance and Epidemiology?

What Percentage of Jurisdictions Had Activities Provided for Environmental Health?

What Percentage of Jurisdictions Had Activities Provided for Regulation, Licensing, or Inspection?

What Percentage of Jurisdictions Had Other Public Health Activities?

Background

The Profile study questionnaire was designed to assess the overall availability of public health activities and services at the local level, and identify the types of providers for each. The 2008 questionnaire listed 87 separate activities and services in the following groups: immunization services; screening for diseases and conditions; treatment for communicable diseases; maternal and child health services; other health services; population-based primary prevention services; surveillance and epidemiology; environmental health; regulation, inspection, and licensing; and other activities.

Respondents were asked to check all types of organizations providing each activity or service within the LHD jurisdiction. Types of organizations included the LHD as the direct provider, the LHD as the contractor, a state agency, another local governmental agency, and "done by someone else" (non-governmental organizations, or NGOs). Other listed choices included "unknown" and "not available in the jurisdiction." The NGO category represents many different types of organizations, such as physician practices, hospitals, community-based organizations, and other voluntary organizations. The Profile questionnaire captures information about which organizations provide public health services, but is not designed to measure whether the level of a service or activity is adequate for the jurisdiction.

For each group of activities or services, this chapter includes a table that details the percentage of all LHDs that provided each activity or service, plus a breakdown by jurisdiction population size. The percentages presented in these tables include LHDs that provided the service or activity directly, contracted it out, or both.

For each group of activities, except immunization (which was almost universally provided by LHDs), this chapter also includes a graph that summarizes information about what kinds of organizations provided each service or activity in LHD jurisdictions. Although there are large numbers of possible combinations of organizations, only five selected combinations are displayed for each group of activities or services. Estimates of the percentage of LHD jurisdictions with provision of each activity or service are based on these combinations only; actual percentages may be higher.

For groups of activities or services that include mostly clinical services (screenings for diseases and conditions, treatment of communicable diseases, maternal and child health services, and other personal health services), the graphs focus on provision of these services by governmental agencies only. In most LHD jurisdictions, private physicians, clinics, or hospitals also delivered these clinical services. These graphs display the percentage of jurisdictions where each service was available through the LHD (broken out by direct provision, contracted out, and both). In cases where the service was not available through the LHD, the graph displays the percentage of jurisdictions where the service was provided by another local governmental agency or a state agency.

For the remaining groups of activities and services, the graphs display selected combinations that include all of the types of organizations listed in the questionnaire. For population-based primary prevention activities and epidemiology/surveillance, the combinations displayed are (1) provided by LHD only (directly, via contract, or both); (2) provided by both LHD and an NGO; (3) provided by a state agency only; (4) provided by multiple governmental agencies (e.g., LHD and another state or local agency); and (5) provided only by an NGO. For environmental health, regulatory, and miscellaneous public health activities, the combinations displayed are (1) provided by LHD only (directly, via contract, or both); (2) provided by another local agency

only; (3) provided by a state agency only; (4) provided by multiple governmental agencies; and (5) provided by an NGO only.

What Public Health Activities and Services Were Provided Most Often by LHDs and Others?

Figure 7.1 presents the 10 activities and services provided most frequently in LHD jurisdictions by LHDs. Immunizations (for adults and children) and communicable and infectious disease surveillance (including tuberculosis) and food service establishment inspection were conducted by more than three-fourths of LHDs.

FIGURE 7.1 Percentage of LHD Jurisdictions with 10 Most Frequent Activities and Services Available Through LHDs Directly

Rank	Activity or Service	Percentage of Jurisdictions
1	Adult Immunizations Provision	88%
2	Communicable/Infectious Disease Surveillance	88%
3	Child Immunizations Provision	86%
4	Tuberculosis Screening	81%
5	Food Service Establishment Inspection	77%
6	Environmental Health Surveillance	75%
7	Food Safety Education	74%
8	Tuberculosis Treatment	72%
9	Tobacco Use Prevention	70%
10	Schools/Daycare Center Inspection	68%

Figure 7.2 presents the 10 activities and services provided most frequently in LHD jurisdictions through LHD contracts with other organizations. Overall, contracts with other organizations were infrequent, with the highest category (laboratory services) contracted out by 13 percent of LHDs.

FIGURE 7.2 Percentage of LHD Jurisdictions with 10 Most Frequent Activities and Services Available Through LHD Contracts

Rank	Activity or Service	Percentage of Jurisdictions
1	Laboratory Services	13%
2	STD Screening	7%
3	HIV/AIDS Screening	7%
4	Cancer Screening	7%
5	Adult Immunizations Provision	6%
6	HIV/AIDS Treatment	6%
7	STD Treatment	6%
8	Tobacco Use Prevention	6%
9	Family Planning	6%
10	Lead Inspection	5%

Figure 7.3 presents the 10 activities and services provided most frequently by other local governmental agencies. More than half of LHDs reported that animal control, land use planning, and specific emergency response activities (hazardous materials and emergency medical services) were provided by other local governmental agencies.

FIGURE 7.3 Percentage of LHD Jurisdictions with 10 Most Frequent Activities and Services Available Through Other Local Governmental Agencies

Rank	Activity or Service	Percentage of Jurisdictions
1	Animal Control	64%
2	Land Use Planning	61%
3	Hazmat Response	60%
4	Emergency Medical Services	52%
5	Housing Inspections	38%
6	Medical Examiner's Office	38%
7	Hazardous Waste Disposal	37%
8	School Health Activities	36%
9	Groundwater Protection	34%
10	Outreach and Enrollment for Medical Insurance	33%

Figure 7.4 presents the 10 activities and services most frequently available *only* through NGOs. Most of these are clinical services (provided by LHDs in some other jurisdictions).

FIGURE 7.4 Percentage of LHD Jurisdictions with 10 Most Frequent Activities and Services Available Exclusively Through NGOs

Rank	Activity or Service	Percentage of Jurisdictions
1	Comprehensive Primary Care	84%
2	Obstetrical Care	79%
3	Substance Abuse Services	77%
4	Oral Health Care	77%
5	Mental Health Services	76%
6	Home Healthcare	76%
7	Cardiovascular Disease Screening	73%
8	Prenatal Care	71%
9	Cancer Screening	70%
10	Diabetes Screening	70%

What Percentage of LHDs Provided Immunization Services?

Overall, 88 percent of LHDs performed adult immunizations and 86 percent performed childhood immunizations (Figure 7.5). For both adult and childhood immunizations, however, the likelihood of providing immunizations generally increased with increasing population size of the jurisdiction served. For adult immunizations, 82 percent of LHDs serving jurisdictions of less than 25,000 performed adult immunizations, whereas 94 percent of LHDs serving populations of 500,000 or more performed adult immunizations. Similarly, 79 percent of LHDs serving jurisdictions of less than 25,000 performed childhood immunizations, whereas 93 percent of LHDs serving populations of 500,000 or more performed childhood immunizations.

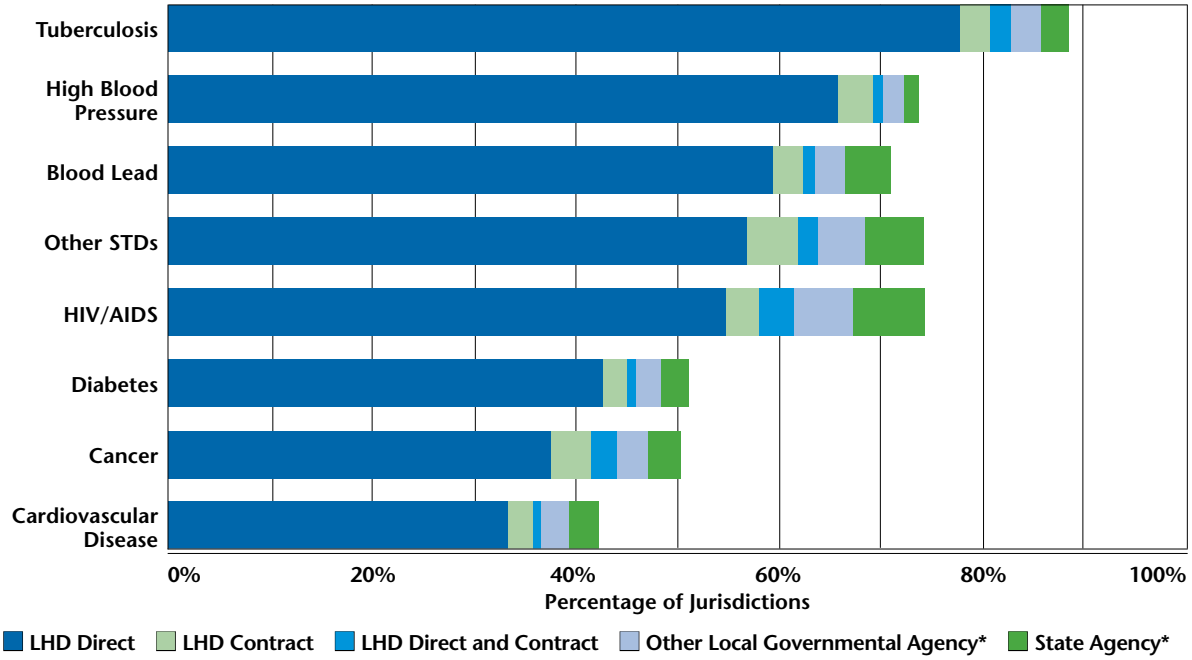
FIGURE 7.5 Percentage of LHDs with Adult and Childhood Immunization Services, by Size of Population Served

Immunization Category	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000+
Adult	88%	82%	90%	94%	93%	94%
Childhood	86%	79%	89%	92%	94%	93%

What Percentage of Jurisdictions Had Screenings Available for Diseases and Conditions?

Figure 7.6 shows that 40 percent or more of local jurisdictions were covered by governmental agencies providing screening for all diseases and conditions included in the questionnaire. For tuberculosis, high blood pressure, blood lead, HIV/AIDS, and other STDs, governmental agencies provided screening in more than 70 percent of LHD jurisdictions. For all of these selected diseases and conditions, the LHD was the most often cited governmental agency providing screening services.

FIGURE 7.6 Percentage of LHD Jurisdictions with Screenings for Selected Diseases and Conditions Provided by Governmental Agencies



*Provided by other agency only, not LHD.

Selected agency combinations only; does not include all possible combinations.

The majority of LHDs provided screening for the following five diseases and conditions (Figure 7.7): tuberculosis (81%), high blood pressure (68%), blood lead (62%), HIV/AIDS (59%), and other STDs (60%). Among all diseases and conditions listed in the questionnaire, respondents for LHDs serving larger populations were generally more likely to report that screening was provided.

For the communicable diseases, however, the likelihood of provision of screening services varied considerably by size of the population served by the LHD, with tuberculosis services available to 72 percent of jurisdictions serving less than 25,000 but available to more than 90 percent of jurisdictions with populations of 100,000 or more. For HIV/AIDS and other STDs, the likelihood of screening availability at the LHD almost doubled, from less than 50 percent for jurisdictions with populations less than 25,000 to more than 80 percent among jurisdictions of 100,000 or more.

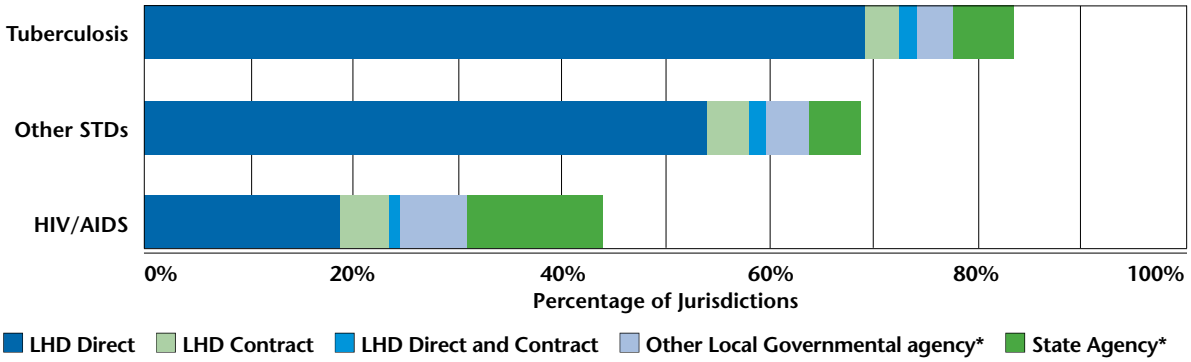
FIGURE 7.7 Percentage of LHD Jurisdictions with Screenings for Selected Diseases and Conditions Provided by LHDs, by Size of Population Served

Disease or Condition	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000+
Tuberculosis	81%	72%	82%	87%	92%	91%
High Blood Pressure	68%	70%	69%	70%	58%	66%
Blood Lead	62%	56%	64%	68%	69%	72%
Other STDs	60%	49%	56%	65%	81%	86%
HIV/AIDS	59%	45%	58%	68%	82%	87%
Diabetes	45%	46%	43%	45%	43%	53%
Cancer	42%	34%	41%	50%	49%	54%
Cardiovascular Disease	35%	31%	39%	40%	36%	48%

What Percentage of Jurisdictions Had Treatment Available for Communicable Diseases?

Figure 7.8 shows that the percent of local jurisdictions with coverage by governmental agencies providing treatment for selected communicable diseases varied greatly by disease. For tuberculosis, governmental agencies provided treatment in 83 percent of LHD jurisdictions; for STDs, 69 percent; for HIV/AIDS, 44 percent.

FIGURE 7.8 Percentage of LHD Jurisdictions with Communicable Disease Treatment Provided by Governmental Agencies for Selected Diseases



*Provided by other agency only, not LHD.

Selected agency combinations only; does not include all possible combinations.

For the treatment of each communicable disease, the LHD was the most often cited governmental agency providing services.

The majority of LHDs provided treatment for tuberculosis (72%) and STDs (57%; Figure 7.9). Treatment for HIV/AIDS was offered by 20 percent of LHDs. For all communicable diseases included in the questionnaire, the likelihood that the LHD provided treatment services generally increased with increasing population size of the jurisdiction served.

