Attachment G

2016 National Profile *of* Local Health Departments

PROFILE

NACCHO
National Association of County & City Health Officials

Acknowledgments

This is my fifth (and final) Profile survey, so I have been given the honor of conveying thanks to all of the people who contribute to this unique study.

I continue to be amazed and humbled at the willingness of our members to contribute their time towards responding to this survey and creating an accurate picture of local public health. Their willingness to do something for "the good of the order" makes us the envy of many other associations.

The average response to a Web-based survey is 10–15%; response to the last five Profile surveys was 76–83%. Our not-so-secret weapons are the many people outside of NACCHO who encourage local health departments to complete the Profile survey, including State Association of County and City Health Officials (SACCHO) leaders, state health department leaders, and current and past NACCHO Board members. Without them, we would be unable to achieve the high response rates that make the Profile such a credible source of information.

People who are afraid of a little hard work cannot be part of the Profile staff team. Some aspects of the study are decidedly not fun (cajoling members to complete their surveys and cleaning financial data come immediately to mind). I am grateful for the Profile Team members who take meticulous care in their work and are always looking for opportunities to improve.

Experts from local health departments, academia, and public health partners volunteer their time to help us ensure that the Profile survey is both rigorous and relevant. Thank you to the members of the Profile Workgroup for their contributions to the study.

Finally, a big thank you to our funders: the Centers for Disease Control and Prevention and the Robert Wood Johnson Foundation. Without you, there would be no NACCHO Profile!

With gratitude,

Carolyn Leep
Senior Director, Research & Evaluation

The lifesaving work our national local health departments (LHDs) perform is guided by the most accurate and up-to-date data available. We are pleased to provide the National Profile of Local Health Departments (Profile) to LHDs, policymakers, public health researchers, and the public health community at large. The Profile is the only survey of its kind that collects information on LHD infrastructure and practice at the national level.

Having these new data is especially critical now, as the nation is being led by a new Administration, and the funding LHDs have depended upon may be at risk. The Profile captures information on many topics that represent the diversity of public health, making the Profile data one of the most important and frequently used data sets in the field of public health systems and services research. With this information, NACCHO's Research and Evaluation Team has given the public health community the data we need to more effectively advocate for our members and the communities they serve as we continue in our work to reduce health inequities, combat disease, and improve the quality and length of all lives.

Claude-Alix Jacob, MPH
NACCHO President
Cambridge Public Health Department (MA)

LaMar Hasbrouck, MD, MPH
Executive Director
NACCHO

The Centers for Disease Control and Prevention (CDC) is pleased to support NACCHO and its work on the National Profile of Local Health Departments. This 2016 report is a valuable resource for all public health professionals, policymakers, federal agencies, researchers, and others to use in understanding our nation's current local public health infrastructure.

The work of local health departments is critical in protecting the health of communities. I commend NACCHO and the local health departments for providing data and for their dedication and contributions to public health.

Thomas R. Frieden, MD, MPH
Director, CDC
Department of Health & Human Services

Our ability to be healthy and well is tied inextricably to where we live. NACCHO and its partners are dedicated to improving the health of our citizens by supporting public health at its foundation—in our communities.

By assessing health risks and behaviors, and by developing improvement plans to enable local health directors to develop their skills, NACCHO and its partners are improving access to care, obesity reduction, promoting wellness and addressing the mental health challenges that lead to substance use. We are grateful for their unceasing devotion to this cause.

Risa Lavizzo-Mourey
President and CEO
Robert Wood Johnson Foundation

National Profile of Local Health Departments Workgroup Members

Betty Bekemeier, PhD, MPH, MSN, FAAN
University of Washington

Bonnie Brueshoff, RN, DNP, PHN
Dakota County Public Health Department

Glenn Czarnecki, MPA
Tennessee Department of Health, Southeast Region

Paul Erwin, MD, DrPH
University of Tennessee

April Harris, MPH
Three Rivers District Health Department

Jenine Harris, PhD
Washington University in St. Louis

Richard Ingram, DrPH
University of Kentucky

Nikki Lawhorn Rider, ScD, MPP
National Network of Public Health Institutes

Rivka Liss-Levinson, PhD
Association of State and Territorial Health Officials

Ruth Maiorana
Maryland Association of County Health Officers

Doug Mathis, MA
Henry County Health Department

Carolyn Miller, MSHP, MA
Robert Wood Johnson Foundation

Carol Moehrle, RN, BSN
Idaho Department of Health and Welfare, North Central District

Gulzar Shah, PhD, MStat, MS
Georgia Southern University

Sergey Sotnikov, PhD
Centers for Disease Control and Prevention

Patricia Sweeney, JD, MPH, RN
Mahoning County District Board of Health

Lisa VanRaemdonck, MPH, MSW
Colorado Association of Local Public Health Officials

Oktawia Wojcik, PhD
Robert Wood Johnson Foundation

Susan Zahner, DrPH, RN, FAAN
University of Wisconsin

Served as a workgroup member during 2015 or 2016.

NACCHO Profile Team

Carolyn Leep, MS, MPH
Senior Director of Research & Evaluation

Jiali Ye, PhD
Lead Research Scientist

Nathalie Robin, MPH
Senior Research Analyst

Sarah Newman, MPH
Senior Research and Evaluation Analyst

Kari O'Donnell, MA
Research Specialist

CONTENTS

Go directly to a chapter by clicking on the title.

FIGURES

Chapter 1 | Introduction

Chapter 2 | Jurisdiction and Governance

Chapter 3 | Partnerships

Chapter 4 | Leadership

Go directly to a figure by clicking on the title.

FIGURES

Chapter 5 | Workforce

Chapter 6 | Finance

Chapter 7 | Programs and Services

Go directly to a figure by clicking on the title.

FIGURES

Chapter 8 | Emergency Preparedness and Response

Chapter 9 | Assessment, Planning, and Accreditation

Go directly to a figure by clicking on the title.

FIGURES

Chapter 10 | Quality Improvement and Workforce Development

Chapter 11 | Public Health Policy

Chapter 12 | Informatics

Go directly to a figure by clicking on the title.

CHAPTER 1

Introduction

This chapter includes the following:

- Study background and methods.
- Questionnaire topics.
- Number of local health departments (LHDs) in study population.
- Definitions of LHD jurisdiction size, type of governance, census regions, and degree of urbanization.

The National Association of County and City Health Officials (NACCHO) is the national non-profit membership association representing the nation's local health departments (LHDs). NACCHO's mission is to be a leader, partner, catalyst, and voice with LHDs. NACCHO conducted the first National Profile of Local Health Departments (Profile) study from 1989 to 1990. This study helped to define an LHD and describe how funding, staffing, governance, and activities of LHDs vary across the United States. Since then, NACCHO has conducted an additional seven Profile studies, including in 2016. All Profile studies have been funded by the Centers for Disease Control and Prevention; beginning in 2007, NACCHO also received funding from the Robert Wood Johnson Foundation.

Purpose

The purpose of the Profile study is to develop a comprehensive and accurate description of LHD infrastructure and practice. Data from the Profile study are essential to painting a picture of the realities on the ground for LHDs and are used by many people and organizations. For example, LHD staff use the data to compare their LHD or those within their states to others nationwide. Data are used by policymakers at the local, state, and federal levels to understand how LHDs improve and protect the health of local communities. Data are also used by universities to educate future public health workforce members about LHDs and by researchers to address questions about public health practice. Profile data also helps highlight the challenges faced by LHDs and differences between small, medium, and large LHDs. NACCHO staff use Profile data to develop programs and resources that meet the needs of LHDs and to advocate effectively for LHDs.

Study Methodology

Study population

Every Profile study has used the same definition of an LHD: an administrative or service unit of local or state government, concerned with health, and carrying some responsibility for the health of a jurisdiction smaller than the state. There are approximately 2,800 agencies or units that meet the Profile definition of an LHD. Some states have a public health system structure that includes both regional and local offices of the state health agency. In those states, the state health agency chooses to respond to the Profile survey at either the regional or local level, but not at both levels.

NACCHO uses a database of LHDs based on previous Profile studies and consults with state health agencies and state associations of local health officials to identify LHDs for inclusion in the study population. For the 2016 Profile study, a total of 2,533 LHDs were included in the study population. Hawaii and Rhode Island were excluded from the study because these state health departments operate on behalf of local public health and have no sub-state units.

Sampling

All LHDs in the study population received the Core questionnaire. A randomly selected group of LHDs also received one of the two sets of supplemental questions (or modules). LHDs were selected to receive the Core questionnaire only or the Core plus one of the two modules using stratified random sampling (without replacement), with strata defined by the size of the population served by the LHD. The module sampling process is designed to produce national estimates but not to produce state-level estimates.

Questionnaire development

The NACCHO Profile team developed the 2016 questionnaire by first reviewing the previous Profile questionnaire (2013) to determine how each question performed among respondents and what questions should be kept, modified, or deferred to a future Profile questionnaire. The team also reviewed questionnaires from previous years (2010, 2008, 2005) to identify whether any questions should be repeated in 2016. Lastly, the team explored developing new questions based on current public health topics. An advisory group (comprised of LHD leaders, staff from affiliate organizations, and researchers) and other subject matter experts within NACCHO provided input and feedback on new and revised survey questions. The Profile team piloted the questionnaire from October to November 2015 among 50 LHDs (29 completed the pilot for a response rate of 58%). NACCHO interviewed select LHDs to assess whether certain sections and questions performed as expected. The Profile team revised the survey as needed and finalized it for distribution. Refer to nacchoprofilestudy.org/data-requests for the final questionnaire.

FIGURE 1.1

Questionnaire topics

Core	Module 1	Module 2
(Core only response rate = 74%)	**(Core + Module 1 response rate = 80%)**	**(Core + Module 2 response rate = 77%)**
Jurisdiction and governance	Community health assessment and planning	Human resources issues
Programs and services	Quality improvement	Access to health care services
Finance	Health impact assessments	Health disparities
Changes in LHD budgets	Land use planning	Emergency preparedness
LHD top executive	Cross-jurisdictional sharing of services	Public health informatics
Workforce	Partnerships and collaboration	County health statistics
Staffing changes	Interaction with academic institutions	Evaluation of Profile
Guide to Community Preventive Services		
Public health policy		
Community health assessment and planning		
Accreditation		
Communication among LHD leaders		

- The 2016 Profile study questionnaire included a set of questions (Core questionnaire) sent to all LHDs in the United States; additional supplemental questions were grouped into two modules.
- LHDs were randomly assigned to receive only the Core questionnaire or the Core plus one of the two modules.
- Many questions in the Core and modules questionnaires have been used in previous Profile studies and provide an ongoing dataset for comparative analysis; most new items were placed in modules.

Questionnaire distribution

In December 2015, NACCHO sent an e-mail invitation from NACCHO's President and Executive Director to all LHDs in the study population. In the e-mail, LHDs were given the opportunity to designate another staff person as the primary contact to complete the Profile questionnaire. NACCHO launched the final questionnaire from January through April 2016 via an e-mail sent to a designated primary contact 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. LHDs could print a hard copy version of their Profile questionnaire by using a link in the introduction to the Web-based questionnaire or could request that NACCHO staff send a copy via e-mail or U.S. mail.

NACCHO sent all LHDs a postcard announcing the Profile launch and instructing them to contact NACCHO if they had not received an e-mail with their survey link. In addition, NACCHO included promotional materials announcing the upcoming survey in NACCHO's periodical publications (*Public Health Dispatch, NACCHO Connect*) from October 2015 through March 2016.

The Profile team conducted extensive efforts to encourage participants to complete the questionnaire. NACCHO staff and a nationwide group of Profile study advocates conducted follow-up with non-respondents using e-mail messages and telephone calls. NACCHO also offered technical support to survey respondents through an e-mail address and telephone hotline. For a select number of LHDs, NACCHO mailed a hard copy of their questionnaire to their mailing address, encouraging them to complete the survey online or complete their hard copy and return via e-mail, fax, or return mail.

FIGURE 1.2

Number of LHDs in study population and number of respondents by state

State	Total number of LHDs	Number of respondents	Response rate
All	2,533	1,930	76%
Alabama	67	65	97%
Alaska	3	3	100%
Arizona	15	15	100%
Arkansas	75	75	100%
California	61	41	67%
Colorado	54	48	89%
Connecticut	73	46	63%
Delaware	2	2	100%
District of Columbia	1	1	100%
Florida	67	65	97%
Georgia	18	14	78%
Idaho	7	7	100%
Illinois	96	74	77%
Indiana	93	60	65%
Iowa	101	65	64%
Kansas	100	73	73%
Kentucky	61	48	79%
Louisiana	10	6	60%
Maine	10	10	100%
Maryland	24	24	100%
Massachusetts	328	130	40%
Michigan	45	35	78%
Minnesota	74	63	85%
Mississippi	9	9	100%

State	Total number of LHDs	Number of respondents	Response rate
Missouri	115	93	81%
Montana	51	35	69%
Nebraska	20	18	90%
Nevada	4	4	100%
New Hampshire	3	3	100%
New Jersey	101	73	72%
New Mexico	6	6	100%
New York	58	48	83%
North Carolina	85	76	89%
North Dakota	28	28	100%
Ohio	121	90	74%
Oklahoma	70	60	86%
Oregon	34	29	85%
Pennsylvania	16	15	94%
South Carolina	4	4	100%
South Dakota	8	8	100%
Tennessee	95	93	98%
Texas	67	48	72%
Utah	13	10	77%
Vermont	12	12	100%
Virginia	35	30	86%
Washington	35	33	94%
West Virginia	49	31	63%
Wisconsin	86	85	99%
Wyoming	23	19	83%

- Overall, the 2016 Profile study had a response rate of 76%.
- With the exception of Massachusetts and Louisiana, all states had a response rate of more than 60%.
- A total of 15 states and the District of Columbia had response rates of 100%.

FIGURE 1.3

Number of LHDs in study population and number of respondents by size of population served

Size of population served	Total number of LHDs	Number of respondents	Response rate
All	2,533	1,930	76%
<25,000	1,034	691	67%
25,000–49,999	527	418	79%
50,000–99,999	384	308	80%
100,000–249,999	304	262	86%
250,000–499,999	141	122	87%
500,000–999,999	96	86	90%
1,000,000+	47	43	91%

- LHDs serving smaller populations had lower response rates than did those serving larger populations.
- Because there are relatively few LHDs serving large populations, the higher response rates among LHDs serving larger populations are important to the analytic capacity of the study data.

Survey Weights and National Estimates

Unless otherwise stated, national statistics presented were computed using appropriate estimation weights. NACCHO developed estimation weights for the items from the Core questionnaire to account for dissimilar non-response by size of population served; estimation weights used to produce statistics from modules also accounted for sampling. By using estimation weights, the Profile study provides national estimates for all LHDs in the United States. Most statistics included in this report from previous Profile studies were also weighted for nonresponse, but some statistics may differ from previous years due to a special weighting methodology. Special estimation weights were developed for some finance and workforce variables because the rate of item non-response is much higher in these two sections than in other sections of the Profile questionnaire.

Two weights were generated for the analysis: proportional weights and scale weights. Proportional weights for each population category (see Figure 1.3) were calculated by dividing the proportion of LHDs in that population category among the full study population by the proportion of LHDs in that population category among all survey respondents. Scale weights were generated by dividing the number of LHDs in a population category in the full study population by the number of LHDs in that population category that responded to the survey. Scale weights are used for estimating population totals. Either proportional weights or scale weights can be used for generating descriptive statistics such as proportion, mean, and median.

Subgroup Analysis

Throughout this report, data are analyzed by various LHD jurisdiction characteristics, namely size of population served, type of governance, United States census region, and degree of urbanization. Definitions of the categories are described in the sidebar to the right.

FIGURE 1.4

Size of population served by LHD jurisdiction

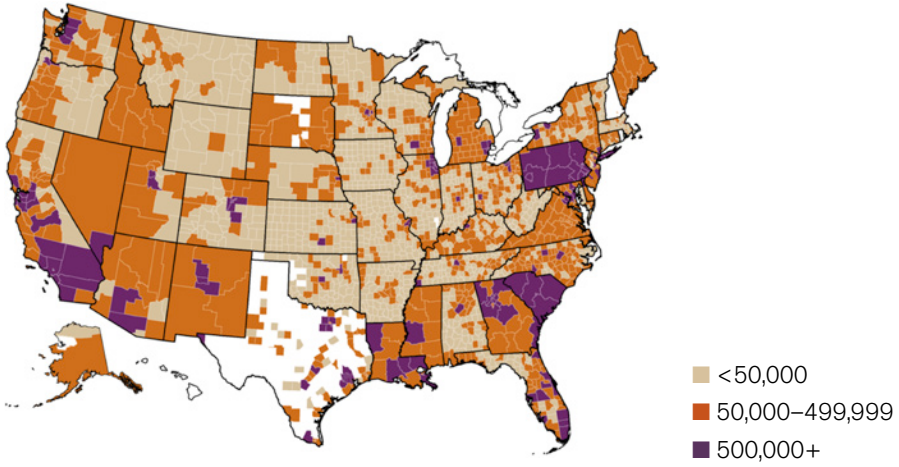
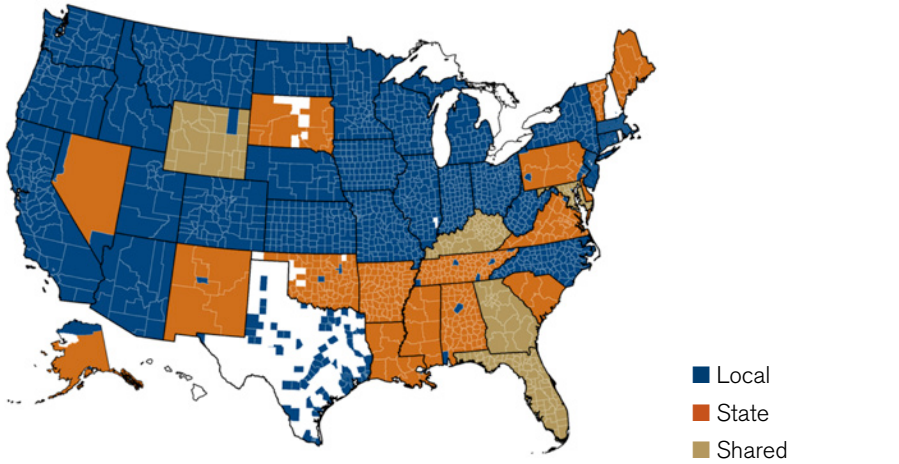


FIGURE 1.5

Type of governance by LHD jurisdiction



- *Size of population served:* Statistics are compared across LHDs serving different population sizes in the LHD jurisdiction. LHDs are classified as small if they serve fewer than 50,000 people, medium if they serve populations between 50,000 and 500,000 people, and large if they serve 500,000 or more people. For certain statistics that are highly dependent on size of population served (e.g., finance and workforce statistics), a larger number of population subgroups are used.

- *Type of governance:* Statistics are compared across LHDs' relationship to their state health department. Some LHDs are agencies of local government (referred to as locally governed); others are local or regional units of the state health department (referred to as state-governed). Some are governed by both state and local authorities (called shared governance). Refer to Chapter 2 (Jurisdiction and Governance) for more details.