FIGURE 7.9 Percentage of LHD Jurisdictions with Selected Communicable Disease Treatment Provided by LHDs, by Size of Population Served

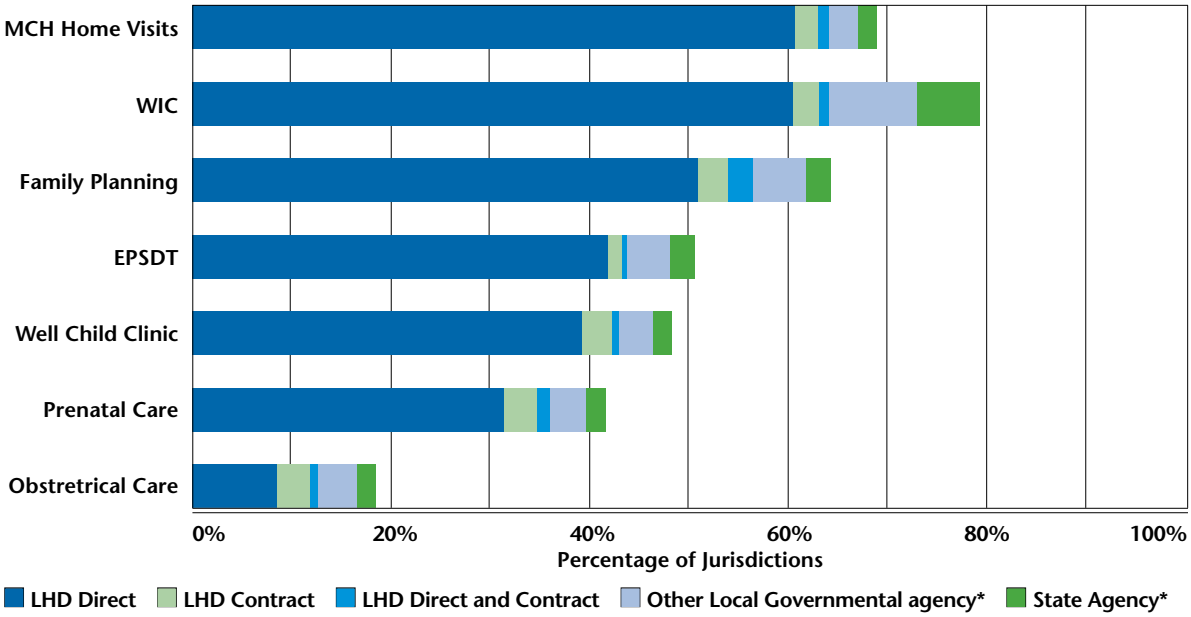
Communicable Disease	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000+
Tuberculosis	72%	62%	73%	78%	86%	90%
Other STDs	57%	45%	52%	62%	79%	84%
HIV/AIDS	20%	15%	17%	20%	32%	37%

What Percentage of Jurisdictions Had Services Available for Maternal and Child Health (MCH)?

Figure 7.10 shows that 50 percent or more of local jurisdictions were covered by governmental agencies providing some maternal and child health services; specifically, Women, Infants, and Children (WIC) services, MCH home visits, family planning services, and the Early Periodic Screening, Detection, and Treatment (EPSDT) program. Well child clinics and prenatal care were available through governmental agencies in over 40 percent of local jurisdictions.

For the MCH services included in the questionnaire, the LHD was the most often cited governmental agency providing services.

FIGURE 7.10 Percentage of LHD Jurisdictions with Selected Maternal and Child Health Services Provided by Governmental Agencies



*Provided by other agency only, not LHD.

Selected agency combinations only; does not include all possible combinations.

Most LHDs provided MCH home visits, WIC services, and family planning services (Figure 7.11). EPSDT was offered by 44 percent of LHDs overall and varied less by size of the population served (from 41% of LHDs serving populations less than 25,000 to 49% of LHDs serving those of 500,000 or more) than other categories.

FIGURE 7.11 Percentage of LHD Jurisdictions with Selected Maternal and Child Health Services Provided by LHDs, by Size of Population Served

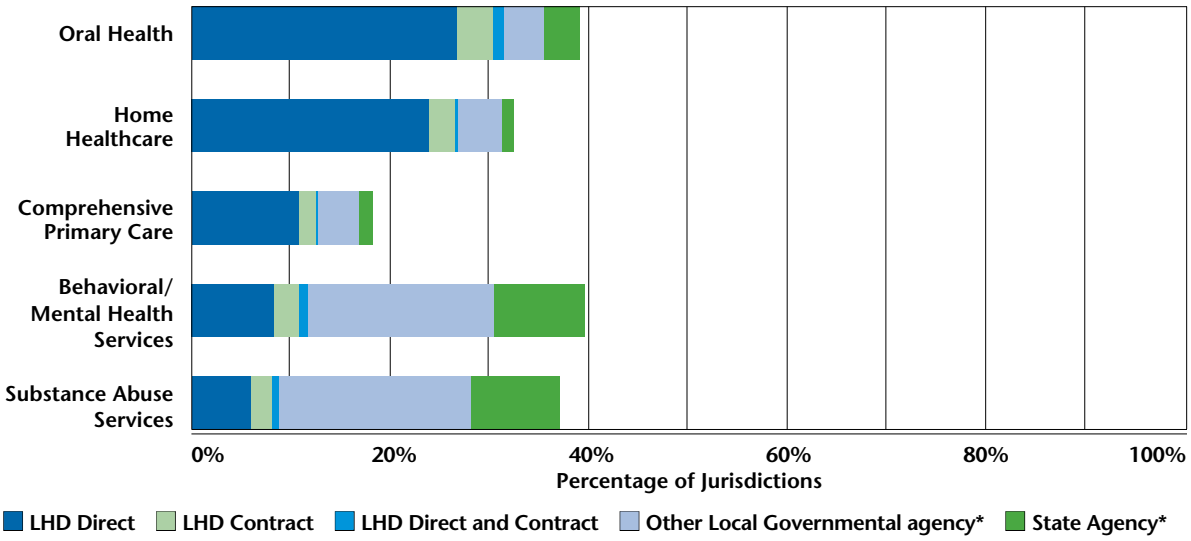
Service	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000+
MCH Home Visits	63%	57%	64%	69%	69%	77%
WIC	62%	55%	63%	64%	73%	77%
Family Planning	54%	48%	54%	59%	62%	66%
EPSDT	44%	41%	44%	46%	47%	49%
Well Child Clinic	41%	38%	37%	45%	47%	48%
Prenatal Care	33%	27%	34%	37%	42%	40%
Obstetrical Care	10%	5%	10%	9%	17%	21%

What Percentage of Jurisdictions Had Other Personal Health Services Available?

Figure 7.12 shows the percentage of local jurisdictions with other personal health services provided by governmental agencies. These services included oral health, home healthcare, comprehensive primary care, behavioral/mental health services, and substance abuse services; behavioral or mental health services offered by a governmental agency was the most frequently indicated service, and comprehensive primary care the least often indicated service.

For oral health, home healthcare, and comprehensive primary care, the LHD was the most often cited governmental agency providing services; for behavioral/mental health services and substance abuse services, other local governmental agencies were cited most often.

FIGURE 7.12 Percentage of LHD Jurisdictions with Other Health Services Provided by Governmental Agencies



*Provided by other agency only, not LHD.

Selected agency combinations only; does not include all possible combinations.

Although 29 percent of all LHDs offered oral health services, the percentage varied widely by size of population served, with 20 percent of LHDs serving populations of less than 25,000 offering oral health services and 57 percent of LHDs serving populations of 500,000 or more offering oral health services (Figure 7.13). For home healthcare, the pattern was reversed: overall, 25 percent of LHDs offered home healthcare, but LHDs serving populations less than 25,000 were more likely (28%) to offer the service than LHDs serving populations greater than 500,000 (11%).

FIGURE 7.13 Percentage of LHDs Providing Other Health Services, by Size of Population Served

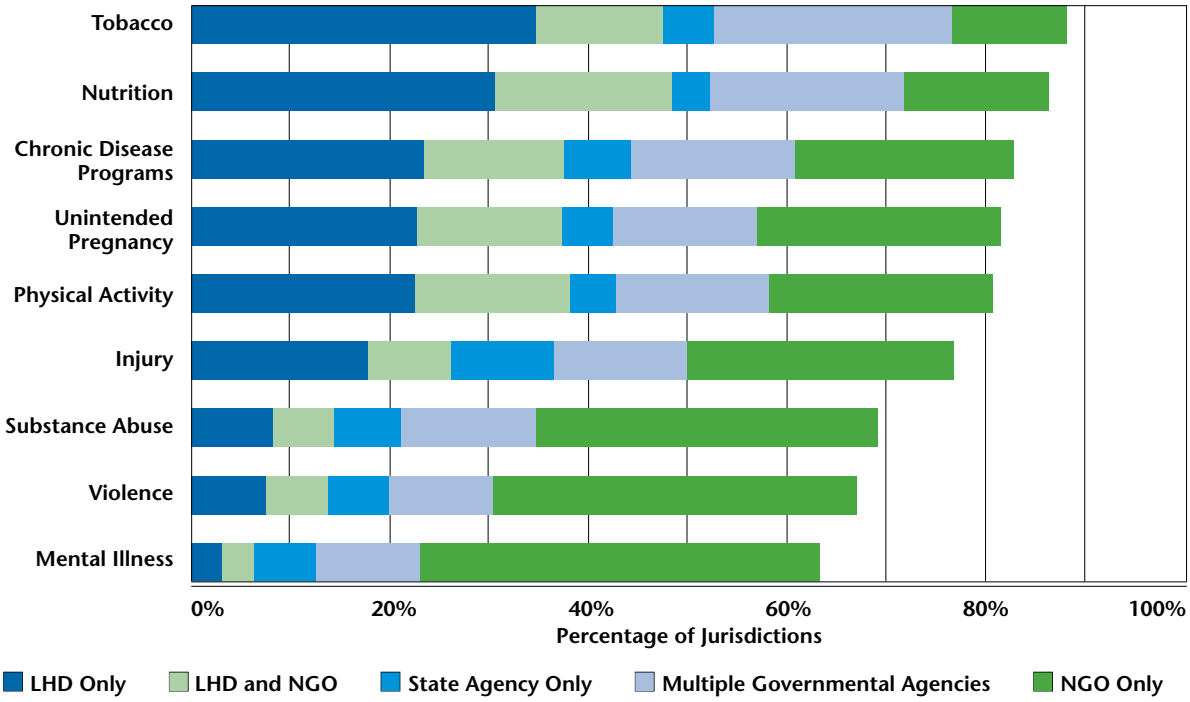
Service	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000+
Oral Health	29%	20%	24%	33%	43%	57%
Home Healthcare	25%	28%	25%	26%	18%	11%
Comprehensive Primary Care	11%	7%	9%	16%	16%	25%
Behavioral/Mental Health Services	9%	5%	9%	12%	13%	27%
Substance Abuse Services	7%	4%	7%	8%	9%	24%

What Percentage of Jurisdictions Had Services Available for Primary Prevention?

Figure 7.14 shows the set of population-based primary prevention services listed in the questionnaire and the percentage of jurisdictions with organizations providing each service. Primary prevention services for tobacco, nutrition, chronic disease, unintended pregnancies, and physical activity were found in more than 80 percent of local jurisdictions.

For most primary prevention services, NGOs were the most frequently listed resource.

FIGURE 7.14 Percentage of LHD Jurisdictions with Selected Population-Based Primary Prevention Services Provided by Organizations



Selected organizational combinations only: does not include all possible combinations.

LHD activity in the area of primary prevention services is described in Figure 7.15. The percentage of LHDs offering population-based primary prevention services ranged from 70 percent (tobacco use primary prevention) to 12 percent (primary prevention of mental illness). The percentages of LHDs offering any particular preventive service also varied widely by the size of the population served as LHDs serving smaller populations were generally much less likely to offer primary preventive services than were LHDs serving larger populations.

FIGURE 7.15 Percentage of LHD Jurisdictions with Selected Population-Based Primary Prevention Services Provided by LHDs, by Size of Population Served

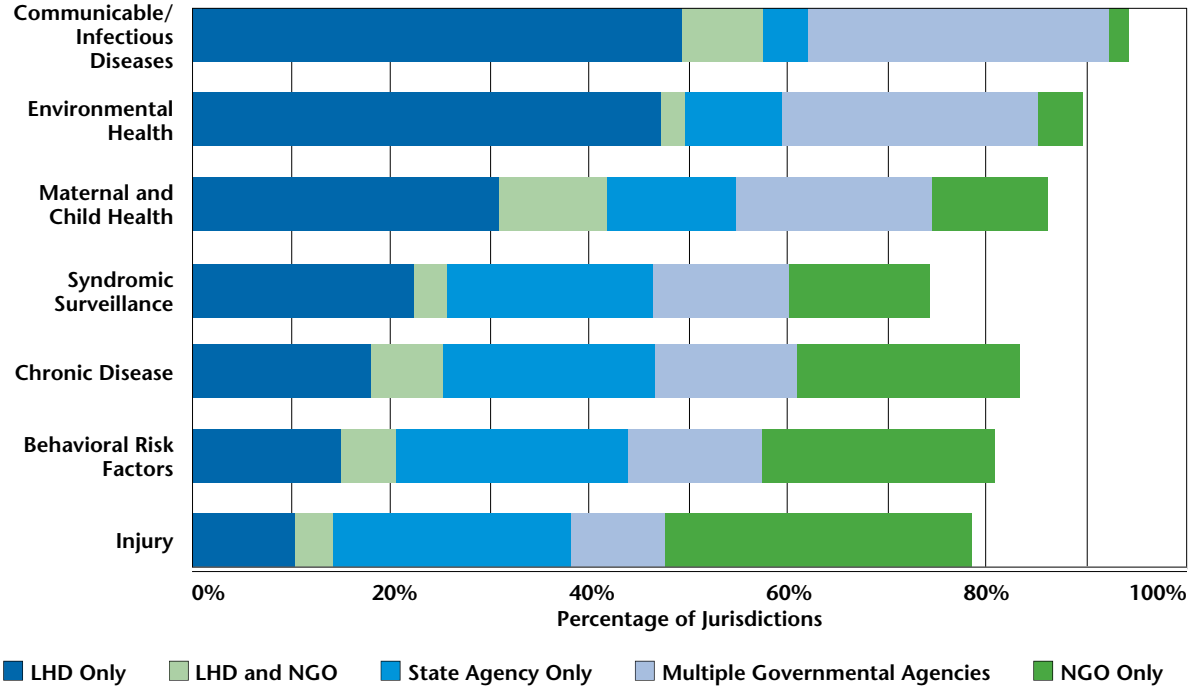
Preventive Focus	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000+
Tobacco	70%	63%	73%	75%	75%	84%
Nutrition	68%	58%	68%	73%	81%	85%
Chronic Disease Programs	53%	44%	57%	58%	62%	79%
Physical Activity	53%	45%	55%	57%	63%	73%
Unintended Pregnancy	51%	44%	53%	53%	60%	71%
Injury	39%	33%	38%	43%	49%	62%
Substance Abuse	24%	21%	25%	28%	24%	33%
Violence	22%	18%	22%	24%	28%	44%
Mental Illness	12%	10%	11%	15%	13%	20%

What Percentage of Jurisdictions Had Activities Provided for Surveillance and Epidemiology?

Figure 7.16 shows the surveillance and epidemiology activities listed in the questionnaire and the percentage of jurisdictions with organizations providing each service. Epidemiology and surveillance for communicable diseases and for environmental health surveillance were available in more than 90 percent of local jurisdictions. Maternal and child health, chronic disease and behavioral risk factors surveillance and epidemiology were available in over 86 percent of jurisdictions.

For some surveillance and epidemiology activities, the LHD was the most frequently listed resource; for others, state agencies and NGOs were the most frequently listed resource.

FIGURE 7.16 Percentage of LHD Jurisdictions with Surveillance and Epidemiology Provided by Organizations



Selected organizational combinations only: does not include all possible combinations.

LHD activity in the area of surveillance and epidemiology activities is described in Figure 7.17. The percentage of LHDs offering surveillance and epidemiology activities ranged from 88 percent (communicable/infectious disease epidemiology) to 23 percent (injury surveillance). Syndromic surveillance showed the greatest difference by size of population served, with the service provided in 29 percent of the smallest LHDs and 79 percent of the largest LHDs.

FIGURE 7.17 Percentage of LHD Jurisdictions with Surveillance and Epidemiology Provided by LHDs, by Size of Population Served

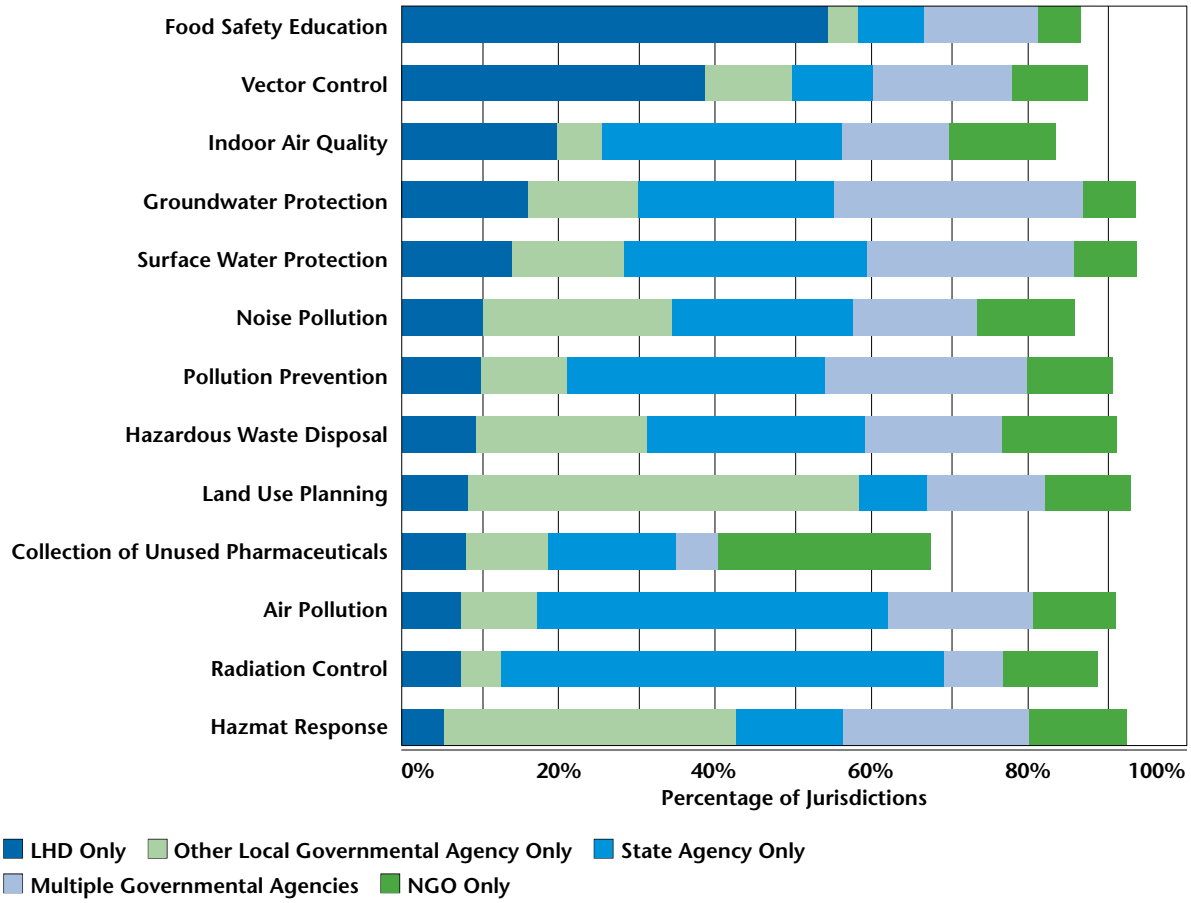
Category	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000+
Communicable/Infectious Diseases	88%	81%	90%	92%	95%	95%
Environmental Health	75%	63%	83%	82%	87%	85%
Maternal and Child Health	61%	53%	61%	68%	71%	79%
Syndromic Surveillance	40%	29%	38%	41%	57%	79%
Chronic Disease	39%	32%	38%	41%	49%	61%
Behavioral Risk Factors	33%	26%	34%	35%	41%	55%
Injury	23%	16%	22%	26%	30%	51%

What Percentage of Jurisdictions Had Activities Provided for Environmental Health?

Figure 7.18 shows the environmental health activities listed in the questionnaire and the percentage of jurisdictions with organizations providing each activity. Ground water protection, surface water protection, air pollution control, hazardous waste disposal, hazardous material (hazmat) response, and land use planning were available in more than 90 percent of all jurisdictions.

For food safety and vector control activities, the LHD was the most frequently listed resource, and for many others, the state agency was the most frequently listed resource.

FIGURE 7.18 Percentage of LHD Jurisdictions with Selected Environmental Health Activities Provided by Organizations



Selected organizational combinations only: does not include all possible combinations.

LHD activity in the area of environmental health services is described in Figure 7.19. The percentage of LHDs offering environmental health services ranged from 74 percent (food safety education) to 9 percent (collection of unused pharmaceuticals). For all environmental health activities, smaller LHDs were less likely to provide the service than were larger LHDs.

FIGURE 7.19 Percentage of LHD Jurisdictions with Selected Environmental Health Activities Provided by LHDs, by Size of Population Served

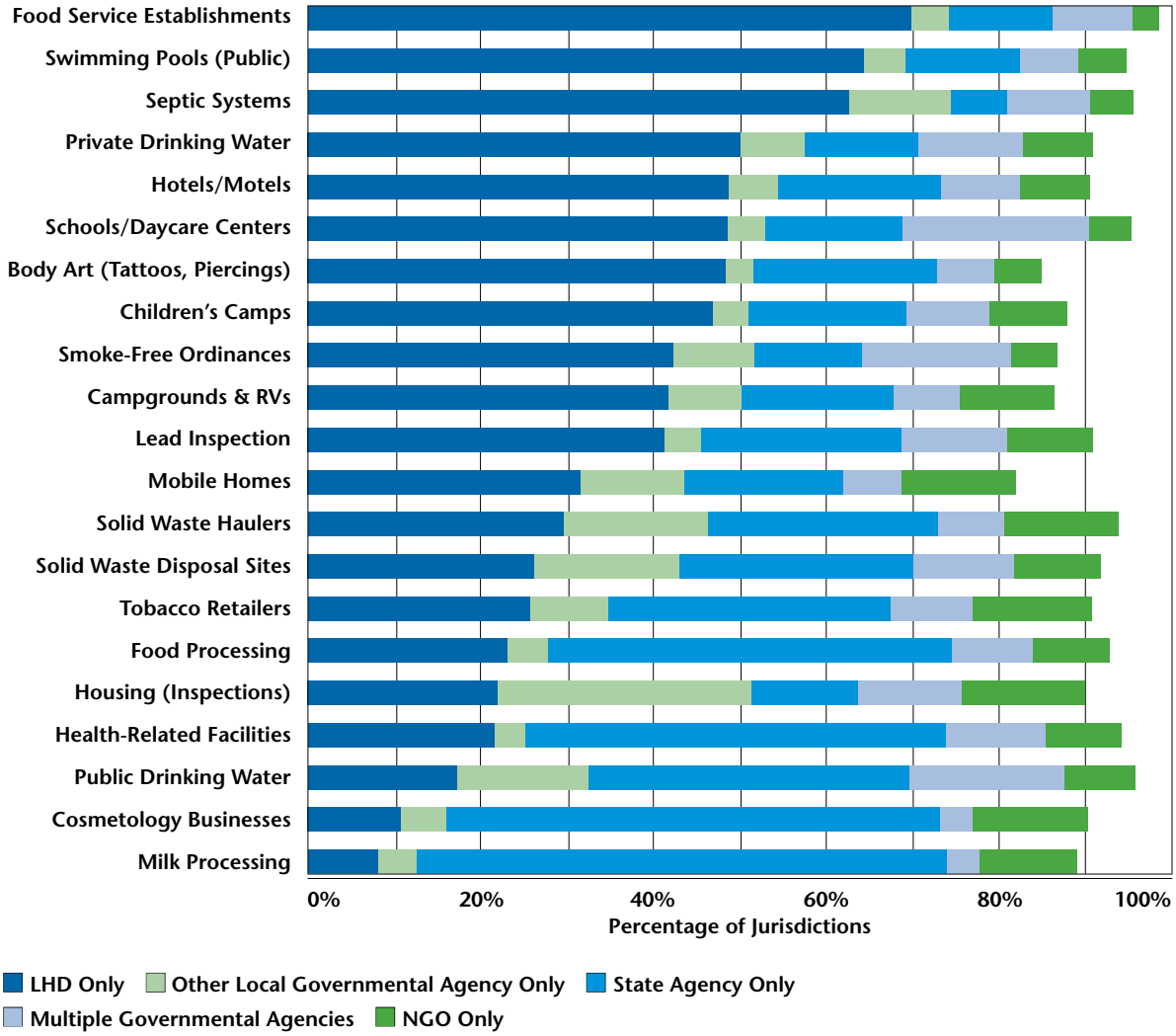
Service	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000+
Food Safety Education	74%	63%	81%	83%	85%	79%
Vector Control	54%	42%	60%	61%	68%	68%
Groundwater Protection	41%	31%	47%	46%	53%	45%
Surface Water Protection	32%	25%	35%	36%	43%	35%
Indoor Air Quality	31%	23%	33%	35%	36%	53%
Pollution Prevention	27%	20%	27%	33%	34%	41%
Hazmat Response	18%	14%	16%	23%	22%	33%
Air Pollution	17%	15%	17%	19%	20%	29%
Land Use Planning	17%	13%	18%	23%	19%	23%
Noise Pollution	16%	14%	16%	17%	16%	27%
Hazardous Waste Disposal	16%	14%	16%	14%	16%	27%
Radiation Control	11%	8%	13%	11%	13%	17%
Collection of Unused Pharmaceuticals	9%	8%	9%	13%	11%	10%

What Percentage of Jurisdictions Had Activities Provided for Regulation, Licensing, or Inspection?

Figure 7.20 shows the regulatory, licensing, and inspection activities listed in the questionnaire and the percentage of jurisdictions with organizations providing each activity. All activities were available in more than 80 percent of local jurisdictions.

For food service, swimming pools, septic systems, and private drinking water, the LHD was included more often than all other resources combined.

FIGURE 7.20 Percentage of LHD Jurisdictions with Selected Regulation, Inspection, and/or Licensing Activities Provided by Organizations



Selected organizational combinations only: does not include all possible combinations.

LHD activity in the area of regulatory, inspection, or licensure services is described in Figure 7.21. The percentage of LHDs offering regulatory, inspection, or licensure services ranged from 77 percent (food service establishments) to 9 percent (milk processing). For regulation of food service establishments, schools/daycare centers, septic systems, public swimming pools, and private drinking water, LHDs serving the smallest and largest population groups (population less than 25,000 or more than 500,000) were less likely to provide the service than LHDs serving mid-sized populations (population between 25,000 and 499,999).

FIGURE 7.21 Percentage of LHD Jurisdictions with Selected Regulation, Inspection, and/or Licensing Activities Provided by LHDs, by Size of Population Served

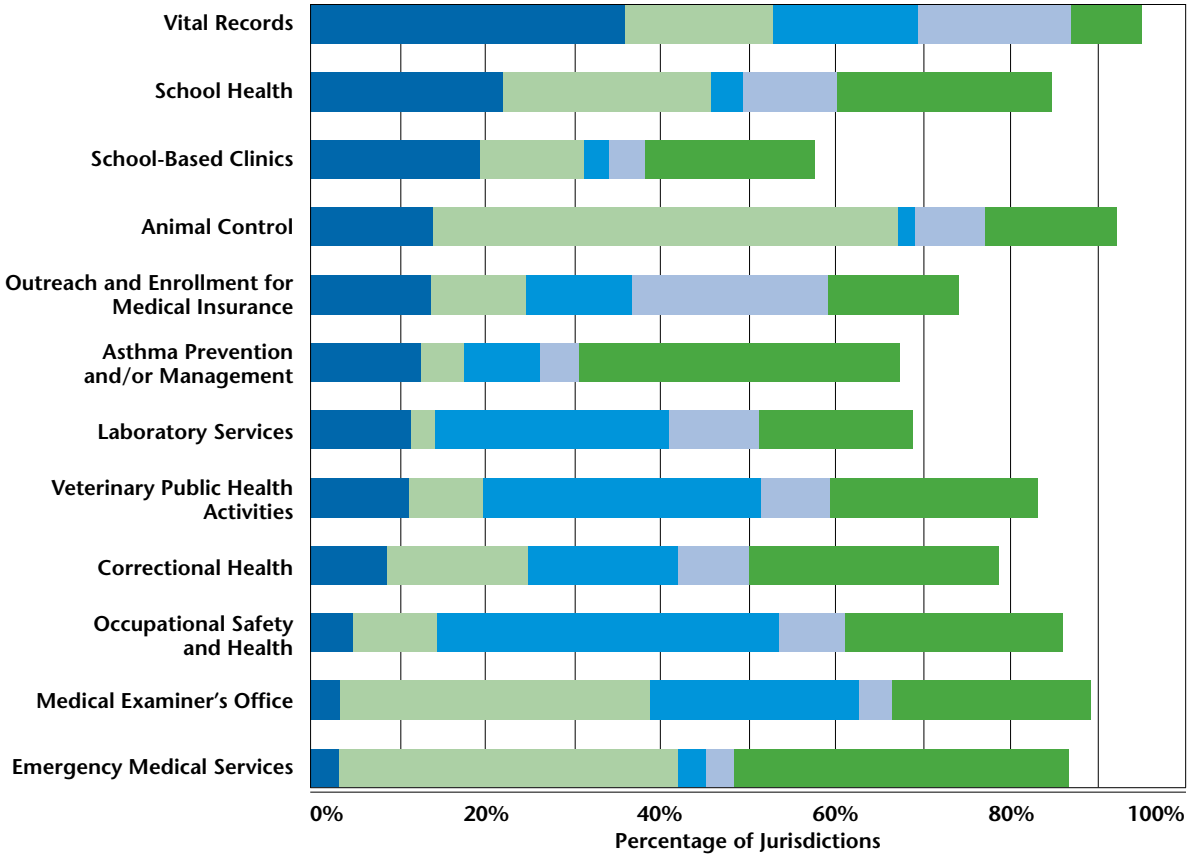
Area of Regulation, Inspection, and/or Licensing Activities	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000+
Food Service Establishments	77%	68%	82%	85%	87%	73%
Schools/Daycare Centers	68%	60%	71%	77%	78%	69%
Septic Systems	68%	62%	67%	73%	79%	65%
Swimming Pools (Public)	67%	55%	72%	77%	82%	71%
Private Drinking Water	59%	54%	63%	60%	69%	54%
Smoke-Free Ordinances	57%	53%	60%	64%	58%	64%
Hotels/Motels	51%	45%	58%	58%	56%	42%
Body Art (Tattoos, Piercing)	50%	41%	54%	61%	58%	53%
Lead Inspection	49%	38%	52%	57%	61%	70%
Children's Camps	48%	39%	53%	59%	60%	43%
Campgrounds and RVs	42%	32%	46%	49%	53%	42%
Health-Related Facilities	31%	26%	33%	34%	37%	36%
Public Drinking Water	30%	24%	31%	32%	42%	43%
Mobile Homes	30%	23%	35%	38%	36%	30%
Solid Waste Disposal Sites	30%	27%	31%	30%	36%	37%
Food Processing	29%	27%	31%	31%	32%	32%
Solid Waste Haulers	29%	28%	29%	29%	30%	34%
Housing (Inspections)	29%	29%	28%	30%	29%	21%
Tobacco Retailers	27%	25%	28%	30%	26%	36%
Cosmetology Businesses	12%	11%	13%	16%	11%	13%
Milk Processing	9%	9%	7%	9%	13%	8%

What Percentage of Jurisdictions Had Other Public Health Activities?