FIGURE 1.6

U.S. census region

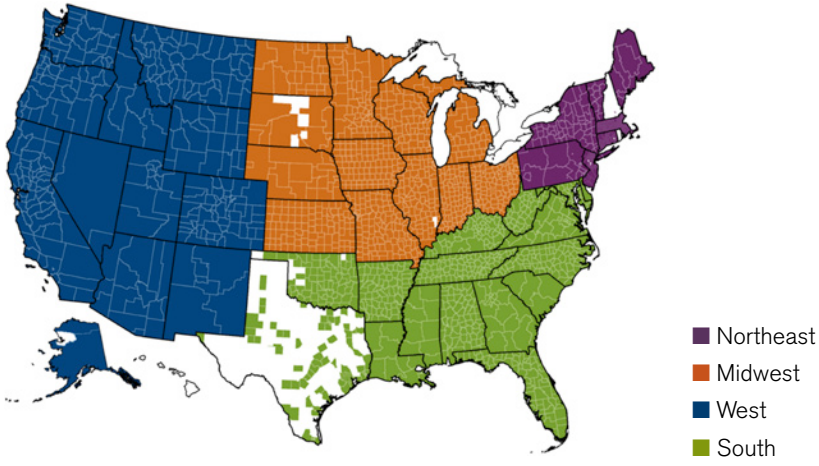
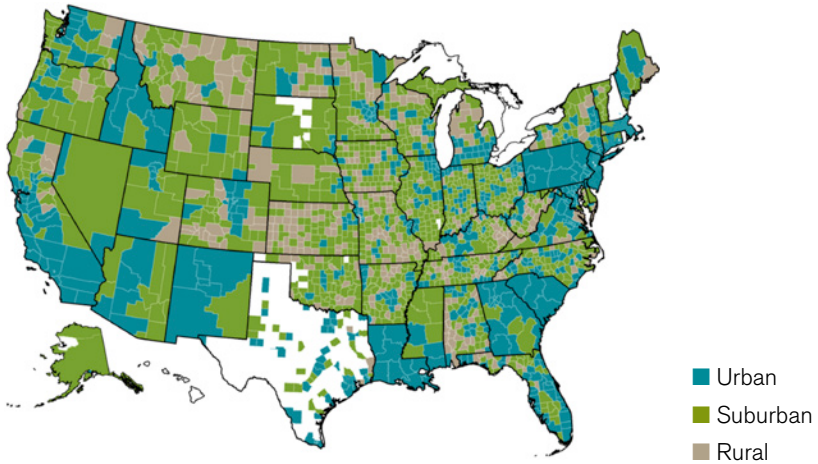


FIGURE 1.7

Degree of urbanization by LHD jurisdiction



- *Census region*: Statistics are also compared across United States census region. All LHDs in each state are classified being in the North, South, Midwest, or West, per the U.S. Census Bureau (http://www.census.gov/econ/census/help/geography/regions_and_divisions.html).
- *Degree of urbanization:* Statistics are compared across LHD jurisdiction by degree of urbanization. Each LHD in the Profile study population is assigned a Rural Urban Commuting Area Codes (RUCA) designation based on the zip code of their primary mailing address, according to the U.S. Department of Agriculture Economic Research Service (http://depts.washington.edu/uwruca/index.php). 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 community information to characterize all of the nation's census tracts regarding their rural and urban status relationships. For this study, NACCHO used these RUCA codes to classify each LHD into urban (1–3), suburban (4–7), or rural (8–10) categories. Occasionally, suburban and rural statistics are presented together; in these cases, groups are labeled urban and non-urban. Each LHD has a single classification based on the zip code of the LHD mailing address, even though some jurisdictions (especially those that are geographically large) include census tracts with differing degrees of urbanization.

Study Limitations

The Profile study is a unique and comprehensive source of information on LHD finances, infrastructure, workforce, activities, and other important characteristics. However, several limitations, should be considered when using the results of this study. Because the questionnaire includes a large number of topics, Profile does not provide in-depth information on these topics. For example, the Profile provides information about whether or not an LHD provides a specific program or service but does not provide any information about the scope or scale of that program or service. All data are self-reported by LHD staff and are not independently verified. LHDs may have provided incomplete, imperfect, or inconsistent information for various reasons.

While the Profile questionnaire includes definitions for many items, not every item or term is defined. For example, the questionnaire does not include definitions for each of the 85 programs and services included in the Profile questionnaire. Consequently, respondents may have interpreted questions and items differently.

Responding to the Profile questionnaire is time-intensive; consequently, respondents may have skipped some questions because of time restrictions. In addition, responses to some questions may have been based on estimation to reduce burden. In particular, questions on finance were difficult for LHDs to answer and yielded large amounts of missing data; refer to the finance chapter for details.

Comparisons with data from prior Profile studies are provided for some statistics, but these comparisons should be viewed with caution because both the study population and the respondents are different for each Profile study. In addition, comparisons are not tested for significant differences.

CHAPTER 2

Jurisdiction and Governance

This chapter includes the following:

- Population sizes served by local health departments (LHDs).
- Geographic jurisdictions served by LHDs.
- Governance of LHDs.
- Combined Health and Human Services Agencies.
- Local boards of health.

FIGURE 2.1

Population sizes served by LHDs

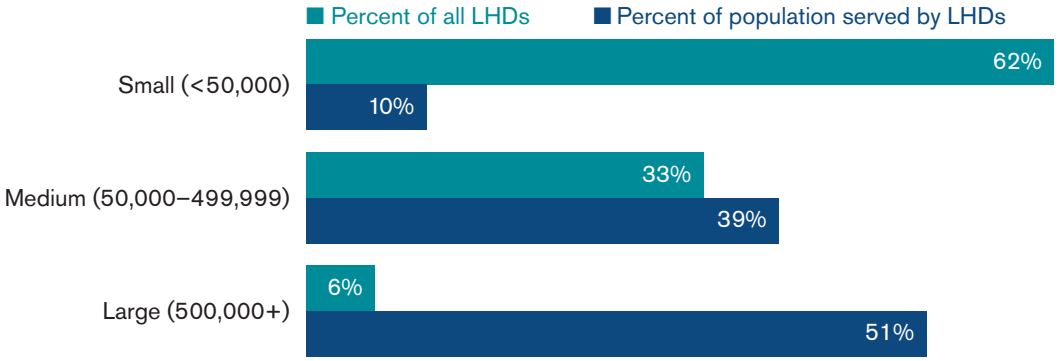
Size of population served	N	Percent
< 10,000	439	17%
10,000–24,999	595	23%
25,000–49,999	527	21%
50,000–74,999	243	10%
75,000–99,999	141	6%
100,000–199,999	244	10%
200,000–499,999	201	8%
500,000–999,999	96	4%
1,000,000+	47	2%
Total	2,533	

N=2,533

- There are approximately 2,800 LHDs in the United States, but not every unit is included in the Profile study. LHDs operating under a centralized governance structure may include multiple levels (e.g., county units and multi-county regions or districts). The state health agency selects one level for inclusion in the Profile.
- 2,533 LHDs were included in the 2016 Profile study population.

FIGURE 2.2

Percent of U.S. population served by LHDs



N=2,533

- LHDs serve different sized jurisdictions across the United States. Throughout this report, small LHDs are classified as those that serve populations of fewer than 50,000 people; medium LHDs serve populations of between 50,000 and 500,000 people; and large LHDs serve populations of 500,000 or more people.
- While only 6% of all LHDs are classified as large, they serve about half of the U.S. population (51%).
- Most LHDs (62%) are small but serve only 10% of the U.S. population.

FIGURE 2.3

Geographic jurisdictions served by LHDs

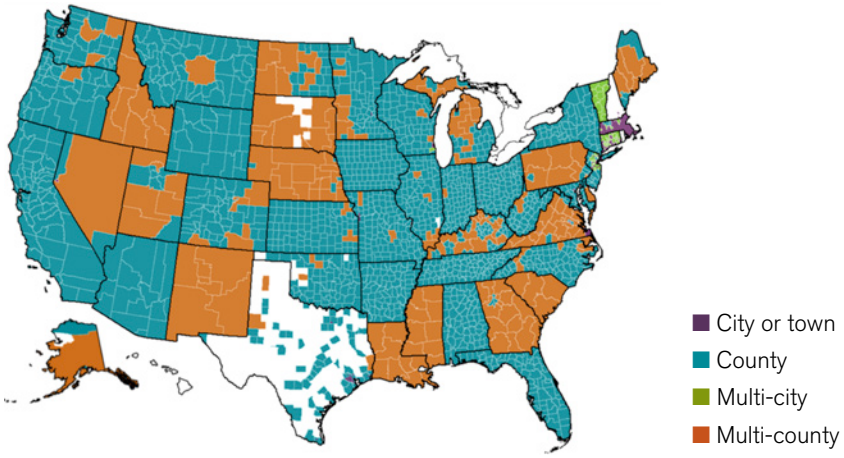
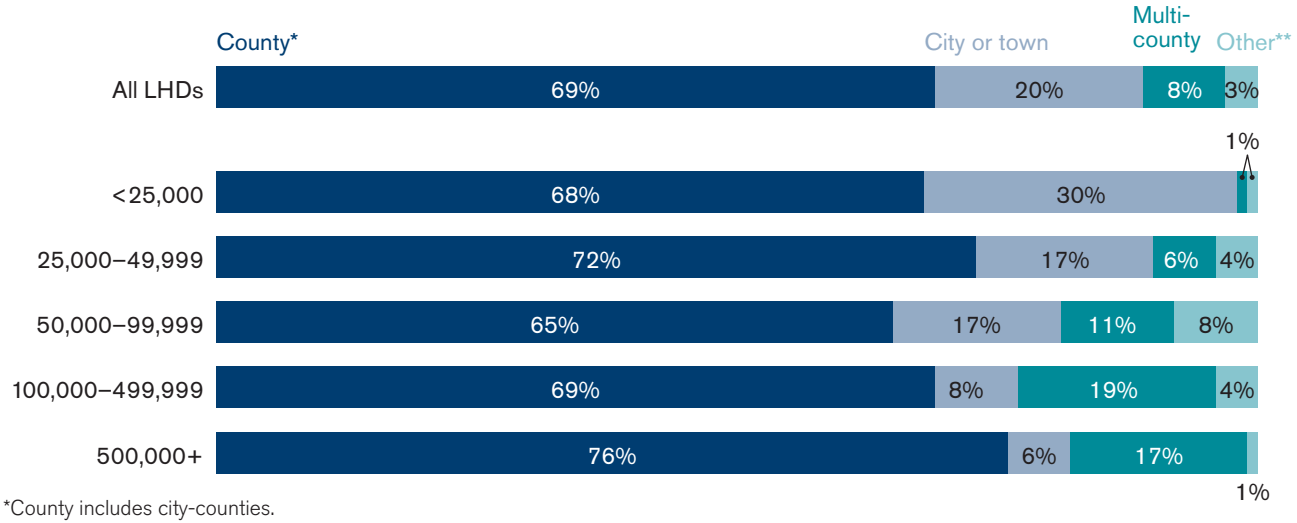


FIGURE 2.4

Geographic jurisdictions served by LHDs by size of population served



*County includes city-counties.

**Other includes LHDs serving multiple cities or towns.

N=2,533

- Approximately two-thirds of LHDs (69%) are county-based and an additional 8% serve multiple counties. One-fifth of LHDs (20%) serve cities or towns.
- Large LHDs are less likely to serve cities or towns but are more likely to serve multiple counties than small LHDs.

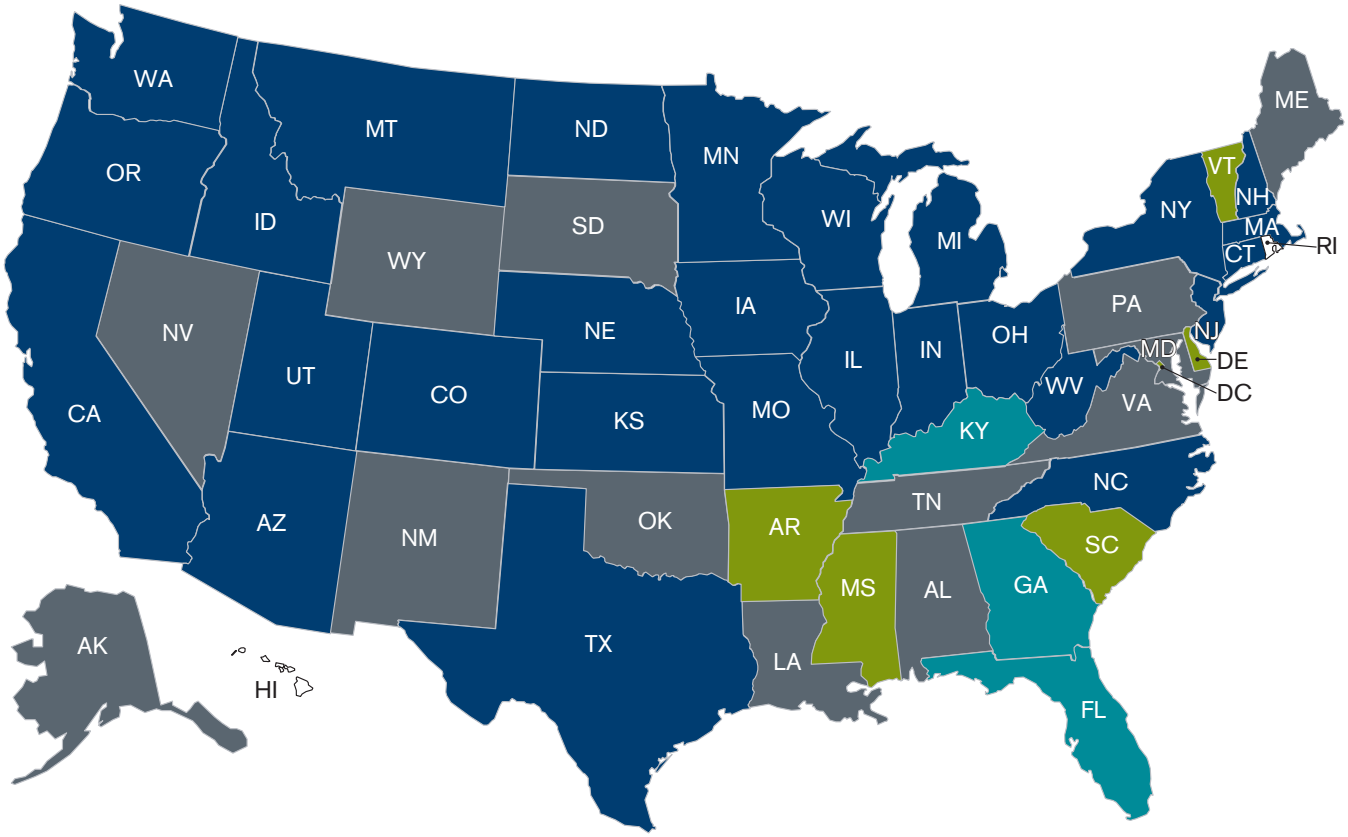
Technical note

Due to their small geographic size, many city and town jurisdictions can only be seen in Figure 2.3 if the map is zoomed in significantly.

FIGURE 2.5

Governance of LHDs by state

- Local (all LHDs in state are units of local government)
- State (all LHDs in state are units of state government)
- Shared (all LHDs in state governed by both state and local authorities)
- Mixed (LHDs in state have more than one governance type)



RI and HI non-participants.

N=2,533

- Of the 2,533 LHDs included in the 2016 Profile study population, 1,946 are locally governed, 396 are units of the state health agency, and 191 have shared governance.
- In 27 states, all LHDs are **locally governed**.
- All LHDs in Florida, Georgia, and Kentucky and most LHDs in Maryland have **shared governance**.
- All LHDs in Arkansas, Delaware, Mississippi, South Carolina, and Vermont are units of the **state health agency**, as are most LHDs in Alabama, Louisiana, New Mexico, Oklahoma, South Dakota, and Virginia.
- In most states with **mixed governance**, units of the state health agency serve most parts of the state, while a small number of large metropolitan areas have locally governed LHDs.

Technical note

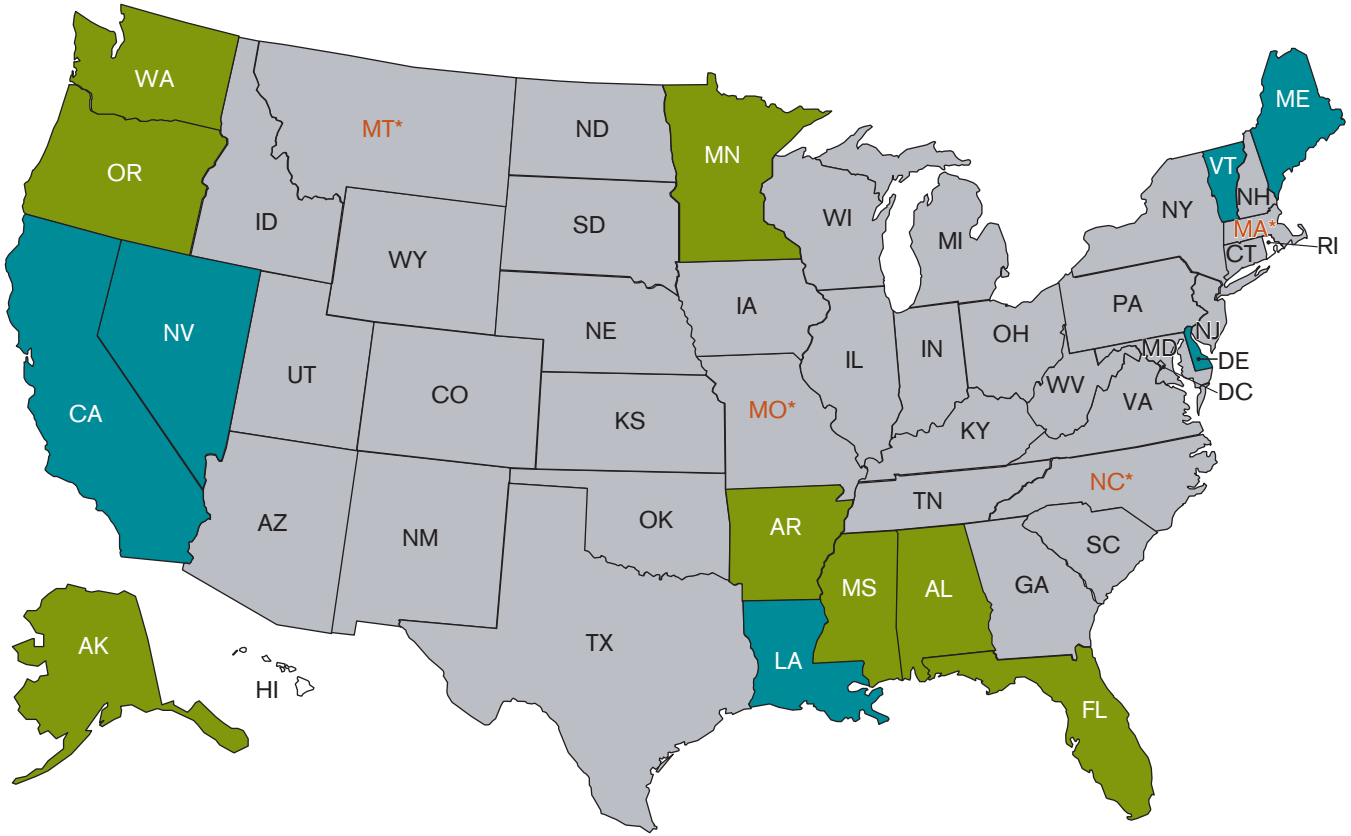
LHDs vary in their relationships with their state health agency. Some LHDs are local or regional units of the state health agency, others are agencies of local government, and others are governed by both state and local authorities (called shared governance). Some states include LHDs with more than one governance type (shown as mixed on the map). States in which all LHDs have state governance are referred to as centralized, and those in which all LHDs are locally governed are decentralized.

FIGURE 2.6

Percent of LHDs part of a combined Health and Human Services Agency (HHSA) by state

Percentage of LHDs that are part of a combined HHSA:

More than 50% 33%–50% Less than 33%



RI and HI non-participants.

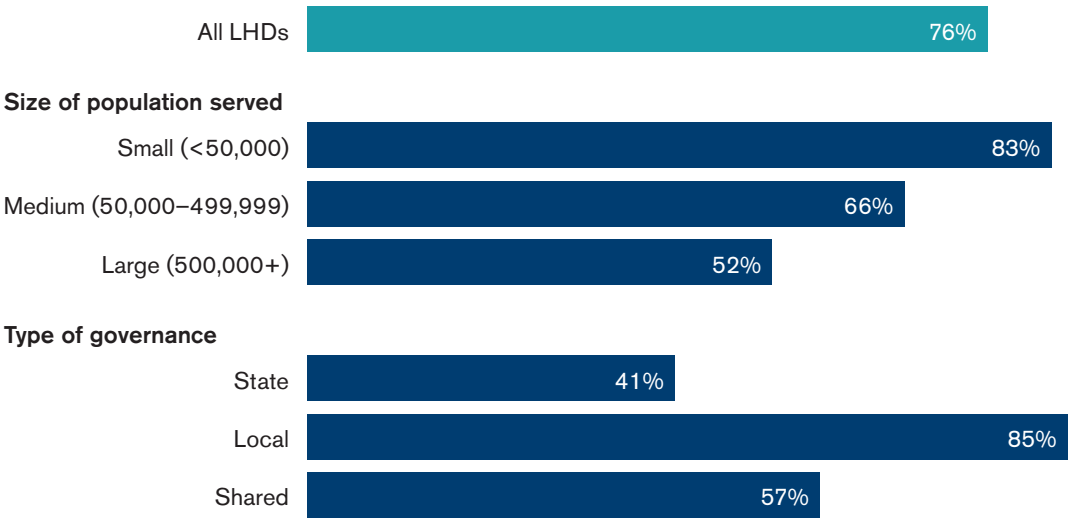
*At least one-third of LHDs that are part of an HHSA were consolidated into the HHSA in past three years.

N=2,533

- Nineteen percent of all LHDs are currently part of a combined HHSA.
- More than half of LHDs in six states are part of a combined HHSA; at least one-third of LHDs in seven states are a part of a combined HHSA; and fewer than one-third of LHDs in the remaining states are a part of combined HHSA.
- In Massachusetts, Missouri, Montana, and North Carolina, at least one-third of LHDs that are part of a combined HHSA were consolidated into that HHSA within the past three years.

FIGURE 2.7

Percent of LHDs with a local board of health by LHD characteristics



N=2,533

- Three-quarters (76%) of all LHDs have a local board of health.
- A larger proportion of small LHDs (83%) have local boards of health, compared to large LHDs (52%).
- Locally governed LHDs are more likely to have a local board of health (85%) compared to LHDs that are units of their state health department (41%) or LHDs that are governed by both state and local authorities (57%).

Technical note

Refer to 2015 Local Board of Health Profile for additional data on local boards of health (available at http://nacchoprofilestudy.org/lboh).

CHAPTER 3

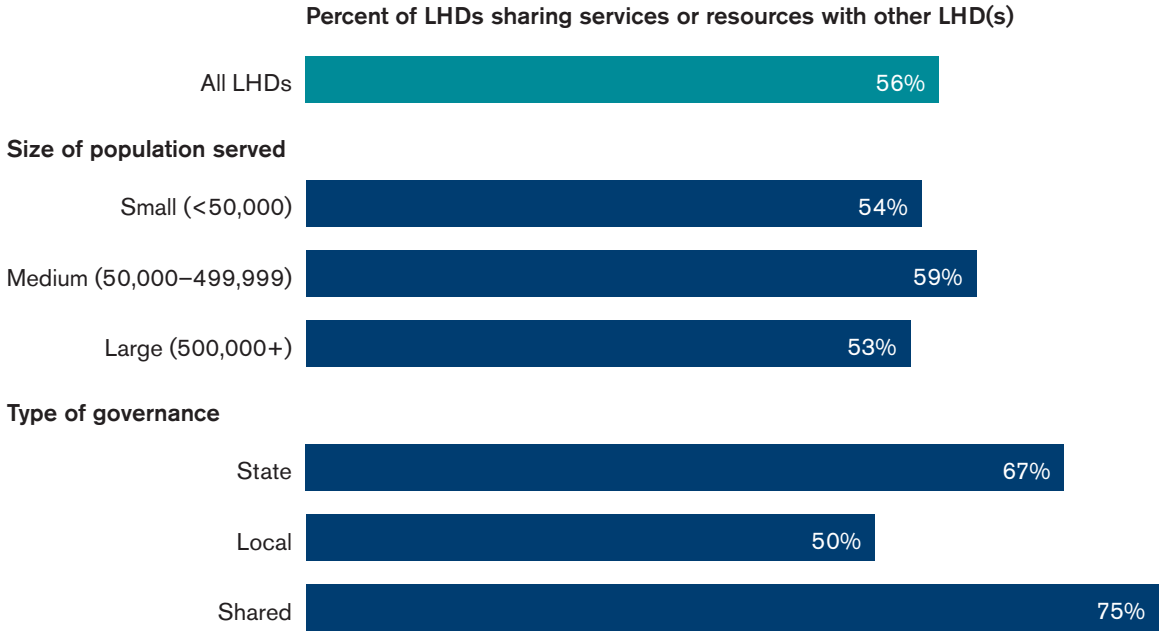
Partnerships

This chapter includes the following:

- Cross-jurisdictional sharing of services.
- Local health department (LHD) partnerships and collaborations.
- LHD engagement with academic institutions.

FIGURE 3.1

Cross-jurisdictional sharing of services by LHD characteristics



n=493

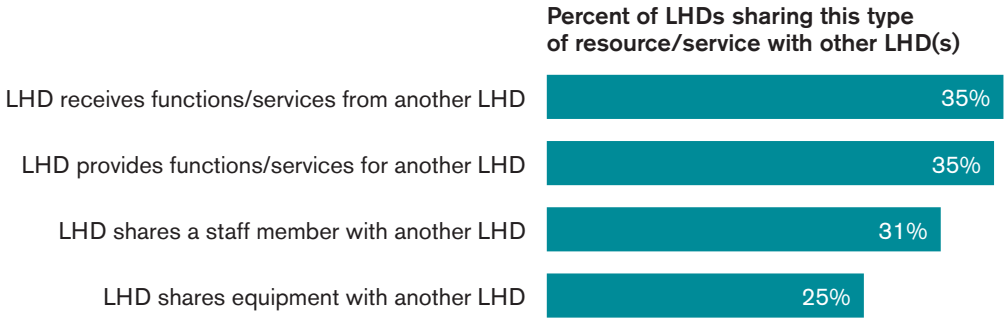
- More than half (56%) of LHDs share resources (such as funding, staff, or equipment) with other LHDs on a continuous, recurring, non-emergency basis.
- Similar proportions of LHDs serving small, medium, and large jurisdictions share services.
- A larger proportion of LHDs governed by both state and local authorities (shared governance) share resources (75%) than locally governed LHDs (50%).

Technical note

Cross-jurisdictional sharing of services is a term used to refer to the various means by which jurisdictions work together to provide public health services. LHDs across the country are looking to cross-jurisdictional sharing as a way to help them more efficiently and effectively deliver public health services. The information provided in this section reflects sharing resources on a continuous, recurring, non-emergency basis.

FIGURE 3.2

Type of cross-jurisdictional sharing of services



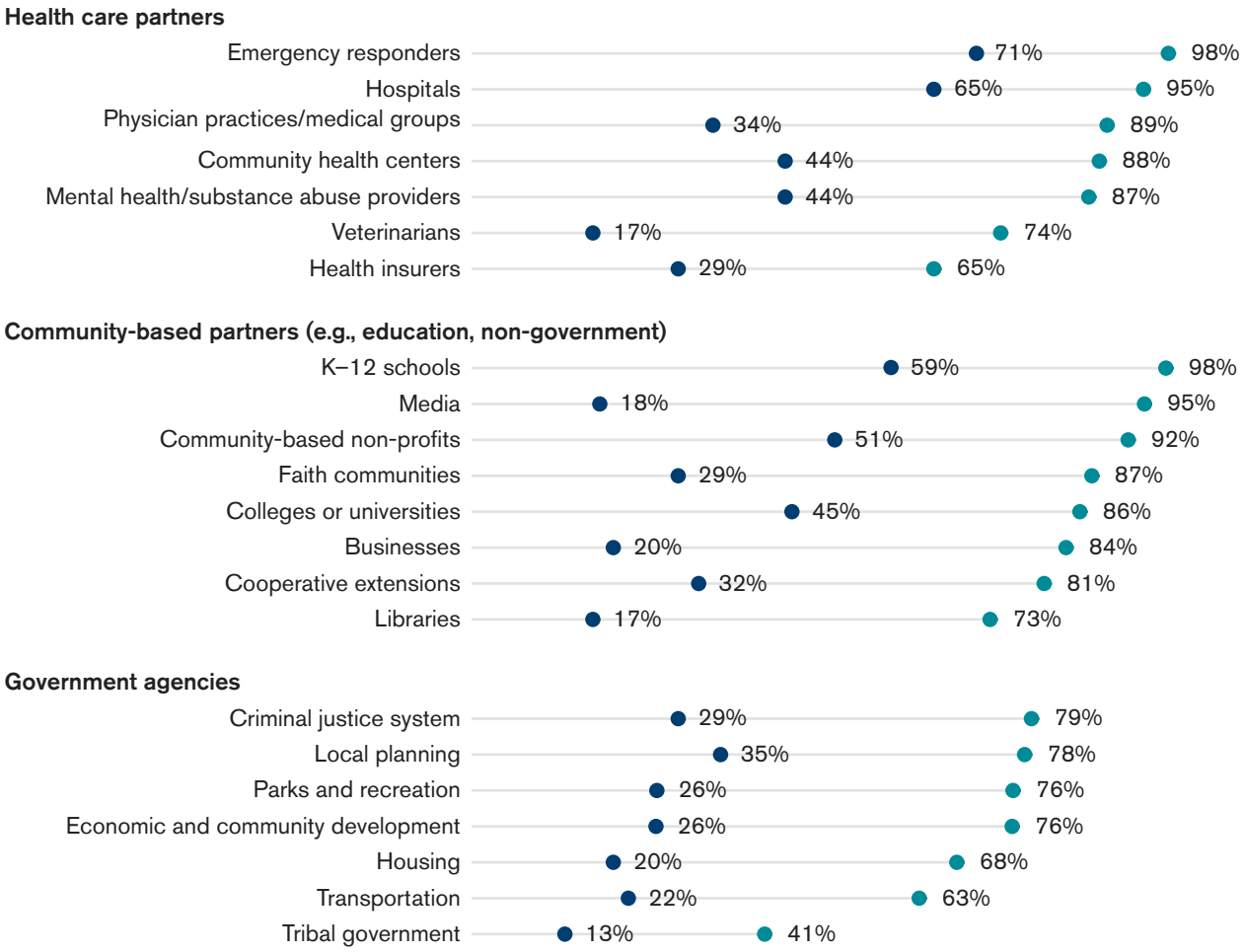
n=460–471

- Just over one-third of LHDs (35%) receive functions or services from another LHD or provide functions or services for another LHD; 31% share staff members with another LHD and 25% share equipment with another LHD.

FIGURE 3.3

LHD partnerships and collaborations in the past year

- Percent of LHDs working with partner in any way (exchanging information, regularly scheduling meetings, with written agreements, or sharing personnel/resources)
- Percent of LHDs regularly scheduling meetings, with written agreements, or sharing personnel/resources with partner



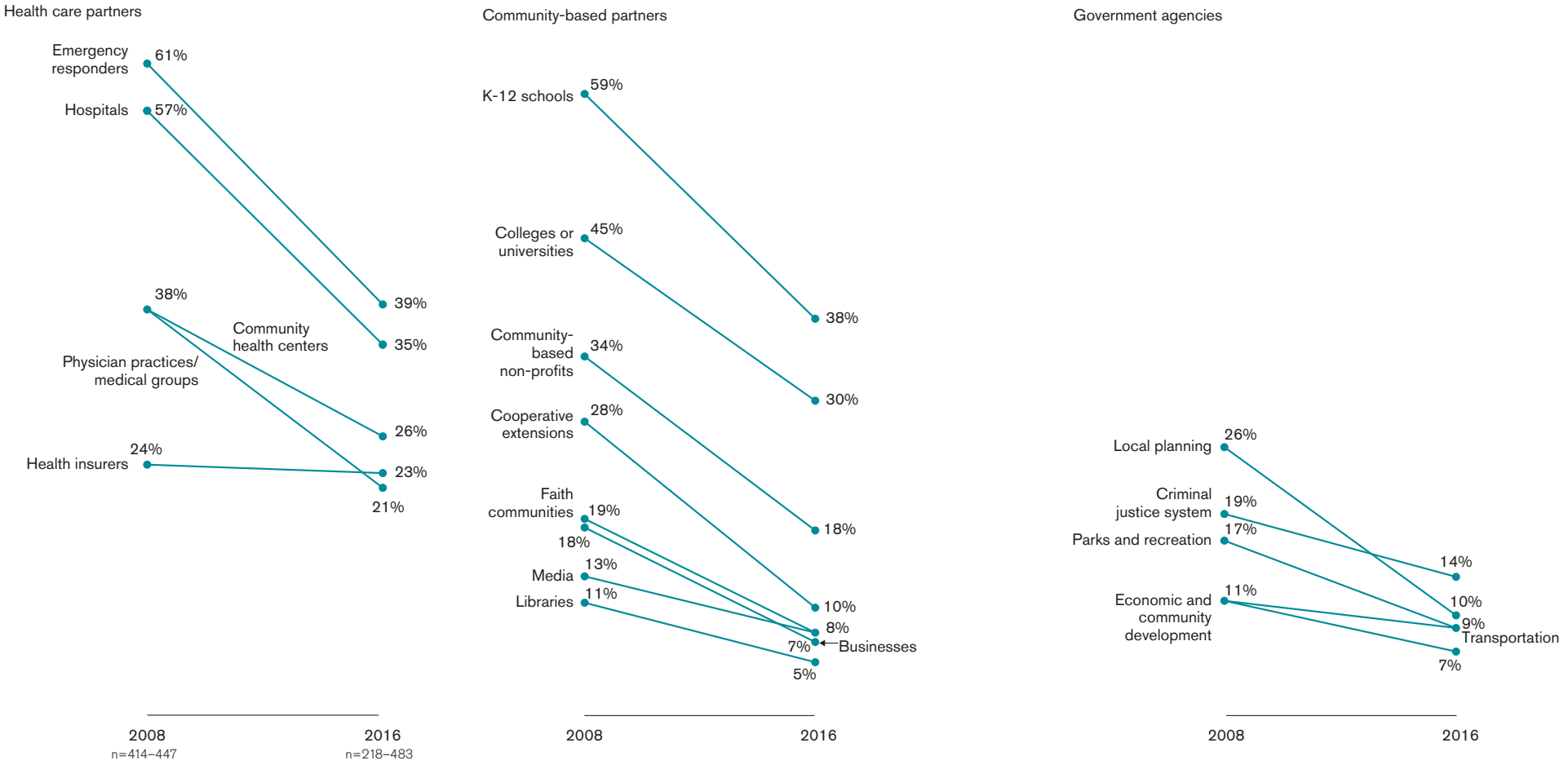
n=218–483 (among LHDs that reported presence of organization)

- LHDs work with a variety of partners in their communities (including health care partners, government agencies, and community-based partners) in a variety of ways, such as sharing information, regularly scheduling meetings, establishing written agreements, and sharing personnel/resources.
- Almost all LHDs work with some partners, such as emergency responders (98%), hospitals (95%), K-12 schools (98%), and the media (95%). Collaborations with other partners are less common, including tribal governments (41%) and health insurers (65%).
- Overall, LHDs are less likely to collaborate in ways beyond only exchanging information (i.e., regularly scheduling meetings, establishing written agreements, or sharing personnel/resources). This difference is particularly large for the media (only 18% collaborate beyond information exchange) and business (only 20% collaborate beyond information exchange).

FIGURE 3.4

Formal* LHD partnerships and collaborations over time

Percent of LHDs that share personnel/resources and/or have written agreements



*Share personnel/resources and/or have written agreements.

- Across all types of partnerships, the percentage of LHDs reporting formal collaborations (i.e., sharing personnel/resources and/or have written agreements) was lower in 2016 compared to 2008.
- Between 2008 and 2016, the proportion of LHDs reporting formal collaborations with emergency responders, hospitals, and K-12 schools decreased by 23, 22, and 21 percentage points, respectively.
- LHDs are also generally less likely to have formal partnerships with government agencies than with either health care or other community-based partners but the decreases since 2016 are generally smaller with the exception of local planning.

FIGURE 3.5

Engagement with academic institutions in the past year by size of population served

	All LHDs	Size of population served		
		Small (<50,000)	Medium (50,000–499,999)	Large (500,000+)
LHD accepts students from academic institutions as trainees, interns, or volunteers	76%	66%	92%	92%
LHD staff serve as faculty in academic institutions	30%	17%	45%	79%
LHD staff serve on an academic institution advisory group	25%	16%	35%	65%
LHD has formal relationship with academic institutions to provide training or professional development for LHD staff	25%	19%	31%	45%
LHD actively recruits graduates from academic institutions	25%	12%	41%	65%
Faculty/staff from academic institutions have served in a consulting role for LHD	24%	11%	40%	55%
Academic institutions have agreements or policies on providing LHD with access to scientific and professional journals	11%	7%	14%	34%
Did not engage academic institutions in any of the ways above	16%	25%	2%	3%

n=484

- Three-quarters of LHDs (76%) accept students from academic institutions (as trainees, interns, or volunteers) but fewer actively recruit graduates from institutions (25%).
- Fewer than one-third of LHDs have staff that serve as faculty (30%) and one-quarter have staff who serve on an academic institution advisory group (25%).
- Medium and large LHDs are more likely to engage in these partnerships with academic institutions than small LHDs (25% do not engage in any of these ways). Notably, almost all medium and large LHDs (92%) accept students from academic intuitions and 79% of large LHDs have staff who serve as faculty.