Figure 7.22 shows the other local public health activities and services listed in the questionnaire and the percentage of jurisdictions with organizations providing each activity. All activities and services were available in over half of all jurisdictions; vital records and animal control were available in over 90 percent of all jurisdictions.

These other public health activities were broadly based, with many different organizations contributing to the provision of the service at the local level.

FIGURE 7.22 Percentage of LHD Jurisdictions with Other Public Health Activities Provided by Organizations



Selected organizational combinations only: does not include all possible combinations.

LHD activity in the area of other public health activities is described in Figure 7.23. The percentage of LHDs offering other public health activities was 50 percent or less for each activity. Outreach and enrollment for medical care (including Medicaid), vital records, and school health were the three leading LHD activities within this group.

FIGURE 7.23 Percentage of LHD Jurisdictions with Other Public Health Activities Provided by LHDs, 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 (Including Medicaid)	50%	41%	49%	59%	61%	62%
Vital Records	50%	38%	52%	59%	64%	68%
School Health	40%	37%	40%	40%	42%	51%
Asthma Prevention and/or Management	26%	19%	24%	31%	35%	56%
Laboratory Services	25%	16%	21%	24%	42%	64%
School-Based Clinics	25%	26%	25%	23%	22%	27%
Animal Control	19%	15%	22%	26%	19%	23%
Veterinarian Public Health Activities	18%	14%	18%	23%	20%	31%
Correctional Health	14%	12%	14%	14%	15%	28%
Occupational Safety and Health	13%	12%	13%	16%	14%	19%
Emergency Medical Services	4%	2%	3%	4%	8%	16%
Medical Examiner's Office	4%	1%	3%	4%	6%	15%

Chapter 8: Community Health and Health Disparities

Did LHDs Participate in Community Health Planning Activities?

What Roles Did LHDs Have in the Development of Community Health Assessments?

Did Community Health Assessments and Community Health Improvement Planning Activities Differ According to the Size of the Population Served by the LHD?

What Resources Did LHDs Use for CHAs and CHIP?

What Were LHD Activities Related to Health Disparities?

Did Activities to Address Health Disparities Differ by the Size of the Population Served by the LHD?

What Kinds of Collaborations Were Conducted by LHDs?

How Did LHDs Relate to Academic Institutions?

What Were LHD Activities Regarding Public Health Policy?

What Were LHD Activities Regarding Access to Healthcare Services?

Background

To study LHDs and community health planning, the 2008 Profile questionnaire included items on community health assessments (CHAs) and community health improvement planning (CHIP). These items, and the items in this chapter on health disparities, were included in the core questionnaire sent to all LHDs. Data for other topics included in this chapter, however, specifically, partnerships and collaborations, interactions with academic institutions, policy making and advocacy, and LHD activities related to access to healthcare services, were taken from a supplemental module included for a random sample of LHDs.

Did LHDs Participate in Community Health Planning Activities?

More than 60 percent of respondents reported that a community health assessment had been completed in the last three years (Figure 8.1). A lower proportion (49%) reported that community health improvement planning had been conducted in the last three years; within this group, more than 90 percent of all CHIPs were based on community health assessments.

FIGURE 8.1 Percentage of LHDs with Community Health Assessment and Community Health Improvement Planning Activities

Activity	Percent of LHDs
LHD Completed CHA in Last Three Years	63%
LHD Plans to Complete CHA in Next Three Years	69%
LHD Completed CHIP in Last Three Years	49%
CHIP Based on Community Health Assessment*	92%
CHIP Linked to State Health Improvement Plan*	69%

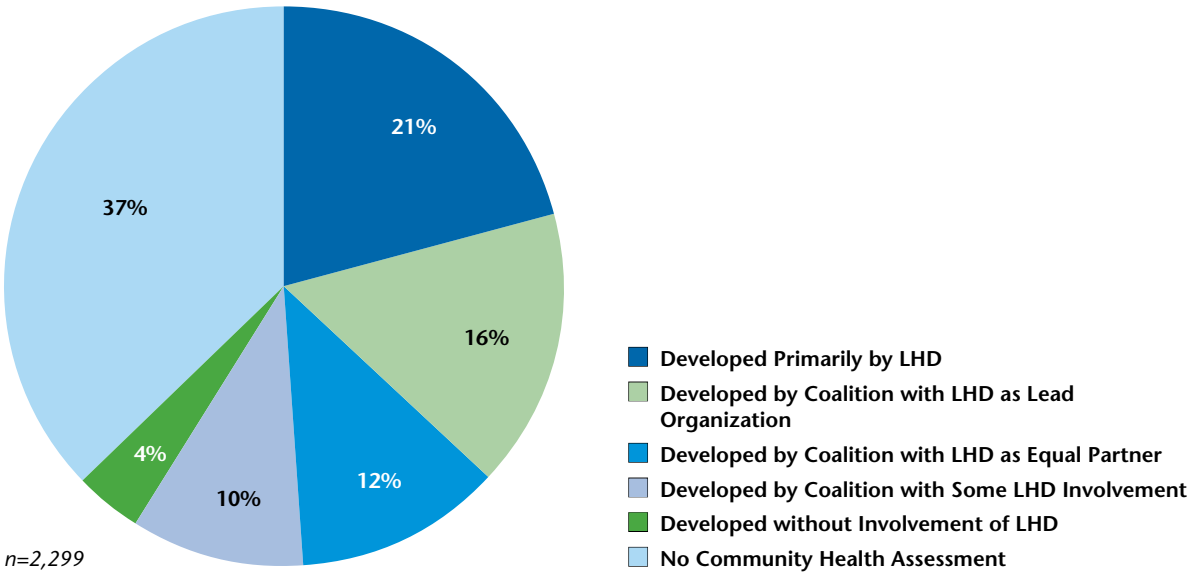
n ranged from 2,220 to 2,300

**Includes only those LHDs with completed CHIP.*

What Roles Did LHDs Have in the Development of Community Health Assessments?

Figure 8.2 shows the varying levels of involvement of LHDs in the development of community health assessments. For 21 percent of LHDs, the LHD was the primary developer of the

FIGURE 8.2 Percentage Distribution of LHDs, by Roles in Community Health Assessment



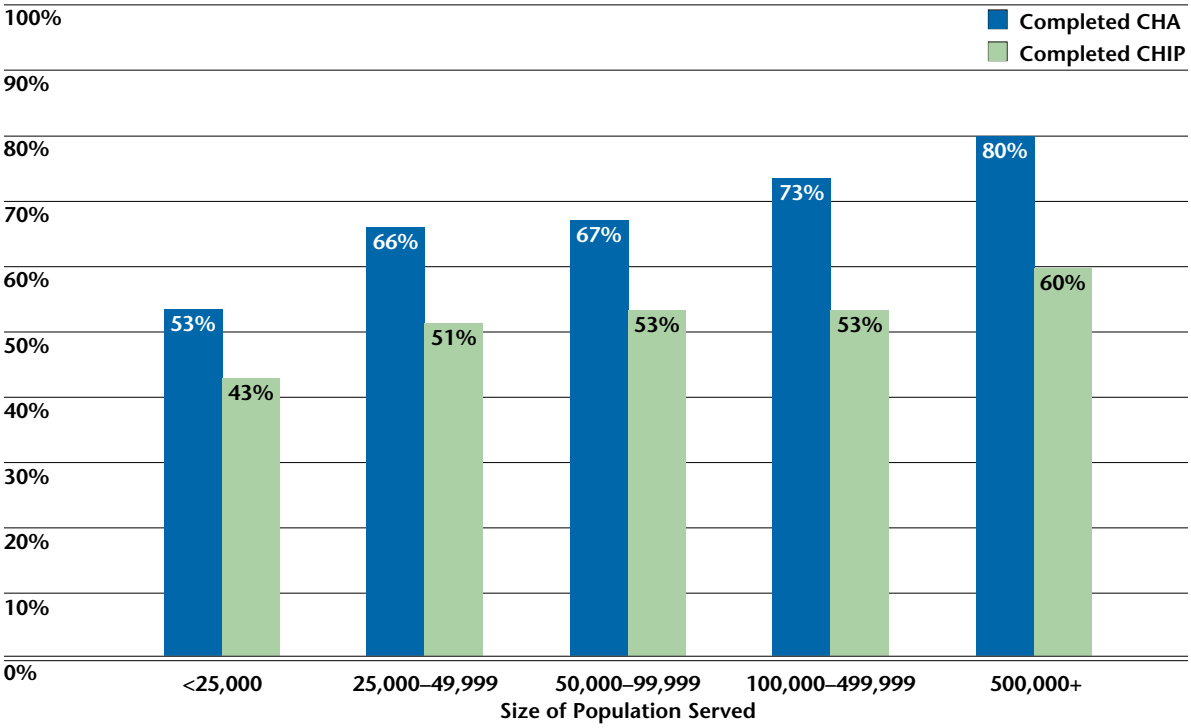
n=2,299

community health assessment; for an additional 16 percent, the LHD was the lead organization in a coalition developing the community health assessment; and for 12 percent, the community health assessment was developed by a coalition with the LHD as an equal partner.

Did Community Health Assessments (CHAs) and Community Health Improvement Planning (CHIPs) Activities Differ According to the Size of the Population Served by the LHD?

LHD participation in CHAs and CHIP varied by the size of the population served by the LHD (Figure 8.3). Participation in community health assessments ranged from a low of 53 percent among LHDs serving jurisdictions with populations less than 25,000 to a high of 80 percent among LHDs serving jurisdictions with populations of 500,000 or more. Similarly, participation in community health improvement planning ranged from a low of 43 percent among LHDs serving jurisdictions with populations less than 25,000 to a high of 60 percent among LHDs serving jurisdictions with populations of 500,000 or more. Within each population category, CHAs were more likely to be reported than CHIP, suggesting a gap between the ability to assess community health and the ability to engage the resources necessary for a community health planning effort.

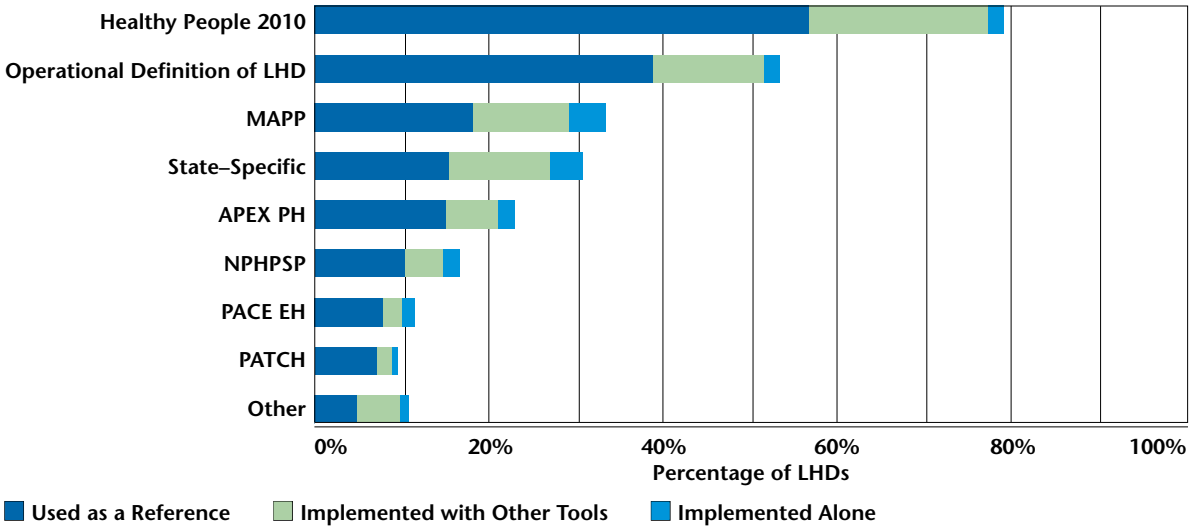
FIGURE 8.3 Percentage of LHDs with Completed Community Health Assessment and Community Health Improvement Plans, by Size of Population Served



What Resources Did LHDs Use for CHAs and CHIP?

The three resources most often mentioned for community health assessments and community health improvement planning are found in Figure 8.4. These resources included Healthy People 2010, the Operational Definition of a Local Health Department, and Mobilizing for Action through Planning and Partnerships (MAPP). "Used as a reference" was indicated most often as the type of use for each tool, followed by "implemented in collaboration with other tools" and "implemented independent of other tools." When all types of use for each tool were combined, 79 percent of LHDs had used Healthy People 2010, 53 percent had used the Operational Definition of a Local Health Department, and 33 percent had used MAPP.

FIGURE 8.4 Percentage of LHDs Using Selected Community Health Assessment and Planning Tools, by Type of Use



n=2,160

What Were LHD Activities Related to Health Disparities?

The 2008 Profile questionnaire asked respondents to indicate the types of efforts made by the LHDs to address health disparities (Figure 8.5). Slightly more than half (52%) described health disparities in the jurisdiction using data and 58 percent supported community efforts to change the causes of health disparities; 50 percent of all LHDs held training for staff on health disparities.