FIGURE 3.6

Engagement with academic institutions in the past year by urbanization

	All LHDs	Degree of urbanization		
		Urban	Suburban	Rural
LHD accepts students from academic institutions as trainees, interns, or volunteers	76%	83%	76%	63%
LHD staff serve as faculty in academic institutions	30%	45%	21%	19%
LHD staff serve on an academic institution advisory group	25%	35%	24%	8%
LHD has formal relationship with academic institutions to provide training or professional development for LHD staff	25%	28%	24%	20%
LHD actively recruits graduates from academic institutions	25%	35%	24%	6%
Faculty/staff from academic institutions have served in a consulting role for LHD	24%	38%	15%	12%
Academic institutions have agreements or policies on providing LHD with access to scientific and professional journals	11%	16%	7%	8%
Did not engage academic institutions in any of the ways above	16%	12%	13%	33%

n=484

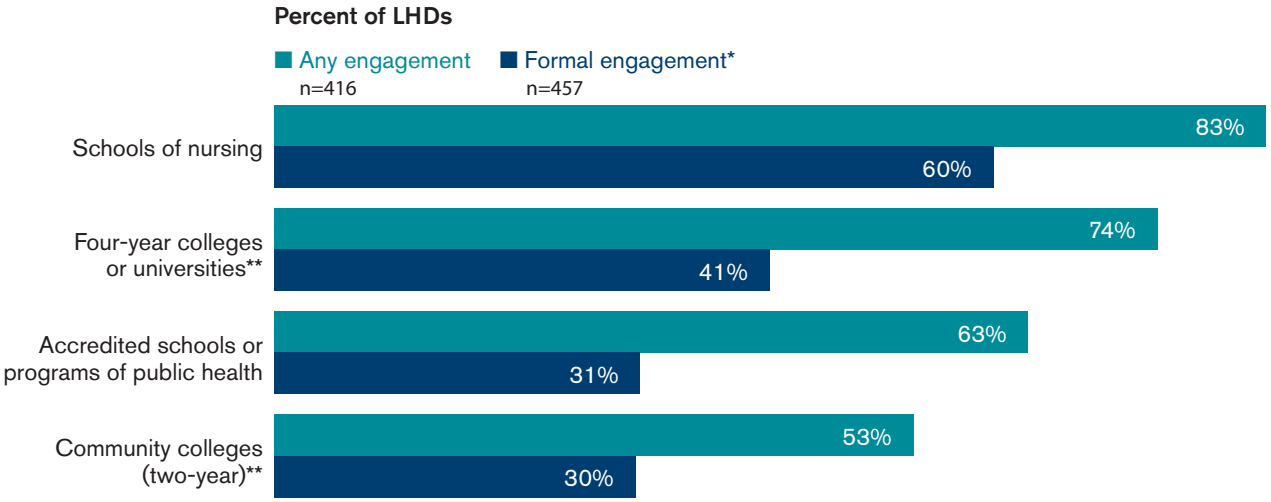
- LHDs in urban areas are more likely to engage with academic institutions. For example, 35% actively recruit graduates from academic institutions, compared to only 6% of LHDs in rural areas. Similarly, 35% of urban LHD staff serve on an academic institution advisory group, compared to only 8% of rural LHD staff.
- Almost two-thirds of rural LHDs (63%) accept students as trainees, interns, or volunteers. Less than 20% of rural LHDs report any of the other kinds of engagement with academic institutions.

Technical note

NACCHO classified each LHD into urban (1–3), suburban (4–7), or rural (8–10) categories based on U.S. Department of Agriculture Rural Urban Commuting Area codes.

FIGURE 3.7

Engagement with specific types of academic institutions in the past year



*Formal Memorandum of Understanding or similar written agreement.

**In schools or programs other than nursing or public health.

- LHDs are more likely to be engaged with schools of nursing than other kinds of academic institutions, usually through formal agreements.
- Sixty-three percent of LHDs partner or interact with accredited schools or programs of public health in some way, while almost one third of LHDs (31%) have a formal agreement.

CHAPTER

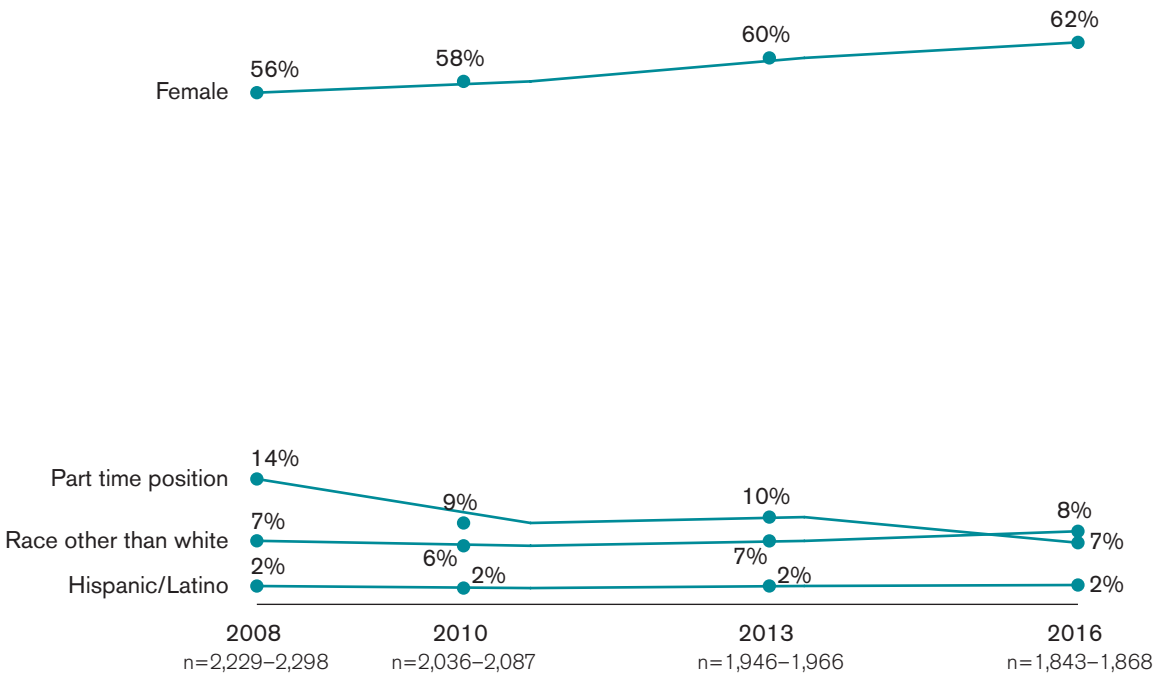
4 Leadership

This chapter includes the following:

- Characteristics of local health department (LHD) top executives, including age, tenure, positions held prior to top executive position, and degrees.
- Characteristics of new versus experienced LHD top executives.

FIGURE 4.1

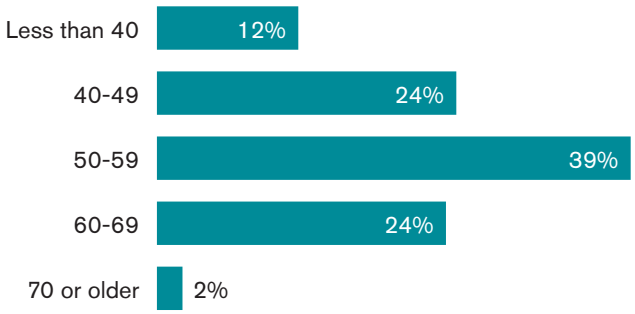
Characteristics of top executives over time



- More than half of top executives are female; since 2008, the percentage of female top executives has increased steadily, from 56% in 2008 to 62% in 2016.
- Few top executives are Hispanic/Latino or a race other than white and these percentages have remained low since 2008.
- The percentage of top executive positions that are part-time has decreased by half since 2008, from 14% to 7% in 2016.

FIGURE 4.2

Age of top executives in 2016

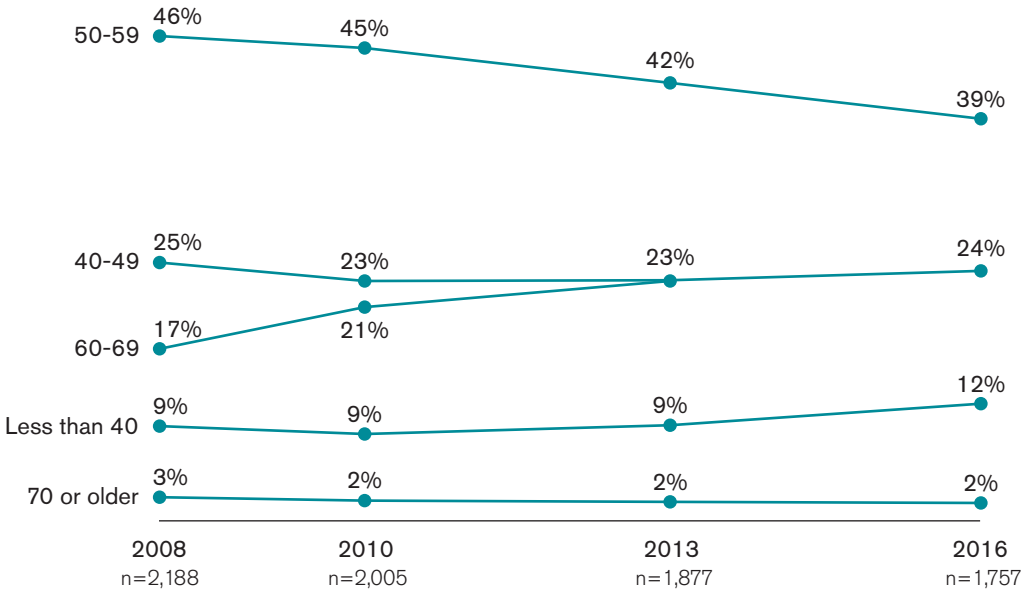


n=1,757

- Almost two-thirds of top executives (65%) are 50 or older including one-quarter (26%) who are 60 or older. Twelve percent are younger than 40.

FIGURE 4.3

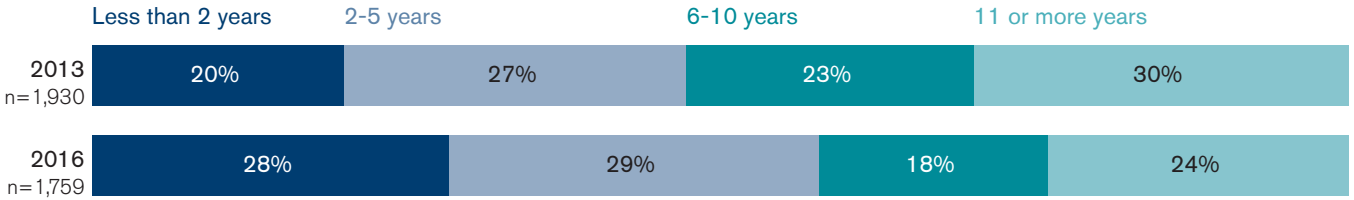
Age of top executives over time



- Since 2008, the percentage of top executives in their fifties has declined, while the percentages of both older (60–69) and younger (less than 40) top executives have grown.

FIGURE 4.4

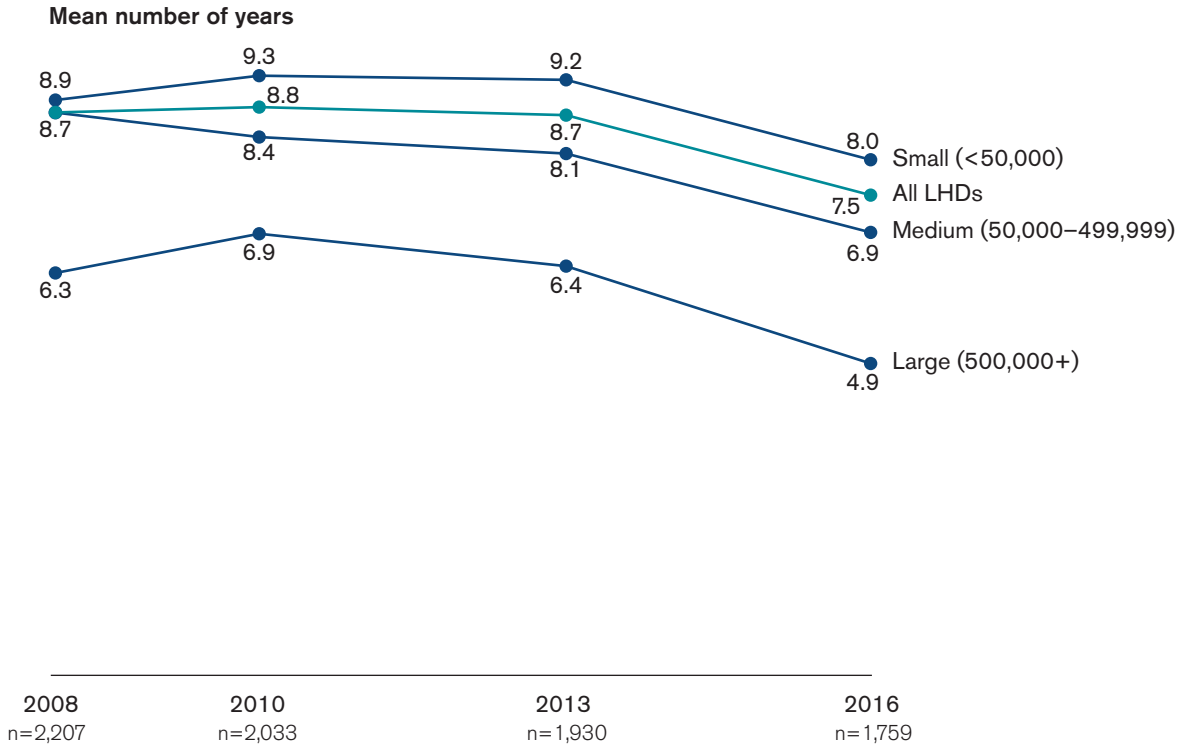
Top executive tenure over time



- Compared to 2013, top executives have been in their positions for fewer years. Since 2013, the percentage of top executives who have been in their positions less than five years has increased, while the percentage of top executives who have been in their positions for six or more years has decreased.

FIGURE 4.5

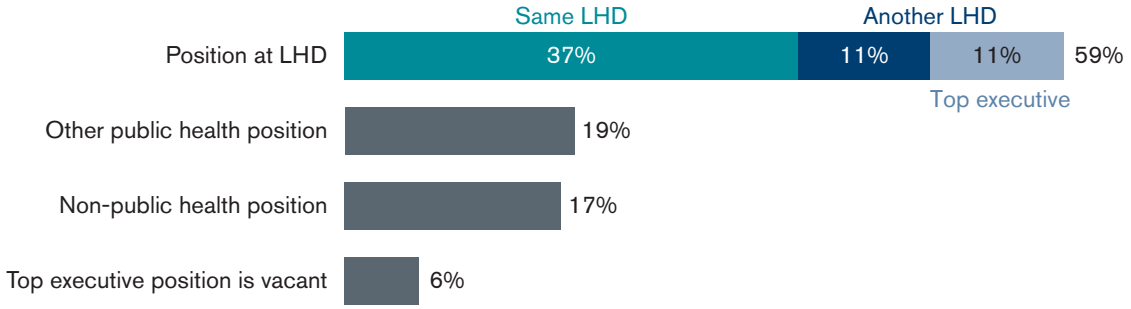
Top executive average tenure over time by size of population served



- The average tenure for top executives decreased from 8.7 years to 7.5 years since 2013; this trend is consistent among LHDs serving different population sizes.
- Top executives at large LHDs remain in their positions for fewer years on average (4.9) than top executives at medium (6.9) or small (8.0) LHDs.

FIGURE 4.6

Positions held prior to current top executive position

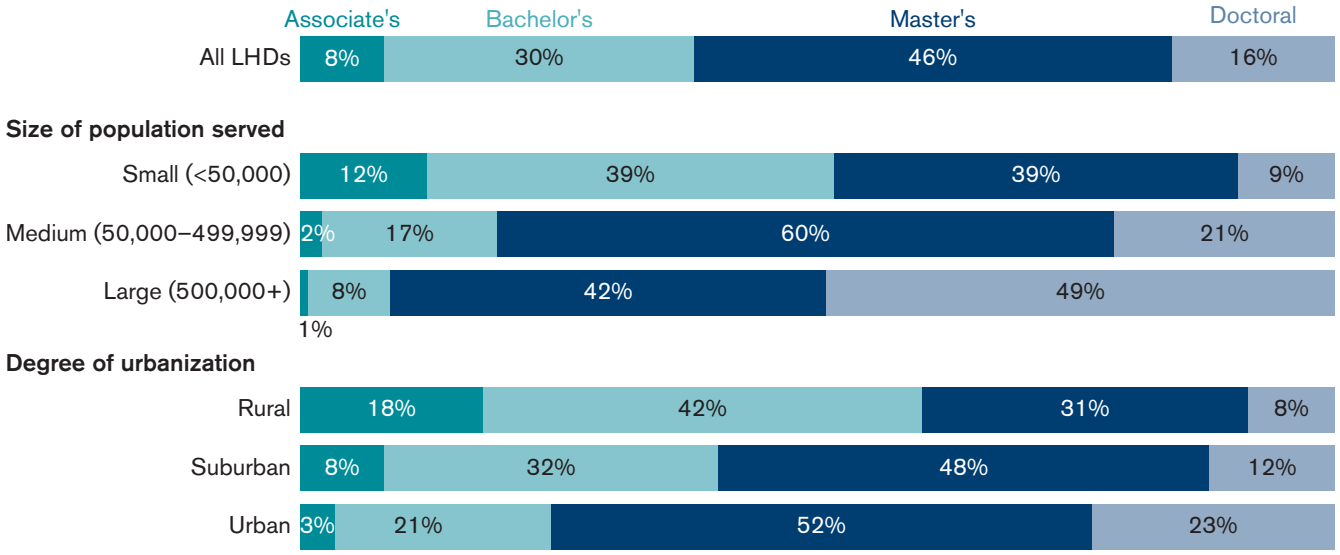


n=1,815

- Prior to their current positions, top executives are most likely to come from LHDs—either from another position in their current LHD (37%) or from another LHD (22%). Only 11% of top executives were top executives at another LHD prior to their current position.
- Only 17% of top executives come from positions in fields other than public health.

FIGURE 4.7

Highest degree obtained by top executive by LHD characteristics



n=1,807

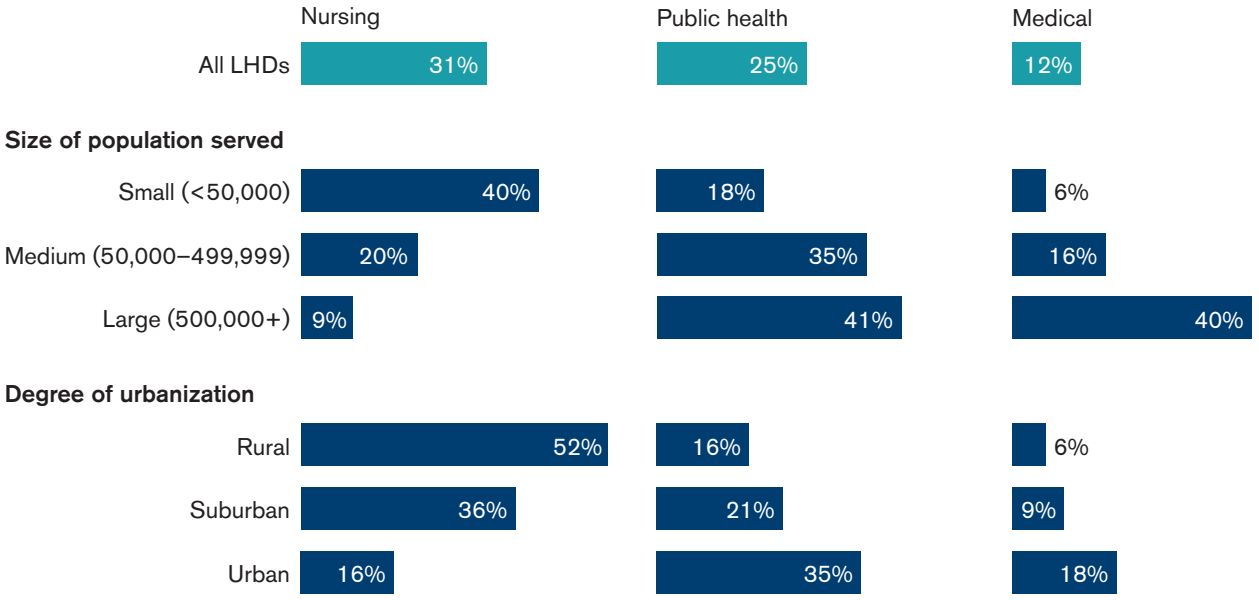
- The highest degree held by top executives is most often a Master's degree (46%), followed by a Bachelor's degree (30%); fewer hold Associate's (8%) or Doctoral degrees (16%).
- Top executives at large LHDs are much more likely to have graduate degrees (91%) than top executives at small LHDs (48%).
- Similarly, top executives at LHDs serving urban areas are much more likely to have graduate degrees (75%) than top executives at LHDs serving rural areas (39%).

Technical note

NACCHO classified each LHD into urban (1–3), suburban (4–7), or rural (8–10) categories based on U.S. Department of Agriculture Rural Urban Commuting Area codes.

FIGURE 4.8

Specialized degrees obtained by top executive by LHD characteristics



n=1,807

- Slightly less than one-third of top executives hold nursing degrees (31%), one-quarter hold public health degrees (25%), and 12% hold medical degrees.
- Top executives at large LHDs are more likely to have public health degrees (41%) and medical degrees (40%) than nursing degrees (9%). On the other hand, top executives at small LHDs are more likely to have nursing degrees (40%) than public health degrees (18%) or medical degrees (6%).
- Top executives at LHDs serving rural areas are more likely to have nursing degrees (52%) than top executives at LHDs serving urban areas (16%).

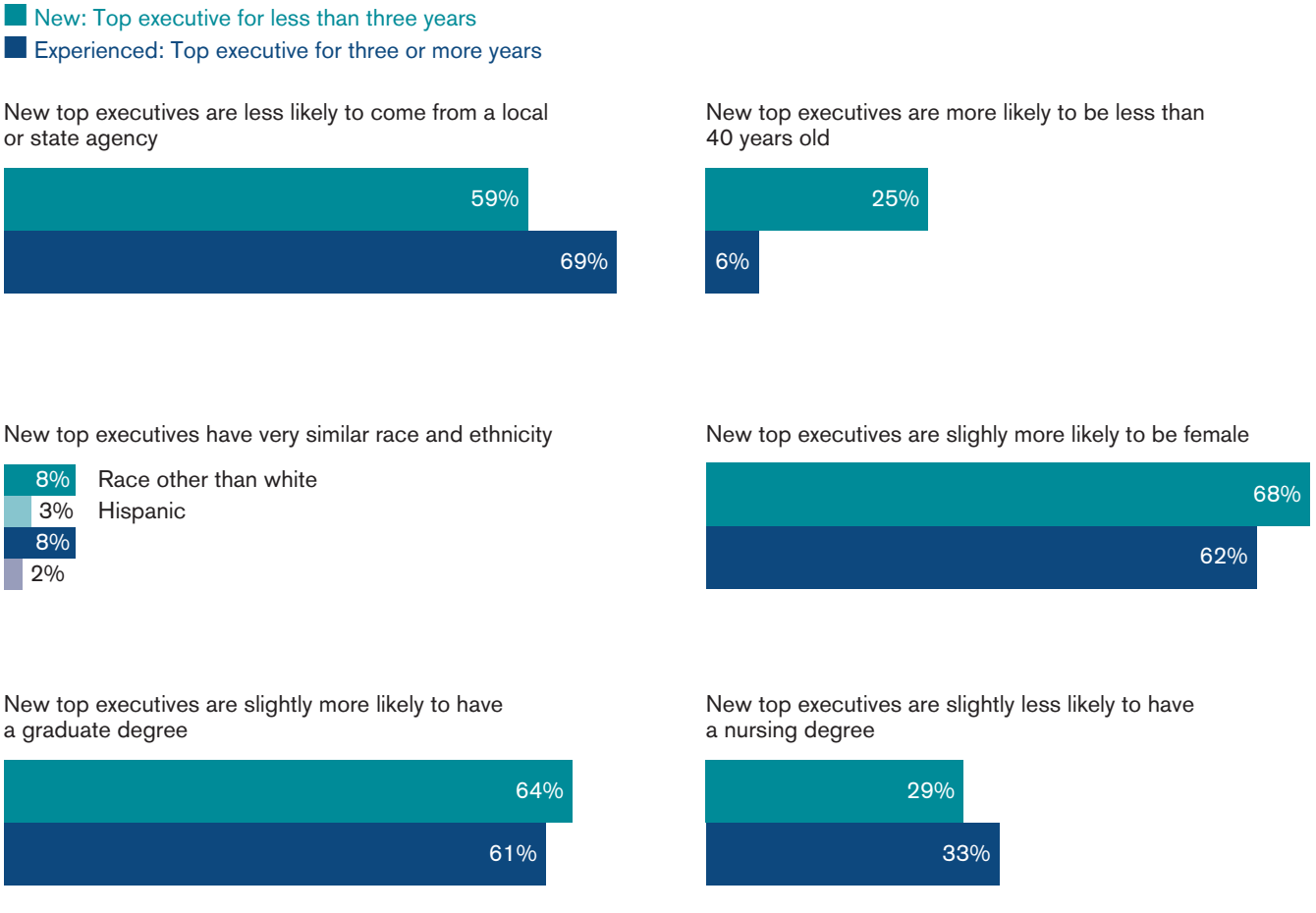
Technical note

NACCHO classified each LHD into urban (1–3), suburban (4–7), or rural (8–10) categories based on U.S. Department of Agriculture Rural Urban Commuting Area codes.

FIGURE 4.9

Characteristics of new versus experienced top executives

Percent of top executives



n=1,757–1,868

- In some ways, new top executives (i.e., top executives who have been in their positions for less than three years) are different than experienced top executives. For example, new top executives are less likely to come from another local or state agency prior to holding their current position and are four times more likely to be less than 40 years old than experienced top executives.
- On the other hand, new top executives are typically of similar race and ethnicity as experienced top executives (mostly white and mostly non-Hispanic).
- New top executives are also slightly more likely to be female, slightly more likely to have a graduate degree, and slightly less likely to have a nursing degree than their more experienced counterparts.

CHAPTER 5

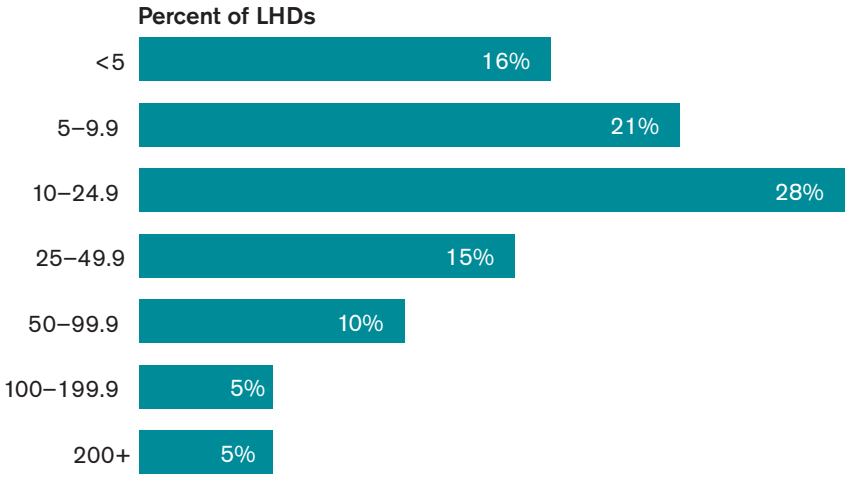
Workforce

This chapter includes the following:

- Current numbers of local health department (LHD) staff (employees and Full-Time Equivalents (FTEs)).
- Annual LHD job losses and gains.
- Changes in numbers of LHD staff (2008 to 2016).
- Employees retiring from LHD workforce.
- Occupations employed by LHDs.

FIGURE 5.1

Number of Full-Time Equivalents (FTEs)



n=1,743

- Eighty percent of LHDs employ fewer than 50 FTEs: 37% employ fewer than 10 FTEs and 42% employ between 10 and 50 FTEs.
- Ten percent of LHDs employ 100 or more FTEs.

Technical note

In order to minimize data loss, special statistical weights were developed to calculate some workforce statistics. Statistics were calculated using all valid data available, regardless of missing information in other occupations, total employees, and total FTEs. A note below each figure in this chapter indicates whether special weights were used to calculate the statistics presented.

FIGURE 5.2

Mean and median number of employees and Full-Time Equivalents (FTEs) by size of population served

Size of population served	Number of employees		Number of FTEs	
	Mean	Median	Mean	Median
All LHDs	57	18	50	15
< 10,000	8	6	6	4
10,000–24,999	14	10	11	8
25,000–49,999	22	17	19	14
50,000–99,999	41	32	36	27
100,000–249,999	71	63	64	58
250,000–499,999	164	134	159	124
500,000–999,999	294	261	259	230
1,000,000+	736	478	694	486
	n(employees)=1,828		n(FTEs)=1,743	

- On average, LHDs employ 57 employees or 50 FTEs; however, these vary greatly by the size of population served by the LHD. While LHDs that serve fewer than 10,000 people employ eight employees or six FTEs on average, LHDs that serve over one million people employ 736 employees or 694 FTEs on average.
- Half of LHDs employ fewer than 18 employees.

FIGURE 5.3

Full-Time Equivalents (FTEs) per 10,000 people by size of population served

Size of population served	2016
All LHDs	4.2
< 10,000	10.2
10,000–24,999	7.2
25,000–49,999	5.2
50,000–99,999	5.1
100,000–199,999	4.5
200,000–499,999	4.3
500,000–999,999	3.7
1,000,000+	3.4

n=1,743

- Among all LHDs, the overall workforce capacity is 4.2 FTEs per 10,000 people.
- LHDs that serve smaller populations employ a greater number of FTEs per 10,000 people than LHDs that serve larger populations.

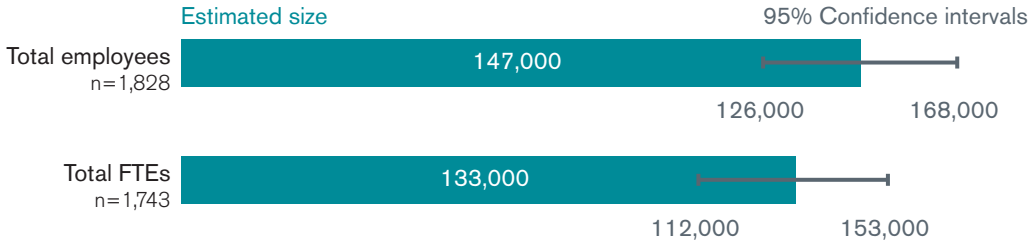
Technical notes

The number of LHD staff per 10,000 people served by the LHD is a useful way to measure overall workforce capacity and facilitates comparisons across LHDs serving different jurisdiction sizes. These statistics are computed by summing the FTE staff (for all LHDs or for LHDs in specific jurisdiction size categories), dividing by the total population of those jurisdictions, and multiplying by 10,000.

Special weighting methodology applied to account for item non-response.

FIGURE 5.4

Estimated size of LHD workforce



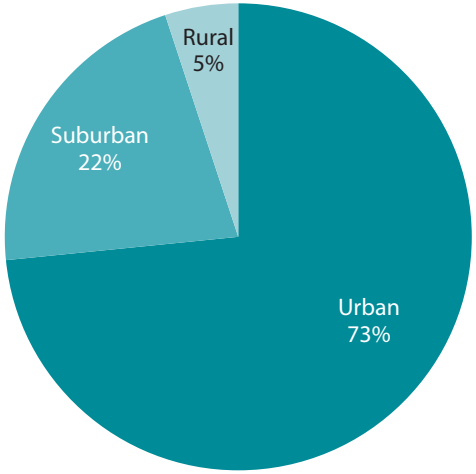
- Approximately 147,000 employees or 133,000 FTEs are employed by LHDs.
- The confidence intervals reflect the uncertainty of this estimate (because of incomplete data and great variability in numbers of LHD staff).

Technical note

Special weighting methodology applied to account for item non-response.

FIGURE 5.5

Distribution of Full-Time Equivalents (FTEs) by urbanization



n=1,743

- Almost three-quarters of LHD FTEs (73%, or 97,400 FTEs) are employed by LHDs that serve urban areas. Only 5% of LHD FTEs (6,700 FTEs) are employed by LHDs that serve rural populations.

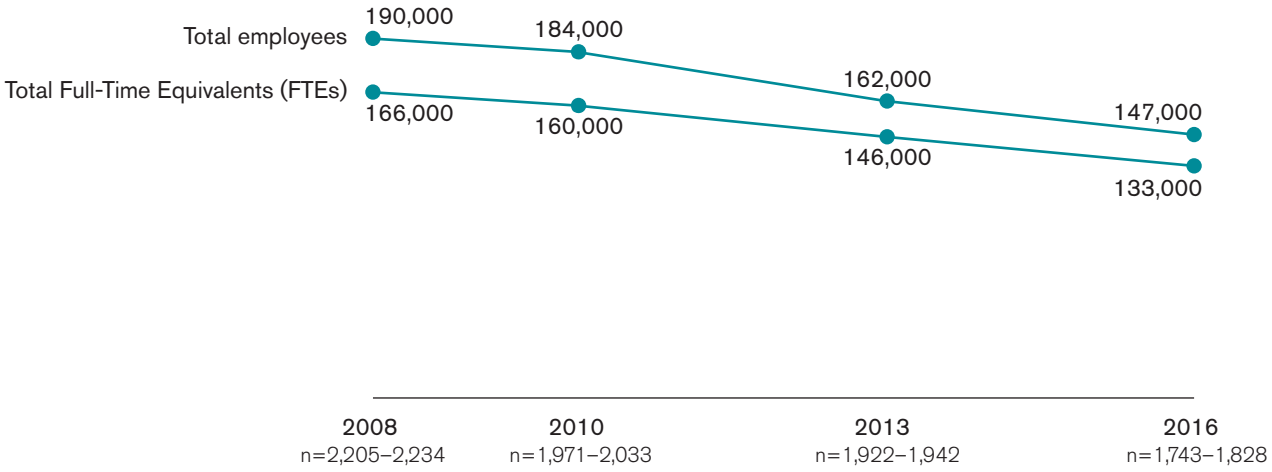
Technical notes

Special weighting methodology applied to account for item non-response.

NACCHO classified each LHD into urban (1–3), suburban (4–7), or rural (8–10) categories based on U.S. Department of Agriculture Rural Urban Commuting Area codes.

FIGURE 5.6

Estimated size of LHD workforce over time



- Since 2008, the estimated number of LHD employees has decreased from 190,000 in 2008 to 147,000 in 2016, a decrease of 23%.
- Similarly, the estimated number of FTEs employed by LHDs has decreased from 166,000 in 2008 to 133,000 in 2016, a decrease of 20%.

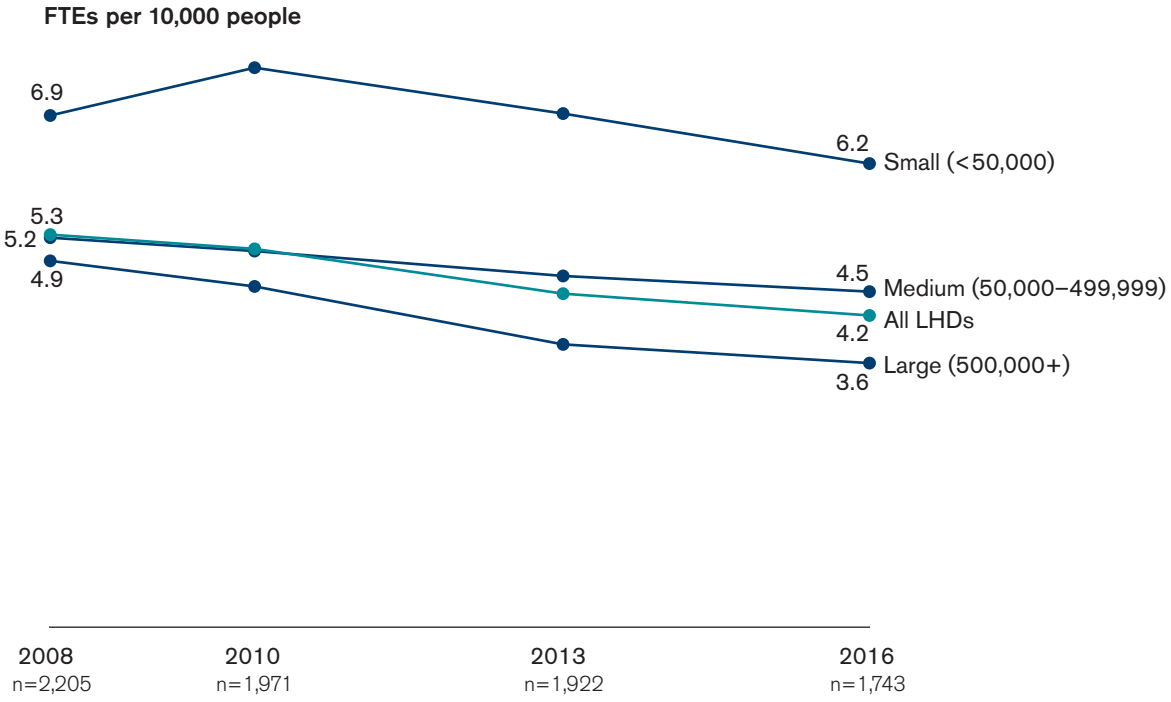
Technical notes

Special weighting methodology applied to account for item non-response.