FIGURE 8.5 Percentage of LHDs with Selected Activities to Address Health Disparities

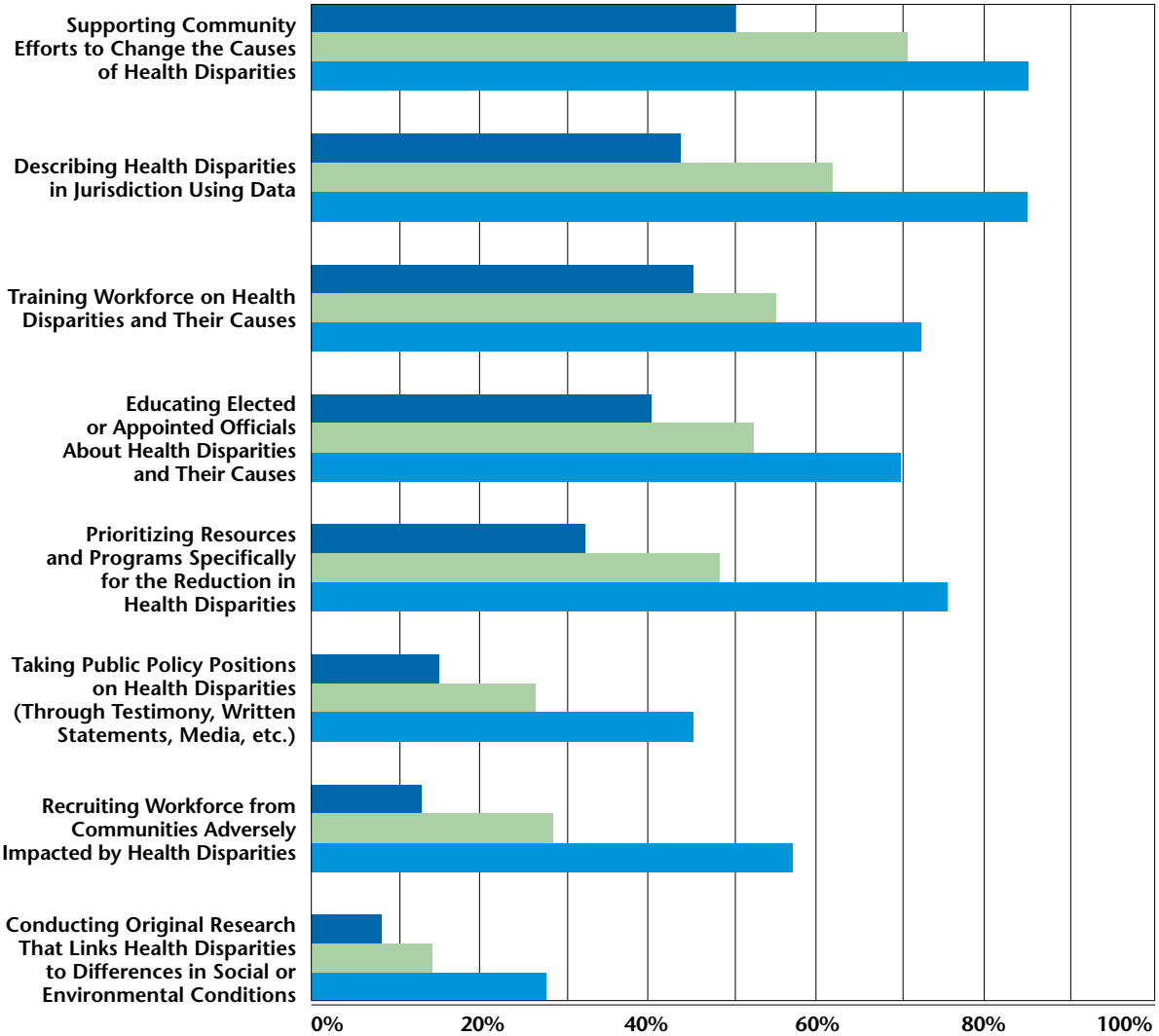
Activity	Percent of LHDs
Supporting Community Efforts to Change the Causes of Health Disparities	58%
Describing Health Dsparities in Jurisdiction Using Data	52%
Training Workforce on Health Disparities and Their Causes	50%
Educating Elected or Appointed Officials About Health Disparities and Their Causes	46%
Prioritizing Resources and Programs Specifically for the Reduction in Health Disparities	40%
None of the Above	22%
Taking Public Policy Positions on Health Disparities (Through Testimony, Written Statements, Media, etc.)	20%
Recruiting Workforce from Communities Adversely Impacted by Health Disparities	20%
Conducting Original Research That Links Health Disparities to Differences in Social or Environmental Conditions	11%

n ranged from 2,281 to 2,282

Did Activities to Address Health Disparities Differ by the Size of the Population Served by the LHD?

In Figure 8.6, LHD efforts to address health disparities are shown by LHD jurisdictional population category. For each type of effort, LHDs serving larger populations were more likely to report conducting the activity than LHDs serving smaller populations. For LHDs serving populations less than 50,000, 40 percent or more reported supporting community efforts, training workforce, and using data to describe the problem, while taking public policy positions and recruiting workforce were mentioned less than 20 percent of the time. Similarly, for LHDs serving populations larger than 500,000, the same general pattern was clear: supporting community efforts, training workforce, using data, and additionally, prioritizing resources were mentioned in more than 70 percent of these cases; lower proportions referenced taking public policy positions (46 percent) or recruiting workforce (57 percent).

FIGURE 8.6 Percentage of LHDs with Selected Activities to Address Health Disparities, by Size of Population Served



n ranged from 2,282 to 2,285

What Kinds of Collaborations Were Conducted by LHDs?

The 2008 Profile questionnaire included a detailed question on LHD partnerships and collaborations. The question was placed in a module added to the questionnaire for a random sample of LHDs and looked at both the type of collaboration (shared personnel/resources, written agreement, regular meeting, and information exchange) and specific types of organizations. If the response indicated that the LHD had no relevant organization in the community service area through a "not applicable" choice, the LHD was excluded from the analysis for the organization.

Schools were the type of organization most often reported for any type of partnership, with almost all LHDs with schools in the service area reporting some type of partnership with them (Figure 8.7). Emergency responders, hospitals, media, physician practices, other healthcare

FIGURE 8.7 Percentage of LHDs with Collaborative Efforts, by Type of Partnering Organization and Type of Effort*

Organization	Any Partnership	Shared Personnel and/or Resources	Written Agreement	Regular Meetings	Exchange Information
Schools	99%	44%	42%	42%	89%
Emergency Responders	98%	46%	39%	67%	84%
Hospitals	97%	40%	39%	53%	90%
Media	96%	11%	3%	10%	93%
Physician Practices/ Medical Groups	94%	22%	23%	21%	89%
Other Healthcare Providers	93%	21%	15%	21%	89%
Community-Based Non-Profits	91%	25%	21%	40%	84%
Community Health Centers	90%	30%	23%	29%	83%
Local Planning Agency	88%	21%	11%	40%	75%
Business	88%	12%	8%	16%	84%
Colleges or Universities	88%	28%	35%	22%	78%
Cooperative Extensions	83%	25%	10%	20%	77%
Faith Communities	82%	14%	8%	20%	76%
Health Voluntaries	81%	25%	15%	24%	76%
Criminal Justice System	81%	16%	10%	21%	76%
Environmental and Conservation Organizations	76%	13%	4%	18%	70%
Parks and Recreation	76%	16%	3%	17%	70%
Economic and Community Development Agencies	75%	9%	4%	18%	68%
Housing Agencies	71%	8%	5%	15%	65%
Libraries	65%	9%	2%	6%	62%
Health Insurers	60%	6%	21%	8%	52%
Transportation	57%	5%	7%	11%	53%
Utility Companies/Agencies	52%	5%	4%	8%	48%
Tribal Governmental Agencies	46%	7%	10%	12%	44%

n ranged from 309 to 439

**Includes only those LHDs with applicable organizations within the LHD community service area.*

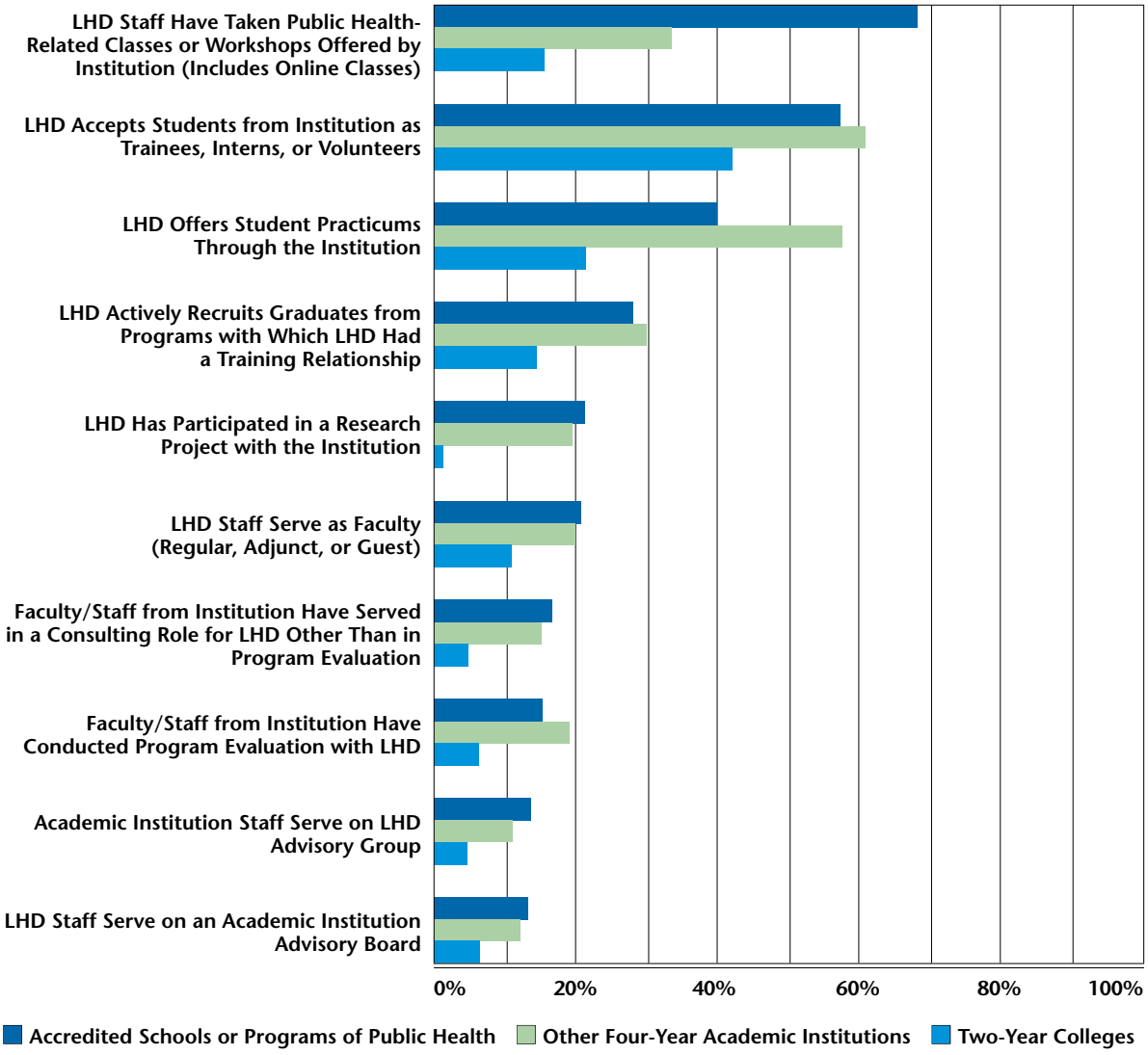
providers, and community-based non-profits were also reported as partners more than 90 percent of the time, with strong partnerships (shared personnel and/or resources, or written agreements) also reported more often for these organizations than for most others.

How Did LHDs Relate to Academic Institutions?

The Profile questionnaire included a new question on LHD interactions with academic institutions. The item was placed in a module added to the questionnaire for a random sample of LHDs and listed various ways that LHDs might relate to three types of academic institutions: accredited schools or programs of public health, four-year colleges, and two-year colleges.

The top interaction between LHDs and academic institutions was that LHD staff had taken public-health related classes from accredited schools of public health (Figure 8.8). Also frequently mentioned were that LHDs accepted students as trainees, interns, or volunteers, with all types of institutions (four-year academic institutions, accredited schools or programs of public health, and two-year colleges) mentioned by more than 40 percent of LHDs.

FIGURE 8.8 Percentage of LHDs with Interactions with Academic Institutions, by Type of Interaction and Institution



n=425

What Were LHD Activities Regarding Public Health Policy?

The Profile questionnaire included a detailed question on LHD activities regarding policy making and advocacy. The item was placed in a module added to the questionnaire for a random sample of LHDs.

More than three-fourths of all LHDs communicated with legislators and other policymakers regarding proposed legislation, regulations, and ordinances (Figure 8.9). Other policy making and advocacy activities included participation on a board or advisory panel (64%), public testimony (55%), preparation of issue briefs (57%), and provision of technical assistance (54%). LHDs that were units of local government were more likely to report policy making and advocacy activities than were LHDs that were units of state health agencies.

FIGURE 8.9 Percentage of LHDs with Selected Policy Making and Advocacy Activities, by Size of Population Served and Type of Governance

Selected Policy Making and Advocacy Activity	All LHDs	<50,000	50,000+	Local Government	State Health Agency
Communicated with Legislators, Regulatory Officials, or Other Policymakers Regarding Proposed Legislation, Regulations, or Ordinances	78%	73%	88%	81%	68%
Participated on a Board or Advisory Panel Responsible for Public Health Policy	64%	56%	79%	68%	51%
Prepared Issue Briefs for Policymakers	57%	47%	75%	59%	49%
Gave Public Testimony to Policymakers	55%	48%	67%	58%	42%
Provided Technical Assistance to Legislative, Regulatory, or Advocacy Group for Drafting Proposed Legislation, Regulations, or Ordinances	54%	44%	74%	55%	50%

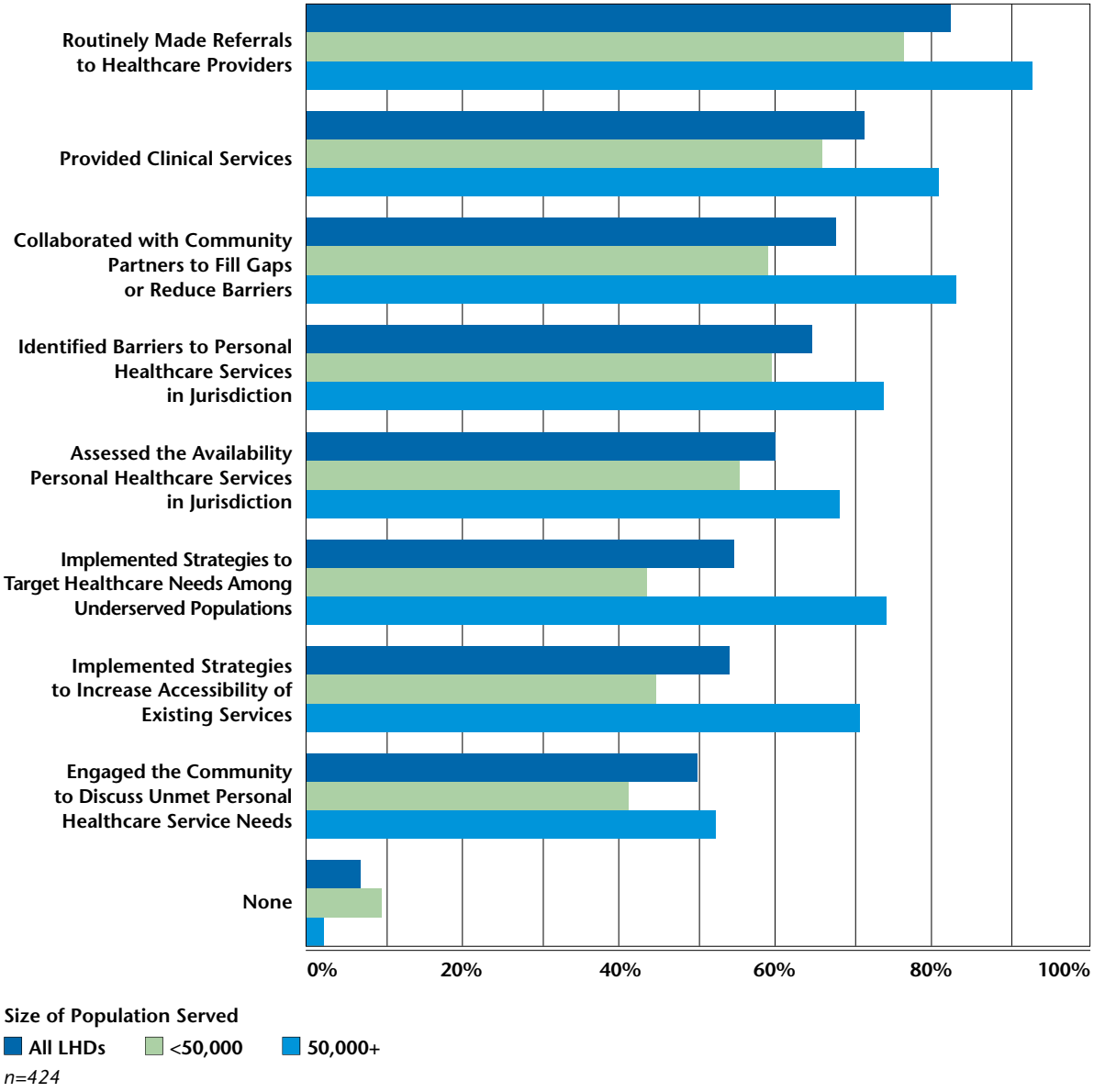
n ranged from 426 to 437

What Were LHD Activities Regarding Access to Healthcare Services?

The Profile questionnaire included a new question on LHD activities regarding access to healthcare services. The item was placed in a module added to the questionnaire for a random sample of LHDs.

Most LHDs were active in the area of promoting access to healthcare services within the LHD jurisdiction. More than 80 percent reported routine referrals; more than 70 percent provided clinical services; and almost 70 percent collaborated with community partners to fill gaps or reduce barriers (Figure 8.10). LHDs serving smaller jurisdictions were somewhat less likely than LHDs serving larger jurisdictions to engage in activities to promote access to healthcare services.

FIGURE 8.10 Percentage of LHDs with Selected Activities to Address Access to Healthcare Services, by Activity, All LHDs, and by Size of Population Served



n=424

Chapter 9: Quality Improvement and Accreditation

Did LHDs Participate in Formal Quality or Performance Improvement Activities?

What Were the Focus Areas for LHD Performance Improvement Activities?

Did LHDs Have Management with Training in Quality Improvement?

What Strategies or Approaches Did LHDs Use for Quality Improvement?

How Was the Operational Definition Used at LHDs?

Were Respondents Aware of the Developing Voluntary National Accreditation Program?

What Was the Interest Level in LHD Accreditation?

Did Interest in a Voluntary National Accreditation Program Differ by the Size of the Population Served by the LHD?

Background

The 2008 Profile questionnaire included a wide range of questions regarding LHD performance improvement activities and voluntary national accreditation. These questions were placed in a module added to the questionnaire for a random sample of LHDs; the module provided all data reported in this chapter. The questionnaire module included the following definitional statement: Performance improvement (often referred to as quality improvement or performance management) is a deliberate, defined process that seeks to achieve measurable improvements in capacity, programs, or services with the goal of impacting the health of the community.

The questionnaire module also included an item regarding the Operational Definition of a Local Health Department that serves as the framework for accreditation standards for LHDs. A set of standards framed around the 10 essential public health services (Figure 9.1), the Operational Definition describes what a person in any jurisdiction in the United States should reasonably expect from their governmental LHD. The Operational Definition standards and accompanying measures were turned into an LHD self-assessment tool for accreditation preparation in anticipation of the release of accreditation standards, now being developed through the Public Health Accreditation Board (PHAB). PHAB is the non-profit organization implementing the voluntary national accreditation program for state, local, territorial and tribal health departments. Visit www.phaboard.org for more information.

FIGURE 9.1 Operational Definition of a Functional Local Health Department

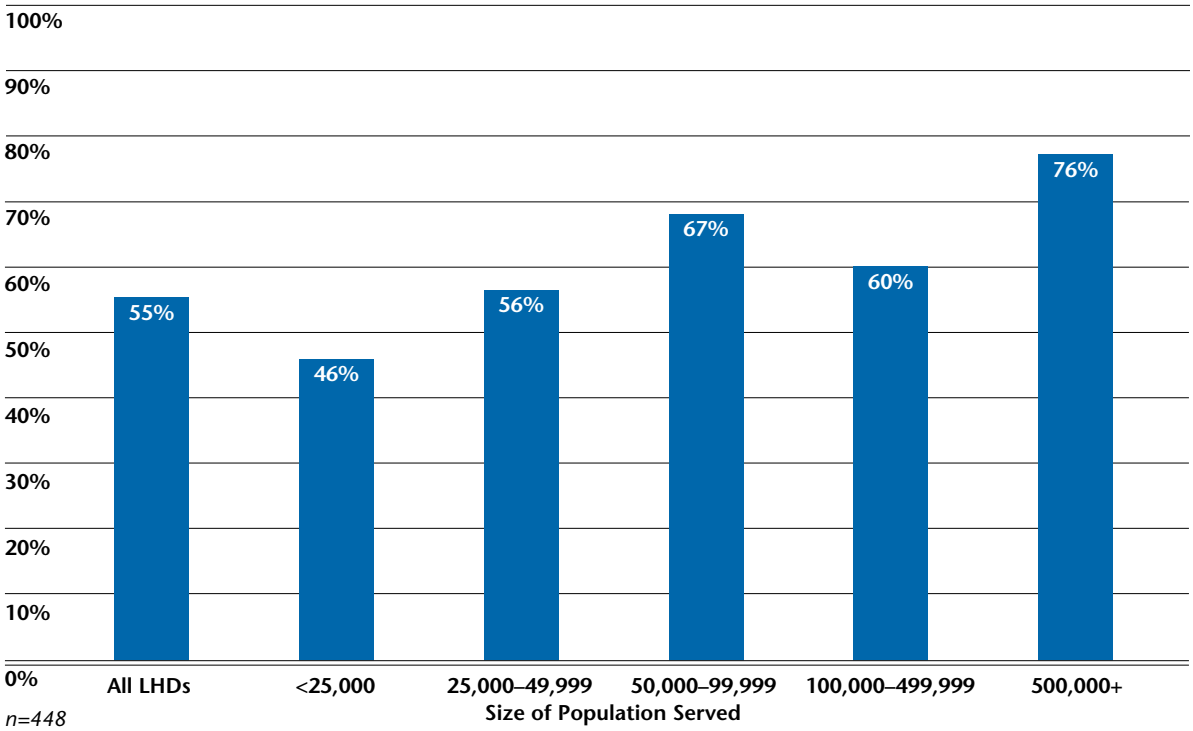
1. Monitor Health Status and Understand Health Issues Facing the Community
2. Protect People from Health Problems and Health Hazards
3. Give People Information They Need to Make Healthy Choices
4. Engage the Community to Identify and Solve Health Problems
5. Develop Public Health Policies and Plans
6. 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

Did LHDs Participate in Formal Quality or Performance Improvement Activities?

A 2008 Profile questionnaire module included a set of detailed questions regarding LHD performance improvement components and seven areas in which these components might be applied.

Figure 9.2 shows the percent of LHDs that participated in quality improvement activities overall and by size of the jurisdictional population served. Although 46 percent of LHDs with a population size of less than 25,000 participated in formal quality improvement activities, 76 percent of LHDs with a population size of 500,000 or more participated in these activities. Although the question specifically asked for *formal* quality improvement activities only, the high response level may suggest that many LHDs are including informal (i.e., with little or no written documentation) quality improvement activities also.

FIGURE 9.2 Percentage of LHDs with Participation in a Formal Performance Improvement Activity, for All LHDs and by Size of Population Served



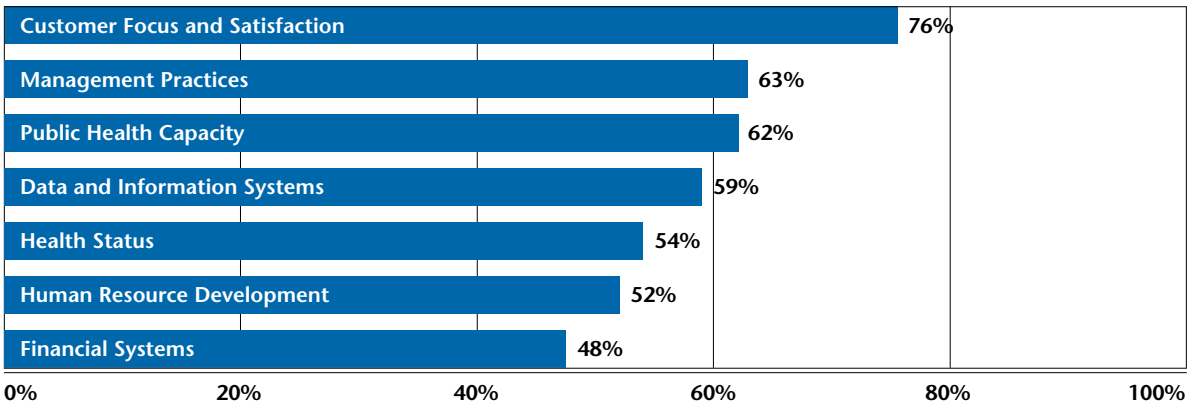
n=448

What Were the Focus Areas for LHD Performance Improvement Activities?

A 2008 Profile module question included a list of possible areas for performance activities and performance improvement components (performance standards, performance measures, reporting of progress, or quality improvement processes) that might have been conducted in these areas.

Among LHDs with any formal performance or quality improvement activities in place, 76 percent included the area of customer focus and satisfaction (Figure 9.3). The areas of management practices, public health capacity, data and information systems, health status, and human resource development were also mentioned by more than 50 percent of respondents citing any formal quality improvement activities in place.

FIGURE 9.3 Percentage of LHDs with Selected Performance Improvement Activity Areas*



n=250

**Among LHDs with any performance improvement activity.*

Did LHDs Have Management with Training in Quality Improvement?

A 2008 Profile module item asked whether none, some, or all of the LHD's management had received formal training in quality improvement.

Among LHDs with any formal quality improvement activities in place, about 22 percent of LHDs had no management with formal quality improvement or performance improvement training, 64 percent had some management with training, and 14 percent reported formal training for all management (Figure 9.4). LHDs serving smaller jurisdictions were more likely (26%) than LHDs serving larger jurisdictions (16%) to have no managers with formal training in quality improvement.

FIGURE 9.4 Percentage Distribution of LHD Management with Formal Training in Quality Improvement*

Managers with Formal Training in Quality Improvement	All LHDs	<50,000	50,000+
No Managers with Training	22%	26%	16%
Some Managers with Training	64%	59%	71%
All Managers with Training	14%	15%	13%

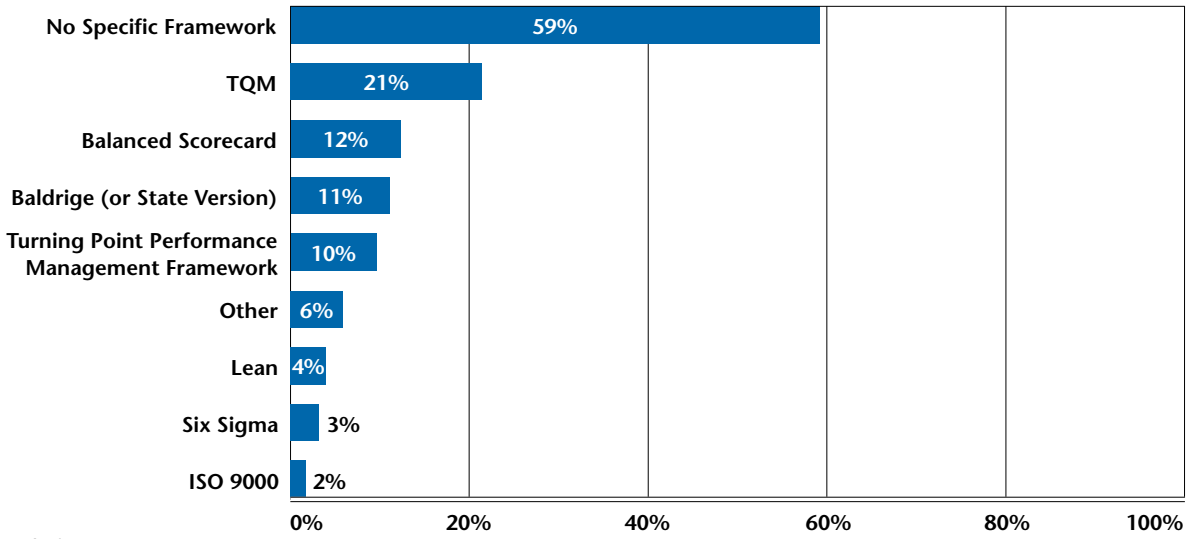
n=242

**Among LHDs with any performance improvement activity.*

What Strategies or Approaches Did LHDs Use for Quality Improvement?

A 2008 Profile module question listed several frameworks or approaches to quality or performance improvement and asked respondents to indicate any that had been used at the LHD during the past two years (Figure 9.5). Among LHDs that had taken any formal quality improvement or performance improvement efforts in the past two years, 59 percent indicated that no specific framework or approach had been used. Among specific approaches, the Total Quality Management (TQM) strategy was most often mentioned (21%).

FIGURE 9.5 Percentage of LHDs, by Selected Quality Improvement Techniques over the Past Two Years*



n=250

**Among LHDs with any performance improvement activity.*

How Was the Operational Definition Used at LHDs?

A 2008 Profile module included a question about the awareness and use of the Operational Definition. Overall, a large majority of LHDs were aware of the operational definition, and many had used it (Figure 9.6). About one-fourth (26%) of respondents reported that the LHD was unaware of the Operational Definition, and an additional one-fourth (26%) reported that the LHD was aware but that the Operational Definition had not been reviewed. Almost half (48%) of LHDs had used the Operational Definition for some purpose. The most often cited use was that one or more staff members had reviewed the Operational Definition, followed by discussion with a Board of Health or other governing body, staff education, strategic planning, and conducting a self-assessment (not shown).

FIGURE 9.6 Percentage of LHDs with Awareness of Operational Definition, by Level of Awareness, for All LHDs and by Size of Population Served

Level of Awareness	All LHDs	<50,000	50,000+
Not Aware	26%	34%	13%
Aware but Have Not Reviewed It	26%	29%	21%
Any Use	48%	38%	66%

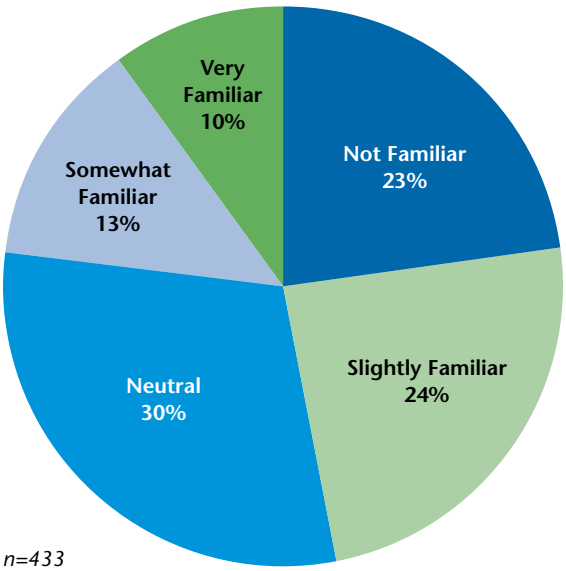
n=422

Were Respondents Aware of the Developing Voluntary National Accreditation Program?

A 2008 Profile module included an item on awareness of a voluntary national accreditation program for state and local health departments.

Of the respondents, 23 percent of LHDs were unfamiliar and 24 percent were slightly familiar with a voluntary national accreditation program, 13 percent were somewhat familiar, and 10 percent were very familiar. The largest category was neutral (30%).