Estimates for 2008 workforce are different from 2008 National Profile of Local Health Departments Report due to new weighting methodology

FIGURE 5.7

Change in Full-Time Equivalents (FTEs) per 10,000 people over time by size of population served



- Overall, LHDs lost 21% of their workforce capacity since 2008. While 5.3 FTEs per 10,000 people were employed at LHDs in 2008, only 4.2 FTEs per 10,000 people were employed in 2016.
- Large LHDs have experienced a greater loss in workforce capacity since 2008 than medium or small LHDs.

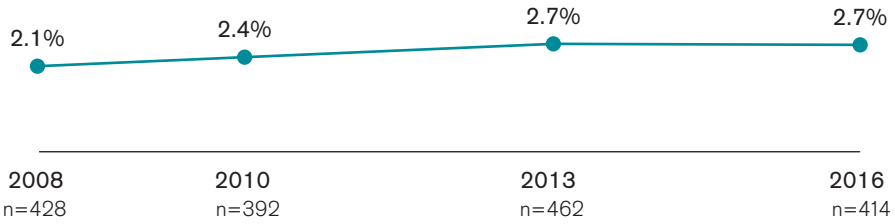
Technical notes

This figure shows changes in overall LHDs workforce capacity (measured in FTEs per 10,000 people) between 2008 and 2016. See notes on Figure 5.3 for more information on how these statistics are computed.

Special weighting methodology applied to account for item non-response.

FIGURE 5.8

Percentage of total workforce retired over time



Based on numbers of employees who retired in the previous year.

- Less than 3% of the total LHD workforce retired in calendar year 2015.
- LHDs reported similar percentages of the LHD workforce retiring in the 2013 and 2016 Profiles; the percentage has increased only slightly since 2008.

FIGURE 5.9

Occupations employed at LHDs by size of population served

		Size of population served						
	All LHDs	<25,000	25,000–49,999	50,000–99,999	100,000–249,999	250,000–499,999	500,000–999,999	1,000,000+
Agency leadership	76%	66%	75%	84%	88%	93%	95%	88%
Animal control worker	10%	7%	8%	16%	10%	13%	18%	24%
Behavioral health staff	13%	6%	9%	18%	18%	32%	45%	36%
Business operations staff	50%	33%	48%	61%	69%	82%	83%	86%
Community health worker	29%	17%	26%	29%	44%	62%	71%	69%
Environmental health worker	76%	62%	79%	86%	92%	90%	86%	79%
Epidemiologist/statistician	26%	8%	14%	28%	54%	79%	92%	95%
Health educator	55%	34%	56%	67%	78%	90%	89%	83%
Information systems specialist	18%	5%	10%	18%	35%	57%	66%	76%
Laboratory worker	15%	4%	8%	19%	27%	40%	54%	79%
Licensed practical or vocational nurse	32%	24%	27%	36%	41%	54%	54%	69%
Nursing aide and home health aide	24%	26%	21%	23%	19%	29%	25%	21%
Nutritionist	50%	31%	47%	65%	71%	80%	77%	86%
Office support staff	91%	87%	92%	95%	95%	97%	96%	93%
Oral health care professional	18%	7%	13%	23%	31%	37%	51%	52%
Preparedness staff	59%	39%	56%	69%	84%	94%	93%	88%
Public health physician	31%	15%	27%	35%	50%	69%	69%	93%
Public information professional	20%	6%	13%	21%	38%	59%	72%	76%
Registered nurse	94%	90%	97%	97%	97%	97%	95%	100%

n=1,865

- Almost all LHDs employ registered nurses (94%) and office and administrative support staff (91%). Fewer LHDs employ animal control workers (10%), behavioral health staff (13%), or laboratory workers (15%).
- LHDs serving larger populations are much more likely than small LHDs to employ epidemiologist/statisticians, information systems specialists, public information professionals, and public health physicians. LHDs of all jurisdiction sizes are approximately equally as likely to employ office and administrative support staff and nursing or home health aides.

FIGURE 5.10

Staffing patterns at LHDs by size of population served (in median Full-Time Equivalents (FTEs))

<10,000	10,000–24,999	25,000–49,999	50,000–99,999
4 Total FTEs	**8 Total FTEs**	**14 Total FTEs**	**27 Total FTEs**
1 Registered nurse	2 Registered nurses	3 Registered nurses	6 Registered nurses
1 Office support staff	2 Office support staff	3 Office support staff	5 Office support staff
0.5 Agency leadership	1 Agency leadership	1 Agency leadership	1 Agency leadership
	1 Environmental health worker	1 Environmental health worker	3 Environmental health workers
		0.4 Health educators	1 Health educator
		0.2 Preparedness staff	0.9 Preparedness staff
			1 Nutritionist
			1 Business operations staff

100,000–249,999	250,000–499,999	500,000–999,999	1,000,000+
58 Total FTEs	**124 Total FTEs**	**230 Total FTEs**	**486 Total FTEs**
9 Registered nurses	17 Registered nurses	29.3 Registered nurses	54.2 Registered nurses
8.5 Office support staff	20 Office support staff	30.5 Office support staff	76.7 Office support staff
3 Agency leadership	5 Agency leadership	6 Agency leadership	7 Agency leadership
7 Environmental health workers	15 Environmental health workers	20.5 Environmental health workers	37 Environmental health workers
2 Health educators	3 Health educators	6 Health educators	14 Health educators
1 Preparedness staff	2 Preparedness staff	3 Preparedness staff	4.8 Preparedness staff
2 Nutritionists	4 Nutritionists	6 Nutritionists	15 Nutritionists
1.5 Business operations staff	4 Business operations staff	5.8 Business operations staff	20.4 Business operations staff
	1 Community health worker	4 Community health workers	4 Community health workers
	1 Epidemiologist/statistician	2.9 Epidemiologist/statisticians	6 Epidemiologist/statisticians
	1 Information systems specialist	1 Information systems specialist	3.5 Information systems specialists
	1 Public health physician	1 Public health physician	2 Public health physicians
	1 Public information professional	1 Public information professional	1 Public information professional
			6 Laboratory workers
			2.5 Licensed practical or vocational nurses

n=1,611–1,817

- LHDs serving the smallest jurisdictions typically employ registered nurses, office support staff, a top executive, and environmental health workers.
- LHDs serving medium-sized jurisdictions typically also employ some additional occupations, including health educators, preparedness staff, nutritionists, and business and financial operations staff.
- LHDs serving jurisdictions over one million people typically employ nearly 500 FTE staff including more than 50 registered nurses, more than 75 office support staff, and employees in many specialized occupations such as community health workers, epidemiologists, information systems specialists, and public information professionals.

FIGURE 5.11

Estimated numbers of LHD workers in select occupations

Number of FTEs for select occupations	Total	95% Confidence intervals	
Agency leadership	7,000	4,900	9,100
Animal control worker	910	650	1,200
Behavioral health staff	3,200	2,000	4,400
Business operations staff	6,000	4,400	7,700
Community health worker	5,200	4,000	6,500
Environmental health worker	13,000	10,200	15,900
Epidemiologist/statistician	1,600	1,200	2,000
Health educator	5,700	3,900	7,400
Information systems specialist	1,700	780	2,700
Laboratory worker	1,600	1,000	2,200
Licensed practical or vocational nurse	2,400	1,800	2,900
Nursing aide and home health aide	3,200	2,300	4,100
Nutritionist	4,900	4,100	5,700
Office support staff	23,700	19,900	27,500
Oral health care professional	1,800	1,400	2,300
Preparedness staff	2,100	1,900	2,400
Public health physician	1,400	890	1,800
Public information professional	540	450	630
Registered nurse	23,600	19,700	27,500

n=1,611–1,828

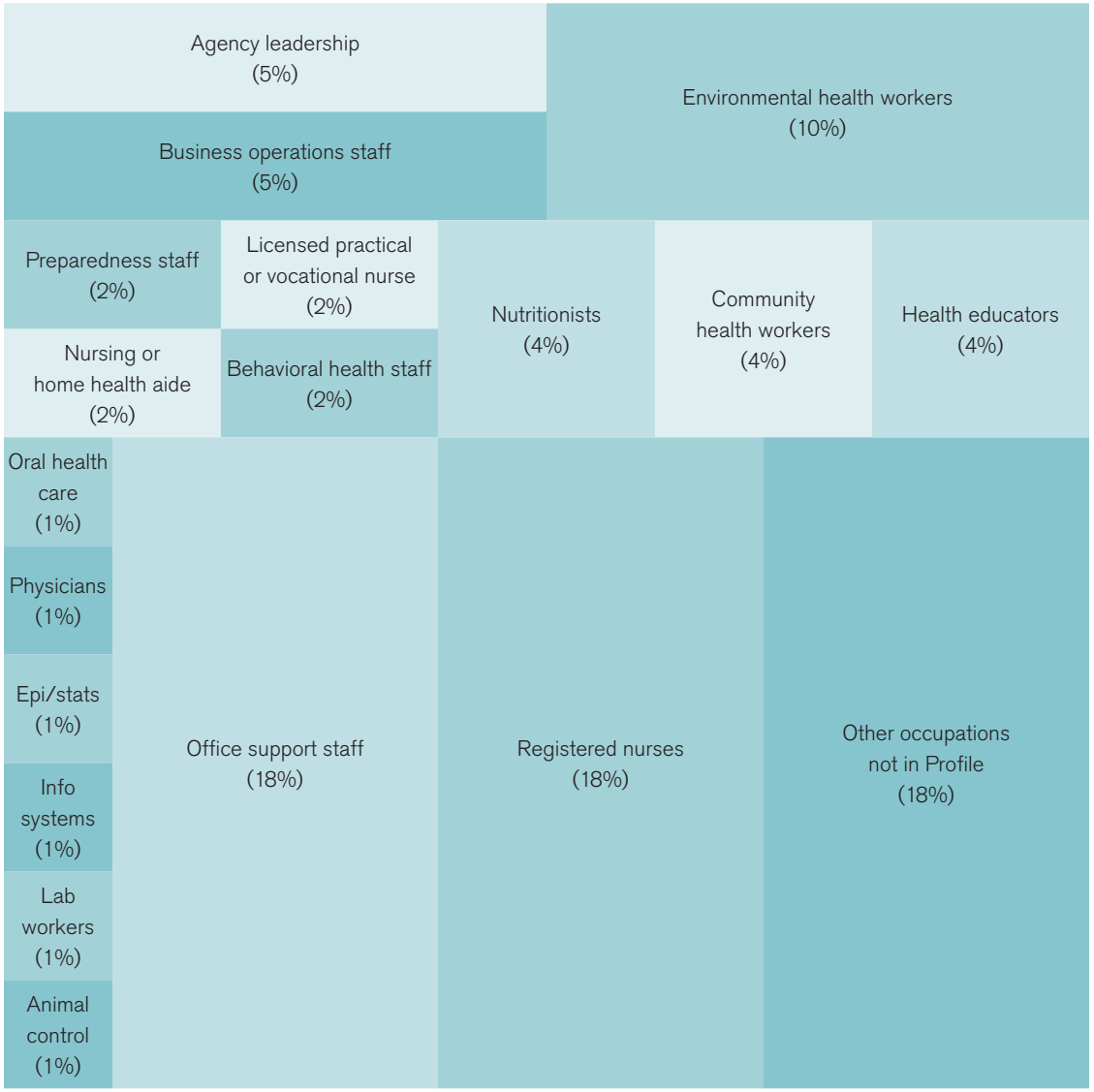
- Approximately 23,700 FTEs are office and administrative support staff and 23,600 FTEs are registered nurses.
- Only 910 FTEs are animal control workers and 540 FTEs are public information professionals.

Technical note

Special weighting methodology applied to account for item non-response.

FIGURE 5.12

Workforce composition



Estimates shown (detail lost due to rounding). Public information professional (0.4%) not shown.

n=1,611–1,828

- More than one-third of the LHD workforce is composed of registered nurses (18%) or office and administrative support staff (18%).
- Ten percent of the LHD workforce is environmental health workers.
- A total of less than 10% of the LHD workforce comprises oral health care professionals, information systems specialists, epidemiologists/statisticians, public health physicians, laboratory workers, and animal control workers.

Technical notes

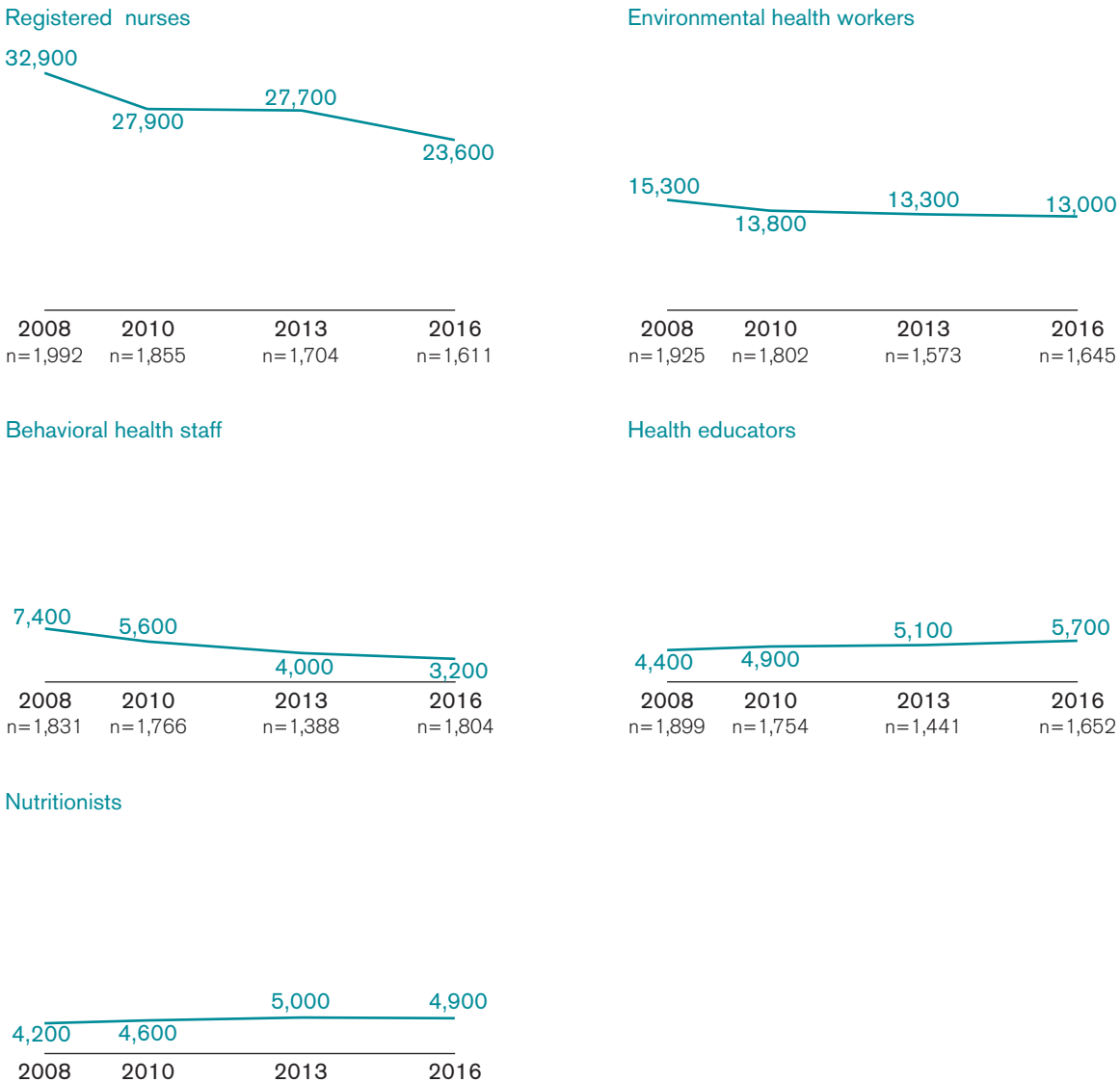
This diagram depicts the overall composition of the LHD workforce across the United States. The area of each box corresponds to the fraction of the LHD workforce comprised by that occupation.

Special weighting methodology applied to account for item non-response.

FIGURE 5.13

Estimated size of select occupations over time

Number of Full-Time Equivalents (FTEs)



- The estimated number of registered nurses decreased by 28% from 2008 to 2016 and the estimated number of behavioral staff decreased by more than half.
- On the other hand, the estimated number of health educators and nutritionists increased by 30% and 18% respectively from 2008 to 2016.

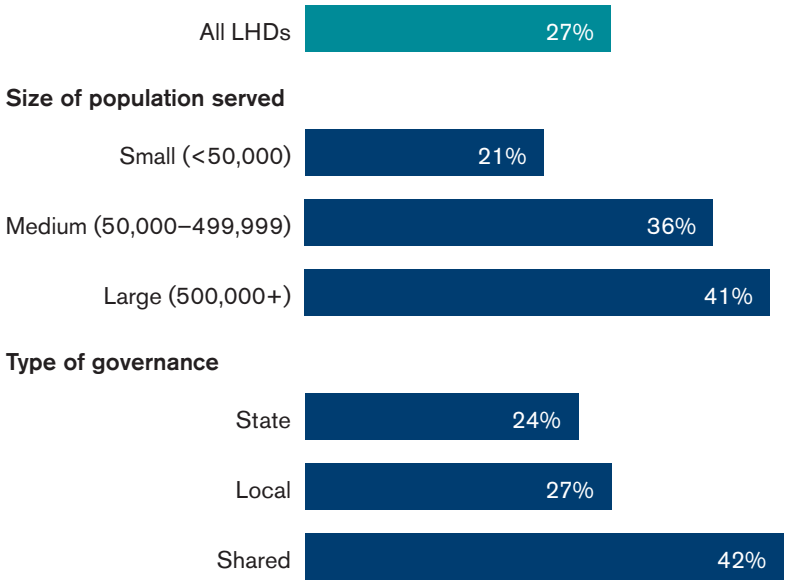
Technical notes

Special weighting methodology applied to account for item non-response.

Estimates for 2008 workforce are different from 2008 National Profile of Local Health Departments Report due to new weighting methodology.