FIGURE 9.7 Percentage Distribution of LHDs, by Familiarity with a Voluntary National Accreditation Program



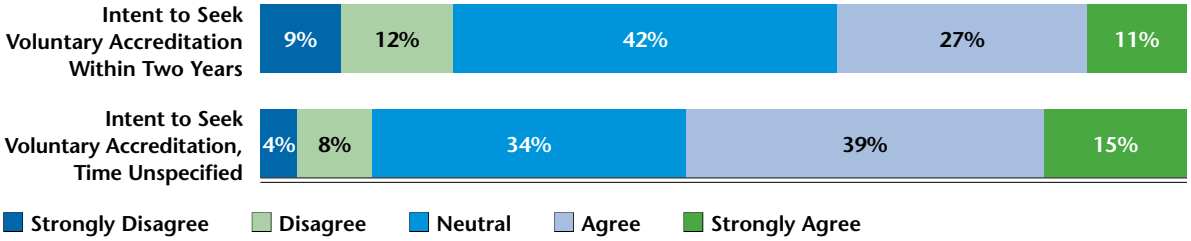
n=433

What Was the Interest Level in LHD Accreditation?

A 2008 Profile questionnaire module also included two questions concerning the level of agreement by the respondent with a statement about whether the LHD would seek accreditation under a voluntary national accreditation program in an unspecified timeframe, and within the first two years of the program (2011–2012). Figure 9.8 shows responses among those who indicated at least some awareness of a voluntary national accreditation program.

Overall, 54 percent of respondents agreed or strongly agreed that their LHD would seek accreditation in an unspecified time period; 38 percent intended to seek accreditation within the first two years of the program (Figure 9.8). About 12 percent disagreed or strongly disagreed that the LHD would seek accreditation in an unspecified time period.

FIGURE 9.8 Percentage of LHDs, by Level of Agreement with Statements on Seeking Voluntary National Accreditation Overall and Within the Next Two Years*



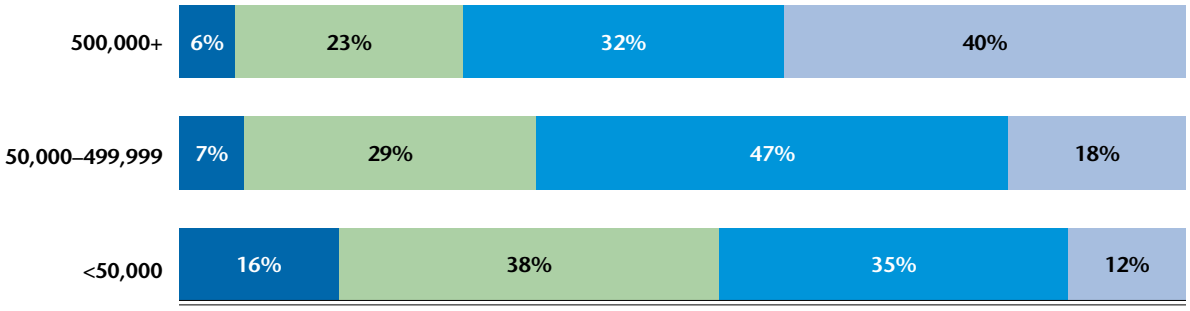
n=343

**Among LHDs with at least slight familiarity with voluntary national accreditation.*

Did Interest in a Voluntary National Accreditation Program Differ by the Size of the Population Served by the LHD?

Figure 9.9 shows the level of agreement with a statement on seeking voluntary national accreditation in an unspecified time by the size of the population served by the LHD. Forty percent of the respondents for LHDs serving large populations strongly agreed with a statement on seeking accreditation, 18 percent of the respondents for LHDs serving mid-sized populations strongly agreed, and 12 percent of the respondents for smaller LHDs strongly agreed.

FIGURE 9.9 Percentage of LHDs, by Level of Agreement with Statements on Seeking Voluntary National Accreditation in Unspecified Time, by Size of Population Served*



n=343

**Among LHDs with at least slight familiarity with voluntary national accreditation.*

Chapter 10: Information Technology and Management

What Kinds of Information Technology Did LHDs Use?

How Were Records Kept in Specific LHD Programs?

What Types of Information Were Available to LHDs?

Did Most LHDs Have Web Sites?

What Types of Information Were Available on LHD Web Sites?

What Kinds of Promotional Strategies Were Used by LHDs?

Did LHDs Share Resources with Other LHDs?

In What Types of Programs Were LHD Resources Shared?

Background

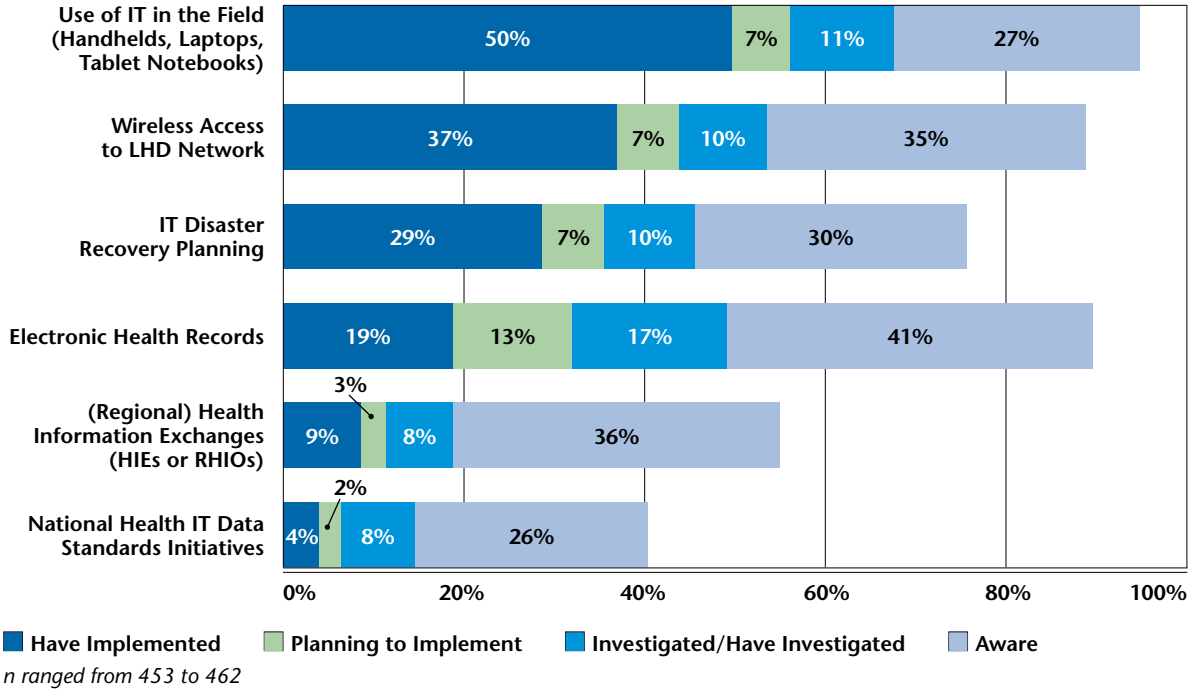
The 2008 Profile questionnaire included a set of detailed questions regarding LHD approaches to information technology, Web sites, public health promotional strategies, and regionalization. These questions were placed in a module added to the questionnaire for a random sample of LHDs; the module provided all data reported in this chapter.

What Kinds of Information Technology Did LHDs Use?

A 2008 Profile module item asked respondents to indicate the LHD awareness level (implemented, planning to implement, investigating, aware, or not aware) related to selected information technology areas.

More than 80 percent of respondents indicated that the LHD had some level of awareness related to three items: use of information technology in the field, wireless access, and electronic health records (Figure 10.1). Use of information technology in the field was the area most often implemented (50%), followed by wireless access to a network (37%), and IT disaster recovery planning (29%).

FIGURE 10.1 Percentage of LHDs, by Level of Implementation of Selected Information Technologies



n ranged from 453 to 462

How Were Records Kept in Specific LHD Programs?

A 2008 Profile module item asked respondents about selected program areas (childhood immunization, vital records, reportable diseases, laboratory reporting, outbreak management, restaurant inspections, and water wells) and the type or types of record keeping used by the LHD related to each area.

Figure 10.2 shows the types of record keeping most common at LHDs for each program area. For five areas—childhood immunization, reportable diseases, vital records, laboratory reporting, and outbreak management—more than 50 percent of LHDs with activity in the program area included a shared database as one of the ways records were kept. Paper records were kept for

FIGURE 10.2 Percentage of LHDs, by Types of Record Keeping for Selected Program Areas*

	Paper	Spreadsheet	Local Relational Database	Shared Database
Childhood Immunization	57%	4%	17%	87%
Reportable Diseases	62%	8%	16%	68%
Vital Records	61%	6%	17%	62%
Laboratory Reporting	67%	4%	18%	58%
Outbreak Management	68%	22%	21%	54%
Restaurant Inspections	73%	14%	26%	33%
Water Wells	76%	16%	24%	24%

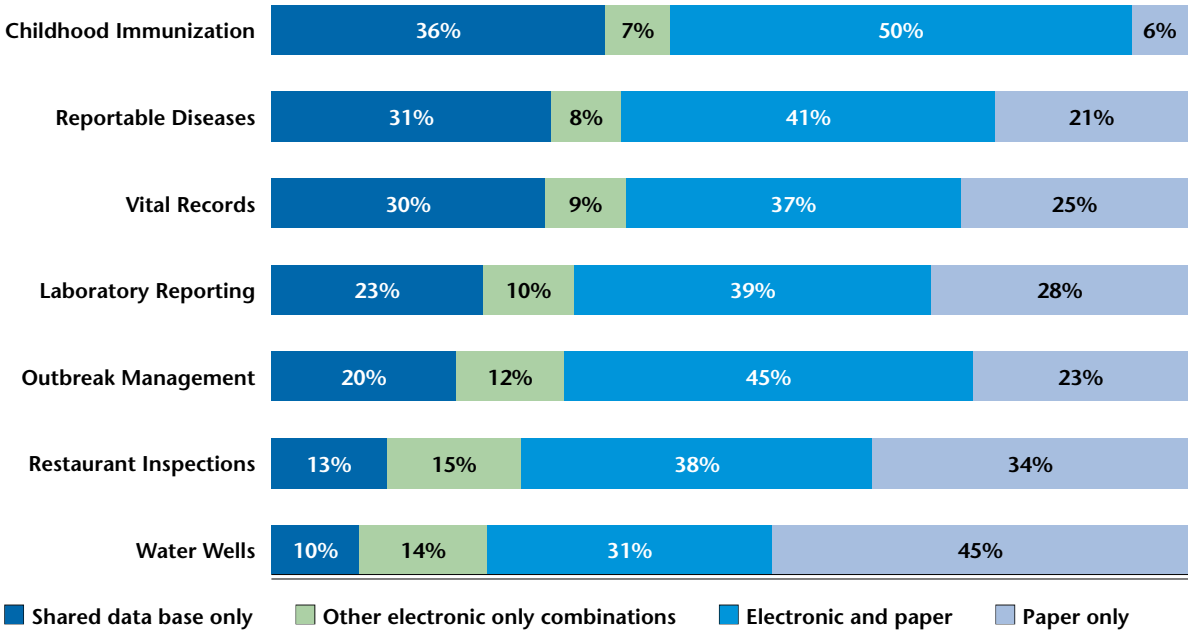
n ranged from 272 to 433

**Percentages among LHDs with activity in the selected program area.*

76 percent of LHDs with water wells (licensing and/or testing), 73 percent of LHDs conducting restaurant inspections, 68 percent of LHDs participating in outbreak management, 67 percent of LHDs with laboratory reporting, 62 percent with activities around reportable diseases, 61 percent of LHDs with vital records, and 57 percent of LHDs conducting childhood immunizations.

In Figure 10.3, approaches to record keeping are grouped into four types: shared database only, other electronic combinations only (to include any combination of shared database and/or spreadsheet and/or relational database, excluding shared database only), any electronic format and paper, or paper only. The first two categories combined represent LHDs that are using exclusively electronic record keeping systems.

FIGURE 10.3 Percentage Distribution of LHDs, by Record Keeping Systems for Selected Program Areas*



n ranged from 272 to 433

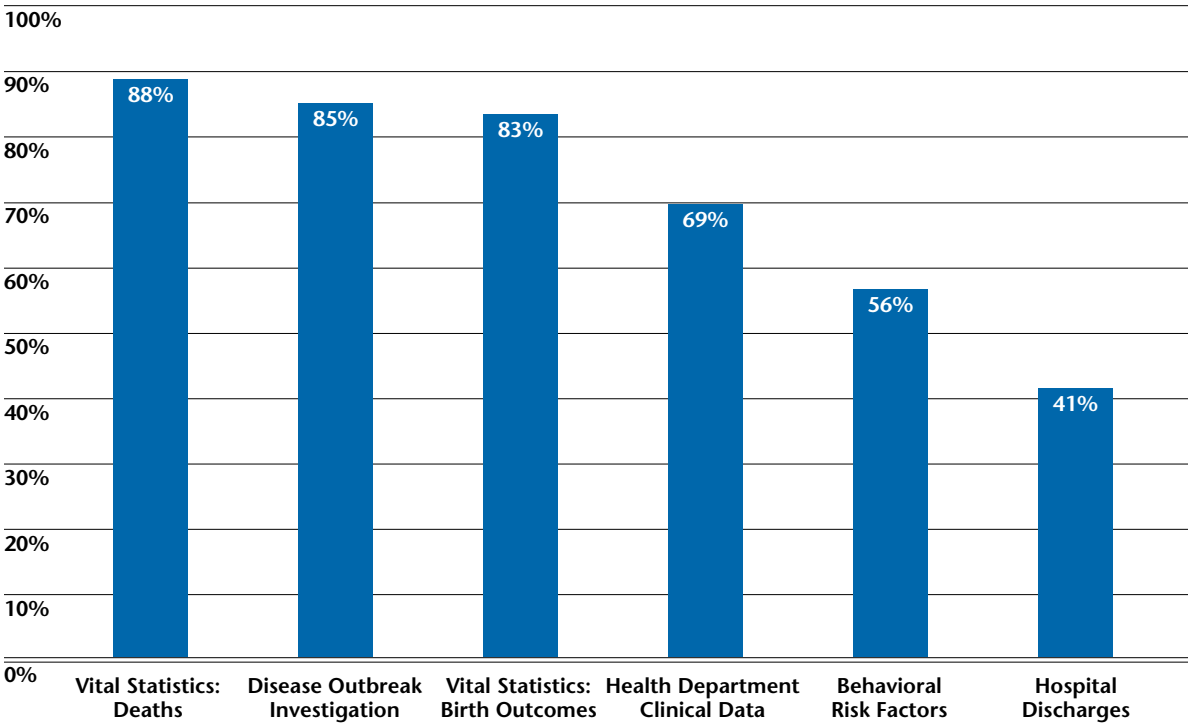
**Among LHDs with activity in the selected program area only.*

What Types of Information Were Available to LHDs?

A 2008 Profile module item asked respondents about selected data sources (hospital discharge, behavioral risk factor, health department clinical data, vital statistics, and disease outbreak investigation) and whether the data sets had been analyzed by specific characteristics, including age, sex, income and/or education, race and/or ethnicity, contextual (e.g., neighborhood), or primary language spoken.