FIGURE 5.14

Percent of LHDs reporting jobs lost due to layoffs and/or attrition in the past year by LHD characteristics



n=1,780–1,778

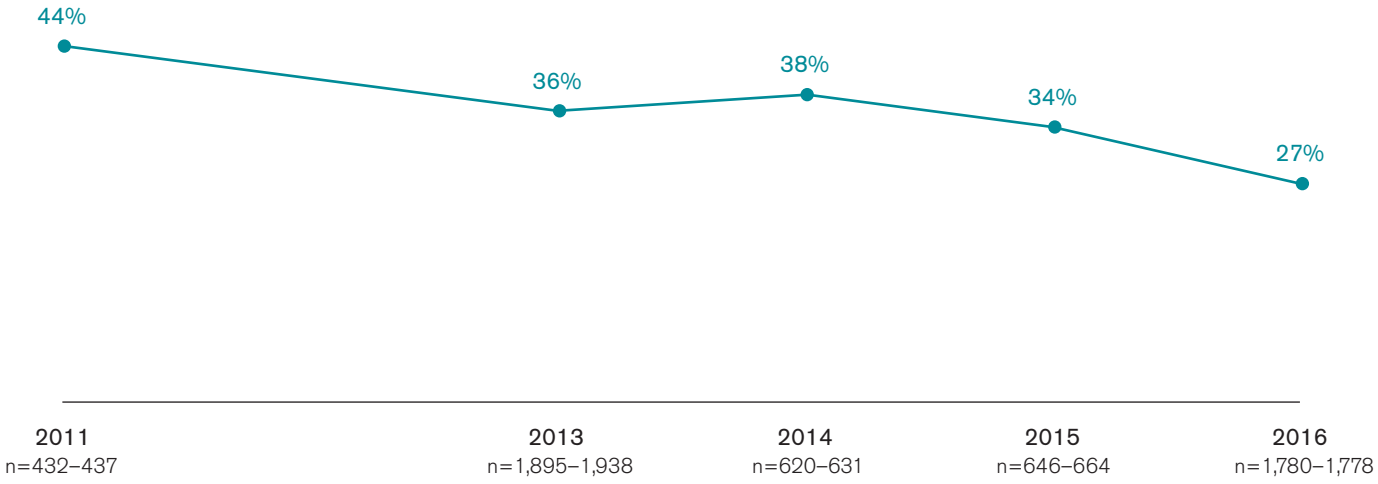
- Twenty-seven percent of LHDs reported at least one job lost during calendar year 2015 due to layoffs and/or attrition.
- A larger proportion of large and medium LHDs, those serving populations of 50,000 or more people, reported having lost at least one job compared to small LHDs.
- Similarly, LHDs with shared governance (governed by both state and local authorities) were more likely to report having lost at least one job compared to state-governed or locally governed LHDs.

Technical note

The 2016 Profile included questions about loss of LHD staff (by layoffs or attrition) during calendar year 2015. Similar questions have been included in nine other NACCHO surveys administered periodically since the beginning of the Great Recession. Figures 5.14 through 5.16 present findings based on those data.

FIGURE 5.15

Percent of LHDs reporting jobs lost due to layoffs and/or attrition over time



- Since 2011, the percentage of LHDs reporting at least one job lost due to layoffs and/or attrition has decreased. While 44% of LHDs reported having lost at least one job during the 2010 calendar year, 27% of LHDs reported having lost at least one job during the 2015 calendar year.

Technical note

N's vary because questions regarding layoffs and attrition were asked in separate questions with different numbers of observations across survey years.

FIGURE 5.16

Number of jobs lost and added over time by size of population served

	Number of positions eliminated	Number of positions added	Net Change
All LHDs			
2011	9,970	3,700	-6,270
2012	4,090	3,680	-410
2015	2,720	3,570	850
Small LHDs (<50,000)			
2011	2,200	600	-1,600
2012	820	620	-200
2015	620	720	100
Medium (50,000–499,999)			
2011	4,500	1,350	-3150
2012	2,030	1,650	-380
2015	1,460	1,640	180
Large (500,000+)			
2011	3,270	1,740	-1,530
2012	1,240	1,400	160
2015	640	1,210	570

n(Jun 2011)=604 n(Jan 2012)=617 n(2012)=1,775 n(2015)=1,261

- Among all LHDs, there was a net loss of 6,270 jobs in the 2011 calendar year; the net job loss decreased to 410 jobs in 2012. In 2015, the number of jobs added exceeded the number of jobs eliminated, for a net increase of 850 jobs across all LHDs.
- The number of jobs added was similar in all three time periods (between 3,500 and 3,700). The decreasing number of jobs lost accounts for the differences in the net job change during these three years.
- LHDs in all jurisdiction size categories showed net losses of staff during 2011 and net gains of staff during 2015. LHDs serving small and medium jurisdictions showed net losses of staff during 2012, while LHDs serving large jurisdictions showed a net gain during 2012.

Technical notes

This figure summarizes data on numbers of LHD positions added and eliminated during three calendar years. The net change is the number of positions added minus the number of positions eliminated. Net loss figures are shown in orange and net gain figures in green.

Only LHDs that reported values for all job cuts and added variables are included in the analysis.

NACCHO estimated 2011 statistics using data from two surveys in which LHDs reported jobs lost and added: in January through June 2011 (labeled as Jun 2011) and July through December (labeled as Jan 2012).

CHAPTER 6

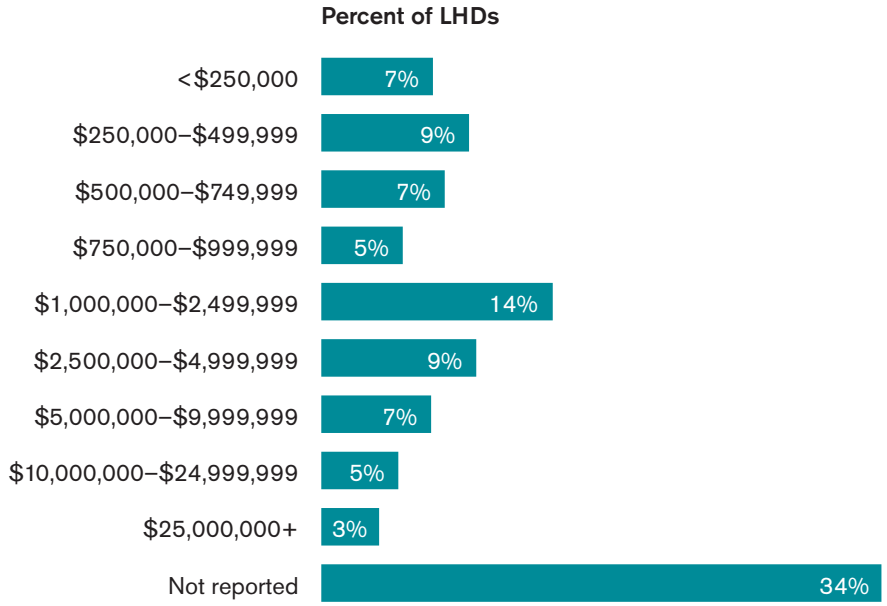
Finance

This chapter includes the following:

- Total annual local health department (LHD) expenditures.
- Annual per capita LHD expenditures and revenues including expenditures over time.
- LHD revenue sources.
- Annual per capita LHD revenue sources including revenue over time.
- Changes in LHD budgets over time.

FIGURE 6.1

Total annual expenditures



n=1,929

- Total annual LHD expenditures range from less than $250,000 to more than $25 million.
- Twenty-eight percent of LHDs report annual expenditures of less than $1 million; 3% of LHDs report expenditures of $25 million or more.
- More than one-third of LHDs (34%) did not report their annual expenditures.

FIGURE 6.2

Mean and quartiles of total annual expenditures by size of population served

Size of population served	Mean	25th percentile	50th percentile (Median)	75th percentile
All LHDs	$6,400,000	$500,000	$1,280,000	$4,000,000
<25,000	$760,000	$250,000	$480,000	$890,000
25,000–49,999	$1,640,000	$600,000	$1,140,000	$2,100,000
50,000–99,999	$3,280,000	$1,440,000	$2,640,000	$4,290,000
100,000–249,999	$6,220,000	$3,220,000	$5,100,000	$7,650,000
250,000–499,999	$16,500,000	$6,920,000	$10,100,000	$19,800,000
500,000–999,999	$32,900,000	$15,200,000	$24,400,000	$42,200,000
1,000,000+	$126,000,000	$34,300,000	$56,400,000	$94,200,000

n=1,286

- On average, LHDs spend $6.4 million per year. Half of LHDs spend less than $1.3 million per year.
- Comparing the 25th and 75th percentiles for each population category illustrates the great diversity in funding levels among LHDs serving jurisdictions of similar sizes.

FIGURE 6.3

Median and mean annual per capita expenditures and revenues by LHD characteristics

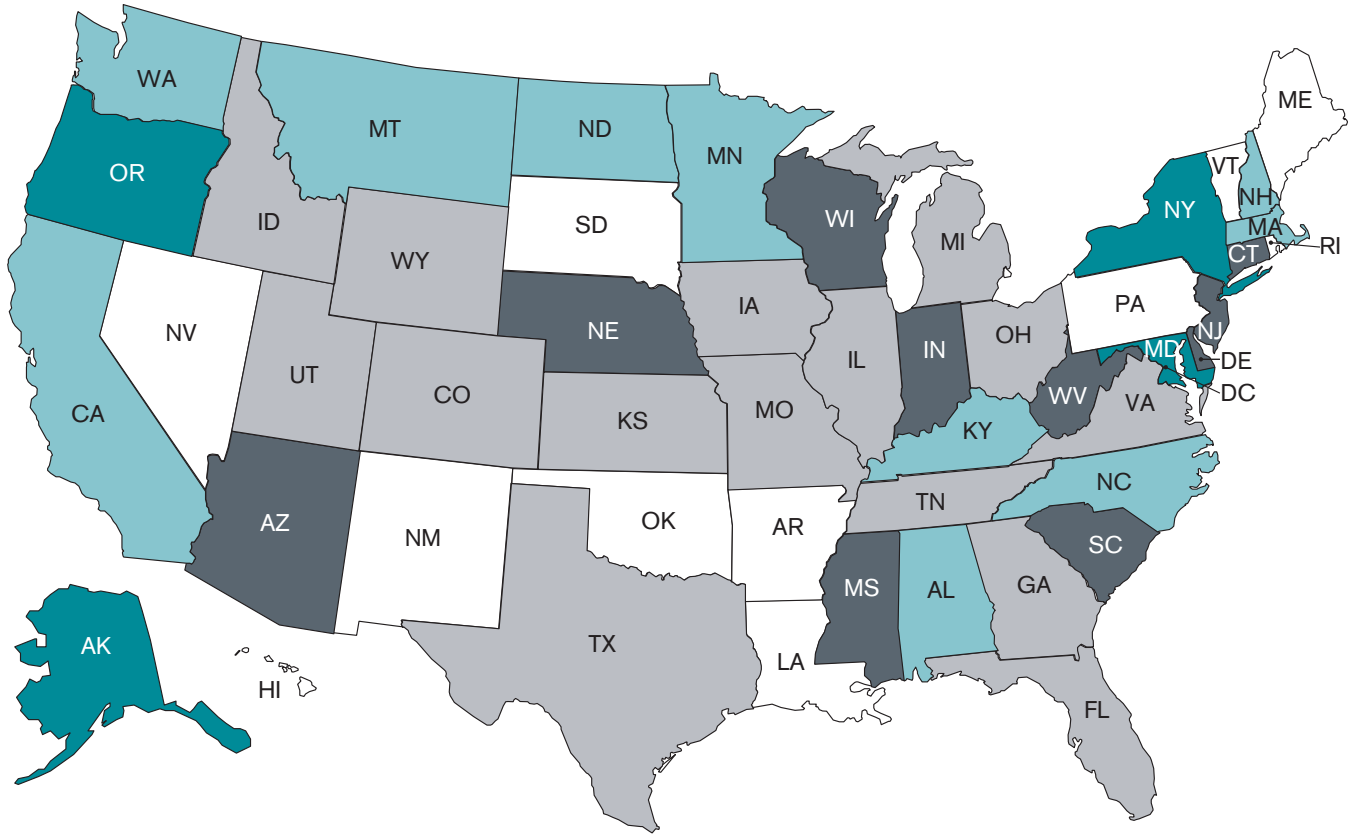
	Expenditures		Revenue	
	Median	**Mean**	**Median**	**Mean**
All LHDs	$39	$55	$41	$54
Size of population served				
<25,000	$49	$68	$51	$65
25,000–49,999	$32	$46	$37	$50
50,000–99,999	$39	$48	$40	$48
100,000–249,999	$33	$40	$33	$40
250,000–499,999	$32	$46	$31	$44
500,000–999,999	$37	$48	$36	$50
1,000,000+	$31	$44	$33	$43
Type of governance				
State	$35	$40	$38	$45
Local	$38	$53	$38	$51
Shared	$58	$78	$69	$86
	n(expenditures)=1,286		n(revenue)=1,166	

- Median and mean annual per capita expenditures were similar to annual per capita revenues across LHDs.
- On average, LHDs serving the smallest populations (fewer than 25,000 people) have higher per capita revenues and expenditures than LHDs serving larger populations.
- LHDs with a shared governance structure receive and spend more on average than LHDs with exclusively local or state governance.

FIGURE 6.4

Overall annual expenditures per capita by state

■ <$30 ■ $30–$49.99 ■ $50–$69.99 ■ $70+



The following states have insufficient expenditure data: AR, LA, ME, NM, NV, OK, PA, SD, VT.

- Overall annual LHD expenditures per capita vary greatly by state, with LHDs in Delaware spending less than $6 per person and LHDs in Alaska and New York spending more than $100 per person.
- Annual LHD expenditures per capita were less than $30 in 10 states, $30 to $49 in 15 states, $50 to $69 in 10 states, and more than $70 in four states.

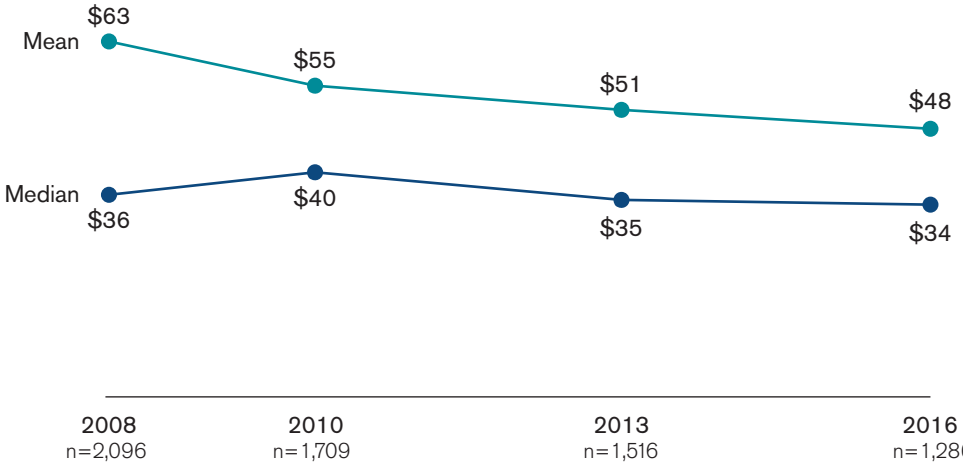
Technical notes

Statistics presented in this map are computed by summing the expenditures reported by LHDs in each state and dividing by the total population of the reporting jurisdictions. This reflects the overall level of LHD expenditures in the state and is a weighted average that takes into account the population of each jurisdiction.

State estimates were not computed using weights to account for non-response.

FIGURE 6.5

Median and mean annual per capita expenditures over time

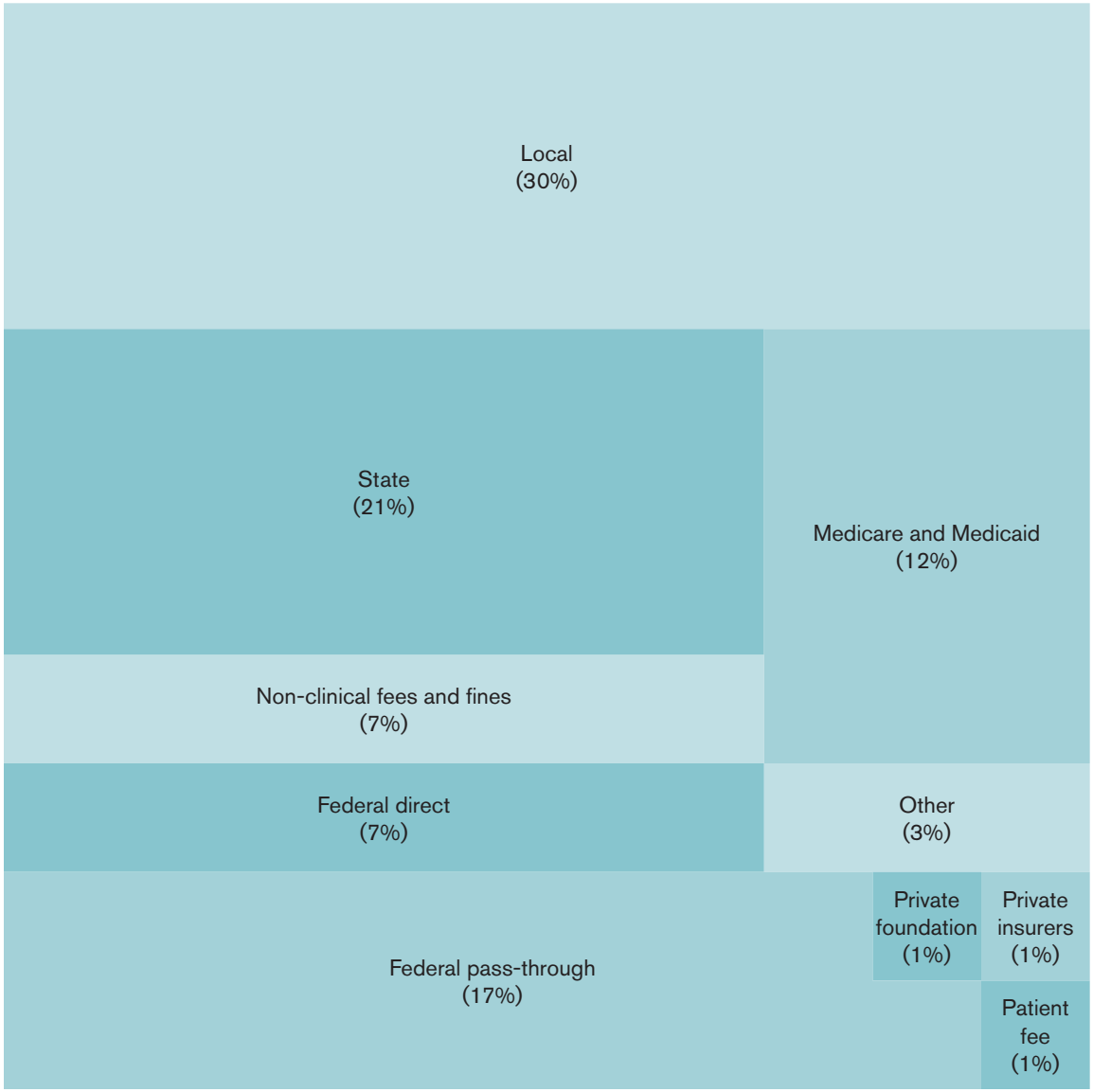


The statistics for 2010, 2013, and 2016 have been adjusted to reflect inflation rates based on the Bureau of Labor Statistics' Consumer Price Index.