Figures 10.4 shows the data sources available to LHDs. Vital statistics—both birth and death certificate data—and disease outbreak investigations were the data sets reported most often; hospital discharges and behavioral risk data sets were reported least often.

FIGURE 10.4 Percentage of LHDs, by Availability of Data Sources



n ranged from 397 to 436

Figure 10.5 shows, for LHDs with access to a data set, the types of information obtained from the data set. For all data sets available to an LHD, age, sex, and race/ethnicity were the data fields most commonly used for analysis. Contextual data and primary language were usually the least commonly used for analysis. These findings may be due to a lack of data availability. For instance, primary language may be available on paper records but not included as a field in a data set. Contextual analysis requires a geographic identifier that may be collected but unavailable to LHDs. The findings also point, in at least some cases, to a lack of use of available data.

FIGURE 10.5 Percentage of LHDs, by Data Sources and Types of Information Accessed*

	Age	Sex	Race and/or Ethnicity	Income and/or Education	Primary Language Spoken	Contextual (e.g., Neighborhood Analysis)
Hospital Discharges	97%	89%	72%	25%	17%	16%
Behavioral Risk Factors	98%	95%	77%	57%	20%	19%
Health Department Clinical Data	96%	92%	80%	53%	36%	19%
Vital Statistics: Birth Outcomes	90%	92%	81%	39%	13%	13%
Disease Outbreak Investigation	97%	96%	65%	23%	25%	33%
Vital Statistics: Deaths	99%	94%	78%	35%	16%	13%
Average	96%	93%	76%	39%	21%	19%

n ranged from 211 to 413 by source of data

**Among LHDs indicating availability of each specified data source.*

Did Most LHDs Have Web Sites?

A 2008 Profile module included a set of items related to a local Web site, and the types of information available on the Web site.

FIGURE 10.6 Percentage of LHDs with Web Sites

	All LHDs	<50,000	50,000+
Has Local Web Site	77%	68%	92%

n=425

Figure 10.6 shows that although 77 percent of all LHDs had a Web site, the existence of a Web site varied greatly by the size of the population served by the LHD, with 68 percent of LHDs serving populations of less than 50,000 having a Web site, and 92 percent of LHDs serving populations of 50,000 or more having a Web site.

What Types of Information Were Available on LHD Web Sites?

Figure 10.7 shows the information available on LHD Web sites, among LHDs with an existing Web site. Providing information (including contact information) for various services provided at the LHD were included by more than 90 percent of all LHDs. Information on services provided by other public health partners in the community was included on 73 percent of the Web sites, community health information on 53 percent, downloadable forms on 38 percent, and results from local restaurant inspections on 19 percent of all LHD Web sites. LHDs serving larger populations were somewhat more likely to have each information item.

FIGURE 10.7 Percentage of LHDs with Selected Web Site Attributes*

Web Site Content	All LHDs	<50,000	50,000+
Provides Telephone and/or E-Mail Contact Information for the Various Services Provided	95%	94%	97%
Provides Information About the Various Services Provided	94%	91%	98%
Includes Links or Contact Information for Other Public Health Partners in the Community	73%	68%	79%
Includes a Number of Links to Other Sources of Consumer Health Information for the Public (e.g., Medline Plus, CDC Information)	63%	57%	71%
Offers Resource Information (Resource Directories: Health Services, Child Care)	59%	56%	64%
Provides Community Health Information (e.g., Data, Reports, and Plans)	53%	42%	69%
Regulated Entities Can Download Commonly Used Forms from Web Site	38%	28%	51%
Reports Results of Local Restaurant Inspections	19%	12%	28%
Offers Ability to Conduct Surveys Online	10%	6%	16%
Regulated Entities Can Submit Forms or Other Information Electronically via Web Site	8%	5%	12%

n=343

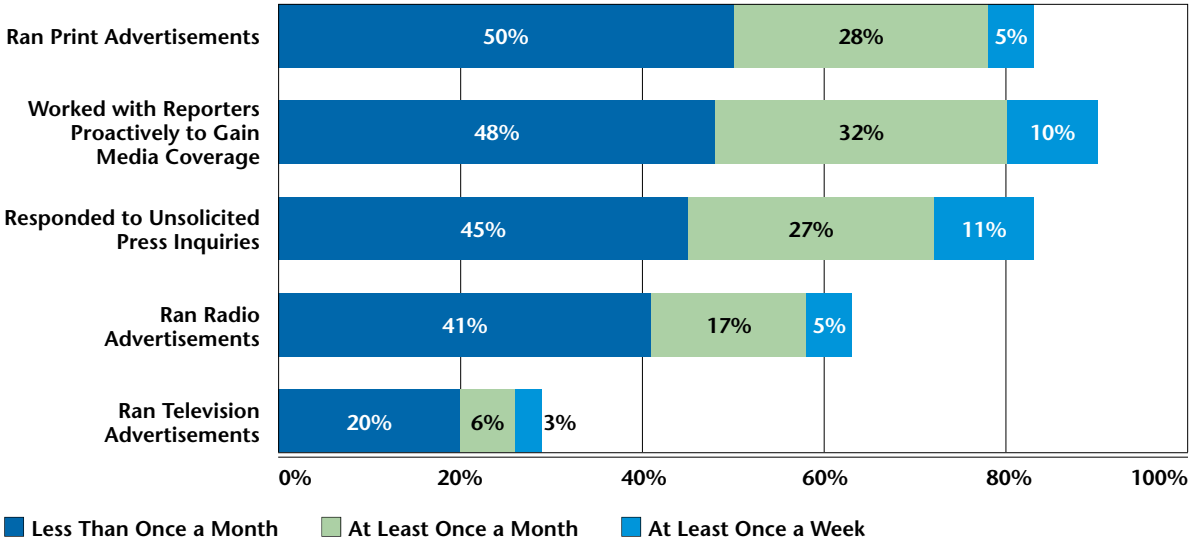
**Among LHDs with Web sites.*

What Kinds of Promotional Strategies Were Used by LHDs?

A 2008 Profile module question asked whether the LHD had engaged in a series of promotional activities—including print, radio, and television advertisements, working with reporters proactively to gain media coverage, and responding to unsolicited press inquiries. The respondent was also asked to indicate the frequency with which each activity was conducted.

Figure 10.8 shows that LHDs were most likely to report working with reporters proactively to gain media coverage (90%), and least likely to report the use of television advertisements (29%). Among LHDs conducting any promotional activity, most LHDs reported a frequency of less than once a month.

FIGURE 10.8 Percentage of LHDs with Selected Public Health Promotional Strategies, by Frequency of Strategies



n=434

Did LHDs Share Resources with Other LHDs?

A Profile module included a set of questions on whether the LHD shared resources—including funding, staff, or equipment—with any other LHDs on a continuous, recurring (non-emergency) basis. If the LHD shared any resources, the respondent was asked to indicate whether resources were shared for the following six areas: emergency preparedness, epidemiology or surveillance, inspections, clinical services, administrative services, or other.

Figure 10.9 shows that 57 percent of all LHDs shared resources with one or more other LHDs on a continuous, recurring basis, with very little difference according to the size of the population served by the LHD.

FIGURE 10.9 Percentage of LHDs Sharing Resources, by Size of Population Served

	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–499,999	500,000+
Share Resources with One or More LHDs on Continuous, Recurring Basis	57%	58%	57%	55%	60%	55%

n=472

In What Types of Programs Were LHD Resources Shared?

Figure 10.10 shows the type of program sharing resources among those LHDs with any resources shared, and the percentage of LHDs sharing resources within each program type. Among LHDs sharing resources, emergency preparedness and epidemiology or surveillance were the two most named programs where resources were shared.

FIGURE 10.10 Percentage of LHDs Sharing Resources, by Service or Function Where Resources Shared

Types of Resources	All LHDs	<50,000	50,000+
Emergency Preparedness	77%	78%	74%
Epidemiology or Surveillance	56%	53%	61%
Clinical Services	41%	47%	32%
Inspections	41%	49%	28%
Administrative Services	37%	42%	27%
Other	21%	18%	26%

n=269

**Among LHDs sharing resources in one or more program areas.*

Chapter 11: Conclusion

Jurisdiction and Governance

Financing

LHD Leaders

LHD Workforce

Emergency Preparedness

LHD Activities

Community Health and Health Disparities

Quality Improvement and Accreditation

Information Technology and Management

Overview

Any effort to summarize information on local public health systems and practice, especially as it relates to LHDs, must begin with an acknowledgment of their diversity. LHDs provide for local public health through many different structures, functions, staffing patterns, and funding sources. It may also be said, however, that with a careful look at the data, a profile of local public health begins to emerge. Below is a summary of major findings from the 2008 Profile study.

Jurisdiction and Governance

LHDs in the United States served a variety of different jurisdiction types, with populations ranging from less than 1,000 to more than nine million. The governance of LHDs varied from state to state, and sometimes even within a state. The 2008 Profile study found the following:

- 71 percent of LHDs served a county or combined city-county jurisdiction
- 64 percent of LHDs served small jurisdictions (populations of less than 50,000), but these small jurisdictions account for only 12 percent of the U.S. population
- Approximately 46 percent of the U.S. population lived in the jurisdictions of the 5 percent of LHDs that serve populations of more than 500,000
- 80 percent of LHDs served a jurisdiction with a local board of health
- In 29 states, all LHDs operated as units of local government

Financing

The diversity among LHDs is clearly evident when LHD financing is examined. LHD annual budgets ranged from less than $10,000 to more than $1 billion. Examining LHD revenue sources also indicates the varied ways that states and local communities have chosen to fund local public health activities and services. The 2008 Profile study found the following:

- 25 percent of LHDs had annual expenditures of under $500,000; 17 percent of LHDs had annual expenditures of more than $5 million
- The median LHD per capita annual expenditure was $36
- Local sources provided the greatest percentage of LHD revenues (25%), followed by state direct sources (20%), and federal funds passed through to LHDs by state agencies (17%)
- LHD per capita funding and revenue sources varied greatly by state

LHD Leaders

LHD top agency executives go by many different names across the United States: health officer, director, administrator, health commissioner, nurse manager, hometown health leader, and many others. The 2008 Profile study found the following:

- 86 percent of LHDs had a full-time top agency executive
- 56 percent of LHD top executives were women
- 46 percent of LHD top executives were age 50–59; 20 percent were 60 or older

- LHD top executives had been in their current positions for an average of nearly nine years
- 57 percent of LHDs serving populations of 500,000 or more were led by a top executive with a doctoral degree, whereas 11 percent of LHDs serving populations less than 25,000 had a top executive with a doctoral degree

LHD Workforce

LHD employees are front-line workers in the nation's public health system, providing a variety of services in the preventive, clinical, environmental, and emergency preparedness arenas. The 2008 Profile study found the following:

- Approximately 155,000 FTE workers were employed by LHDs
- 38 percent of LHDs employed fewer than 10 FTE workers
- Nearly 100 percent of LHDs in most population size categories employed administrative or clerical personnel, nurses, and managers and directors
- 57 percent of LHDs had an emergency preparedness coordinator
- 37 percent of the LHD workforce comprised employees in three occupational categories: nurses, environmental health specialists and scientists, and managers and directors
- Clerical staff made up 23 percent of the LHD workforce

Emergency Preparedness

Responding to disease outbreaks, environmental hazards, and natural disasters are essential services of LHDs. Since September 2001, public health agencies in the United States have placed increased emphasis on emergency preparedness. The 2008 Profile study found the following:

- 62 percent of LHDs had hired additional FTEs using funding from the CDC preparedness cooperative agreement
- $1.59 was the median per capita funding that LHDs received from the CDC preparedness cooperative agreement
- 89 percent of LHDs had written or updated a Pandemic Flu Preparedness Plan, 86 percent of LHDs had participated in table top emergency drills or exercises, and 85 percent had conducted staff training on emergency preparedness
- 80 percent of LHDs activating an Emergency Operations Center for an emergency (not a drill or preplanned event) in the past year did so in response to a natural disaster or severe weather

Activities and Services

LHDs are a critical component of the local public health system that includes governmental agencies, healthcare providers, community organizations, schools, businesses, the media, and others. The specific role filled by each of these organizations or agencies in promoting the public health—including the LHD role—varies by community. The 2008 Profile study found the following:

- 88 percent of LHDs provided adult immunizations; 86 percent of LHDs provided childhood immunizations
- In at least 80 percent of LHD jurisdictions, a governmental agency provided screening for tuberculosis; at least 60 percent of LHDs provided screenings for HIV/AIDS, sexually transmitted diseases (STDs), blood lead levels, and high blood pressure
- 35 percent of LHDs provided screenings for cardiovascular disease; 45 percent of LHDs provided screenings for diabetes
- 72 percent of LHDs provided treatment for tuberculosis; 57 percent of LHDs provide treatment for sexually transmitted diseases
- 62 percent of LHDs provided WIC services; 54 percent provided family planning services
- 70 percent of LHDs provided tobacco use prevention services; 12 percent provided mental illness prevention services
- 88 percent of LHDs conducted surveillance and epidemiology for communicable/infectious diseases
- 74 percent of LHDs provided food safety education

Community Health Planning and Health Disparities

A key role of the LHD is to provide leadership within the local public health system through partnerships and community health planning with many other agencies and organizations. LHDs also work to support efforts to address health inequities and advocate on behalf of local public health. The 2008 Profile study found the following:

- 63 percent of LHDs had completed a community health assessment in the last three years
- 49 percent of LHDs had participated in community health improvement planning in the last three years
- 78 percent of LHDs had communicated with policymakers regarding proposed legislation, regulations, or ordinances
- Half of LHDs engaged their communities to discuss unmet personal healthcare service needs
- 58 percent of LHDs supported community efforts to address health disparities

Performance Improvement and Accreditation

Formal performance improvement (the systematic process of designing, developing, and implementing methods to improve performance) and accreditation (the periodic issuance of credentials and endorsements to organizations that meet a specified set of performance standards) are relatively new to local public health. LHDs are entering into these areas in order to strengthen the activities and services they provide, and ultimately improve the health of their communities. The 2008 Profile study found the following:

- 55 percent of LHDs participated in performance improvement activities
- Among LHDs with performance improvement activities, 76 percent of LHDs had customer focus and satisfaction performance improvement activities in place
- 78 percent of LHDs had at least some managers with formal training in quality improvement
- 77 percent of LHDs were familiar with voluntary national accreditation programs
- 54 percent of LHDs expressed interest in seeking voluntary national accreditation; 38 percent of LHDs planned to seek accreditation within the first two years of the program (2011–2012)

Information Technology

The capacity to use information efficiently and effectively is fundamental to all public health activities, and information management is a key component of the local public health infrastructure. The 2008 Profile study found the following:

- 77 percent of LHDs had a Web site
- 37 percent of LHDs had implemented wireless Internet access
- 19 percent of LHDs kept electronic health records
- More than half of all LHDs kept shared (e.g., Web-based) database records for immunizations, vital records, reportable diseases, laboratory reporting, and outbreak management (if they conducted the activity)

NACCHO

National Association of County & City Health Officials

The National Connection for Local Public Health

1100 17th Street, NW 2nd Floor
Washington, DC 20036
P (202) 783-5550
F (202) 783-1583
http://www.naccho.org