- Over time, average LHD expenditures per capita have decreased 25%, from $63 in 2008 to $48 in 2016.
- On the other hand, median per capita expenditures increased between 2008 and 2010 (from $36 to $40), but then decreased 15% between 2010 and 2016 (from $40 to $34).

FIGURE 6.6

Revenue sources



Estimates shown (detail lost due to rounding).

n=920–1482

- LHDs receive funding from a variety of sources, including local, state, federal, and clinical sources.
- Just under one-third (30%) of LHD revenues come from local sources and 21% come from state sources.
- Fifteen percent of LHD revenues are payments for clinical services (Medicare, Medicaid, private insurers, or patient personal fees).

Technical note

This diagram depicts the overall composition of LHD revenue sources. The area of each box corresponds to the fraction of all revenues that source provides.

FIGURE 6.7

Median and mean annual per capita revenue by selected sources and by LHD characteristics

	Local		State		Federal direct and pass-through		Clinical*	
	Median	Mean	Median	Mean	Median	Mean	Median	Mean
All LHDs	$10	$15	$6	$10	$8	$11	$4	$12
Size of population served								
Small (<50,000)	$11	$16	$6	$11	$8	$12	$4	$14
Medium (50,000–499,999)	$8	$12	$5	$9	$7	$9	$3	$9
Large (500,000+)	$7	$15	$6	$9	$10	$13	$2	$7
Type of governance								
State	$2	$5	$11	$13	$8	$11	$6	$14
Local	$12	$16	$4	$8	$7	$10	$2	$10
Shared	$11	$14	$15	$21	$15	$20	$12	$23
Degree of urbanization								
Urban	$9	$14	$2	$6	$5	$7	$1	$5
Suburban	$10	$12	$7	$12	$9	$12	$6	$15
Rural	$15	$20	$9	$14	$12	$17	$9	$20
Region								
Northeast	$10	$14	$0	$5	$0.04	$2	$0	$2
Midwest	$12	$16	$4	$7	$8	$10	$3	$12
South	$4	$12	$11	$15	$9	$14	$9	$18
West	$10	$16	$6	$13	$13	$17	$3	$11

*Includes Medicaid/Medicare, private health insurance, and patient personal fees.

n=981–1,251

- On average, small LHDs receive more per capita from local, state, and clinical sources than medium and large LHDs.
- LHDs with shared governance receive more per capita from state, federal, and clinical sources than LHDs with exclusively local or state governance. Locally governed LHDs receive more per capita from local sources than state-governed LHDs or LHDs with shared governance.
- Rural LHDs receive more per capita from all sources than urban or suburban LHDs. The difference in clinical revenues among rural and urban LHDs is particularly striking (mean of $20 per capita for rural jurisdictions versus $5 per capita for urban jurisdictions).
- LHDs in the Northeast and Midwest receive more per capita from local sources than LHDs in the South or West; LHDs in the South receive more per capita from state sources than LHDs in other regions; and LHDs in the West receive more per capita from federal sources than LHDs in other regions.

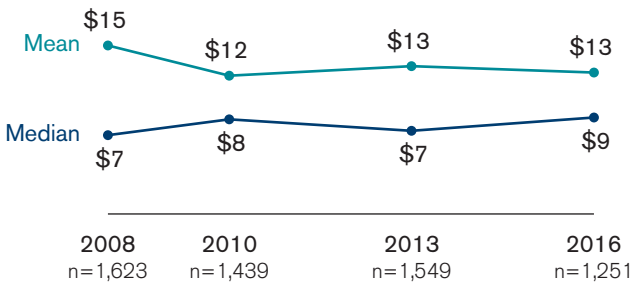
Technical note

NACCHO classified each LHD into urban (1–3), suburban (4–7), or rural (8–10) categories based on U.S. Department of Agriculture Rural Urban Commuting Area codes.

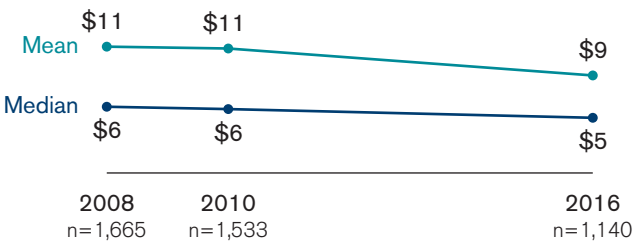
FIGURE 6.8

Median and mean annual per capita revenue sources over time

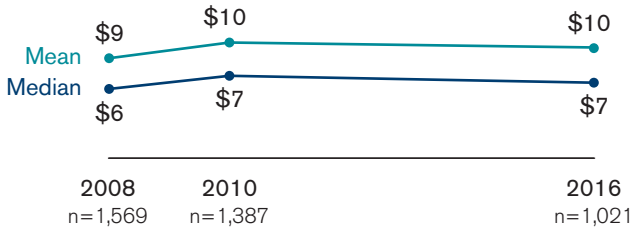
Local



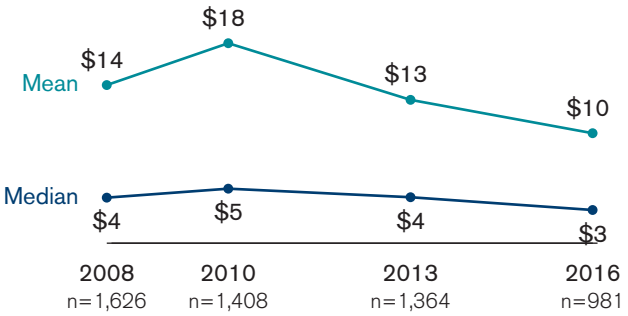
State



Federal direct and pass-through



Clinical*



Statistics for 2010, 2013, and 2016 were adjusted for inflation.

*Includes Medicaid/Medicare, private health insurance, and patient personal fees.

- Since 2008, average per capita revenues from local, state, and clinical sources have decreased. Notably, LHD mean per capita revenues from clinical sources decreased by one-third since 2008.
- Mean and median revenue per capita from federal sources (direct and passed through from state agencies) has remained relatively consistent since 2008.

Technical notes

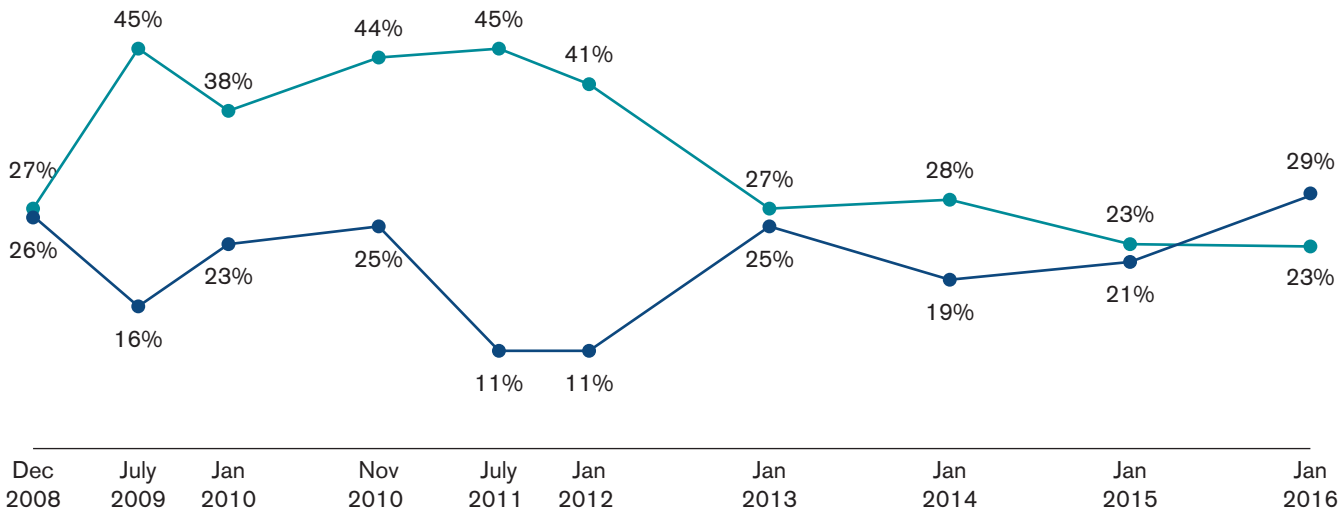
The statistics of revenues from local, state and federal direct and pass-through in 2010, 2013, and 2016 have been adjusted to reflect inflation rates based on the Bureau of Labor Statistics' Consumer Price Index.

The statistics of clinical revenue in 2010, 2013, and 2016 have been adjusted to reflect inflation rates based on the Bureau of Labor Statistics' Consumer Price Index and medical cost inflation.

FIGURE 6.9

Budget changes over time

Percent of LHDs reporting a lower budget in the current fiscal year
Percent of LHDs reporting a higher budget in the current fiscal year



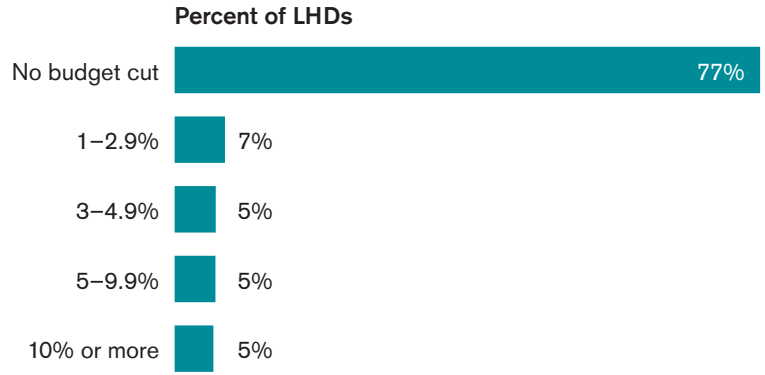
- From 2009 to 2012, between 38% and 45% of LHDs reported lower budgets compared to the previous fiscal year. In recent years, fewer LHDs have reported budget cuts; 23% of LHDs reported having a lower budget in both 2015 and 2016.
- On the other hand, the percent of LHDs reporting a higher budget compared to the previous fiscal year has slowly started to increase over time. While only 11% reported a higher budget in 2011 and 2012, 29% of LHDs reported a higher budget in 2016.
- For the first time since NACCHO started collecting these data, more LHDs reported higher budgets than lower budgets; in all previous NACCHO surveys, more LHDs have reported lower than higher budgets.

Technical note

The 2016 Profile included questions about budget changes relative to the previous fiscal year. Similar questions have been included in nine other NACCHO surveys administered periodically since the beginning of the Great Recession. Figures 6.9 and 6.10 present findings based on those data.

FIGURE 6.10

Percent of budget cut in the current fiscal year compared to the previous fiscal year



n=1,665

- While most LHDs (77%) did not report a lower budget compared to the previous fiscal year, five percent of LHDs reported a budget cut of 10% or more.

Technical notes

The data reported in this chapter should be interpreted with some caution. Collecting error-free data on LHD financing across the United States remains challenging. Large amounts of missing data from the 2016 Profile study led to a greater degree of approximation than was necessary for other chapters of this report. Special weights were generated for all funding measures to minimize the effect of low responses to those questions.

None of the LHDs in Vermont can provide any financial data, nor can state health agency units Oklahoma and South Dakota. In some other states (Arkansas, Louisiana, Maine, New Mexico, Nevada, and Pennsylvania) data are very incomplete, so reliable state-level estimates cannot be developed for per capita expenditures. Data for the District of Columbia were not included in the analysis of total expenditures, total revenues, and revenues from various sources because its status as both a local and state health department results in extreme values relative to other LHDs.

Comparisons with statistics from past Profile studies should be made with caution, especially for subgroups (e.g., state-governed LHDs, LHDs from certain states, or LHDs serving large jurisdictions). Some of the observed differences from year to year result from a large difference in the group of LHDs that provided financial data in each Profile year.

CHAPTER 7

Programs and Services

This chapter includes the following:

- Clinical and population-based programs and services provided directly in the past year.
- Programs and services provided most frequently via contracts.
- Differences in programs and services provided in rural and urban jurisdictions.
- Programs and services provided by more or fewer local health departments (LHDs) compared with 2008.
- Change in level of service provision in the past year.

FIGURE 7.1

Clinical programs and services provided directly in the past year

Program/service	% LHDs
Immunization	
Adult immunizations	90%
Childhood immunizations	88%
Screening for diseases/conditions	
Tuberculosis	84%
Other STDs	65%
HIV/AIDS	62%
Blood lead	61%
High blood pressure	54%
Body Mass Index (BMI)	53%
Diabetes	34%
Cancer	32%
Cardiovascular disease	25%

Program/service	% LHDs
Treatment for communicable diseases	
Tuberculosis	79%
Other STDs	63%
HIV/AIDS	35%
Maternal and child health services	
Women, Infants, and Children (WIC)	66%
Home visits	60%
Family planning	53%
Early and periodic screening, diagnosis, and treatment	38%
Well child clinic	29%
Prenatal care	27%
Obstetrical care	8%

Program/service	% LHDs
Other clinical services	
Laboratory services	38%
School-based clinics	34%
Oral health	28%
Asthma prevention and/or management	22%
Home health care	20%
Correctional health	13%
Substance abuse	11%
Comprehensive primary care	11%
Behavioral/mental health	10%
Emergency medical services	4%

n=1,461–1,899

- LHDs provide many different types of clinical programs and services directly, including adult and child immunizations, screening and treatment for chronic and communicable diseases or conditions, and maternal and child health services.
- Adult and child immunizations are the clinical services most often provided by LHDs (90% and 88%, respectively).
- Almost two-thirds (66%) of LHDs provide Women, Infants, and Children (WIC) services.
- The proportion of LHDs providing other clinical services varies greatly; only 4% provide emergency medical services while 84% provide tuberculosis screening.

Technical note

LHD laboratories may test clinical or environmental specimens; the Profile questionnaire includes a single item intended to include both types.

FIGURE 7.2

Population-based programs and services provided directly in the past year

Program/service	% LHDs
Epidemiology and surveillance	
Communicable/infectious disease	93%
Environmental health	85%
Maternal and child health	69%
Syndromic surveillance	61%
Chronic disease	49%
Behavioral risk factors	45%
Injury	32%
Population-based primary prevention	
Nutrition	74%
Tobacco	74%
Physical activity	60%
Chronic disease programs	57%
Unintended pregnancy	51%
Injury	42%
Substance abuse	34%
Violence	22%
Mental illness	17%

Program/service	% LHDs
Regulation, inspection, and/or licensing	
Food service establishments	79%
Schools/daycare	74%
Recreational water (e.g., pools, lakes, beaches)	68%
Septic systems	67%
Smoke-free ordinances	65%
Body art (e.g., tattoos, piercings)	60%
Private drinking water	60%
Children's camps	59%
Hotels/motels	58%
Lead inspection	53%
Campgrounds & RVs	46%
Tobacco retailers	38%
Health-related facilities	38%
Public drinking water	37%
Food processing	36%
Mobile homes	32%
Housing (inspections)	31%
Solid waste haulers	31%
Solid waste disposal sites	30%
Milk processing	18%

Program/service	% LHDs
Other environmental health services	
Food safety education	77%
Nuisance abatement	76%
Vector control	53%
Groundwater protection	44%
Surface water protection	35%
Indoor air quality	35%
Hazmat response	21%
Radiation control	21%
Air pollution	20%
Land use planning	19%
Hazardous waste disposal	18%
Noise pollution	16%
Other population-based services	
Vital records	62%
Outreach and enrollment for medical insurance	44%
School health	41%
Collection of unused pharmaceuticals	18%
Animal control	18%
Occupational safety and health	15%

n=1,461–1,899

- LHDs provide many different types of population-based programs and services directly, including epidemiology and surveillance; primary prevention; regulation, inspection, or licensing; and environmental health services.
- The most common population-based programs and services provided across LHDs include communicable/infectious disease surveillance (93%), environmental health surveillance (85%), regulation of food service establishments (79%), food safety education (77%), and public health nuisance abatement (76%).

Technical note

School health programs may include both clinical services and populated-based prevention programs.

FIGURE 7.3

Adult and child immunization services provided directly in the past year by LHD characteristics

	All LHDs	Size of population served			Degree of urbanization		
		Small (<50,000)	Medium (50,000–499,999)	Large (500,000+)	Urban	Suburban	Rural
Adult immunizations	90%	87%	93%	94%	83%	93%	94%
Childhood immunizations	88%	86%	91%	94%	77%	95%	95%

n=1,876–1,892

- Most LHDs provide adult (90%) and child (88%) immunizations, regardless of jurisdiction size or degree of jurisdiction urbanization.

Technical note

Massachusetts LHDs skew the statistics among urban LHDs because there are a large number of Massachusetts LHDs and they are typically quite different from other urban LHDs across the United States. If excluding Massachusetts LHDs changes the urban percentage presented in Figures 7.3 through 7.11 by an average of more or less than 2%, this will be indicated in a technical note for that figure.

Technical notes

Omitting Massachusetts LHDs increases the percentages of urban jurisdictions directly providing these services by an average of 6 percentage points.

NACCHO classified each LHD into urban (1–3), suburban (4–7), or rural (8–10) categories based on U.S. Department of Agriculture Rural Urban Commuting Area codes.

FIGURE 7.4

Screening and treatment for diseases and conditions provided directly in the past year by LHD characteristics

	All LHDs	Size of population served			Degree of urbanization		
		Small (<50,000)	Medium (50,000–499,999)	Large (500,000+)	Urban	Suburban	Rural
Screening for diseases/conditions							
Tuberculosis	84%	81%	89%	94%	76%	90%	86%
Other STDs	65%	57%	75%	92%	59%	71%	64%
HIV/AIDS	62%	53%	74%	93%	58%	69%	57%
Blood lead	61%	60%	63%	56%	49%	66%	72%
High blood pressure	54%	56%	51%	51%	51%	53%	62%
Body Mass Index (BMI)	53%	53%	53%	57%	43%	57%	65%
Diabetes	34%	33%	35%	43%	32%	34%	37%
Cancer	32%	28%	38%	41%	30%	35%	29%
Cardiovascular disease	25%	23%	28%	34%	26%	23%	28%
Treatment for communicable diseases							
Tuberculosis	79%	75%	85%	87%	72%	86%	79%
Other STDs	63%	56%	73%	89%	57%	70%	63%
HIV/AIDS	35%	32%	39%	48%	30%	40%	34%

n=1,777–1,898

- LHDs are more likely to provide screening for chronic and communicable diseases/conditions than treatment.
- With the exception of screening for high blood pressure and blood lead, medium and large LHDs are more likely to provide the services presented in this table.

Technical notes

Omitting Massachusetts LHDs increases the percentages of urban jurisdictions directly providing these services by an average of 5 percentage points.

NACCHO classified each LHD into urban (1–3), suburban (4–7), or rural (8–10) categories based on U.S. Department of Agriculture Rural Urban Commuting Area codes.

FIGURE 7.5

Maternal and child health services provided directly in the past year by LHD characteristics

		Size of population served			Degree of urbanization		
	All LHDs	Small (<50,000)	Medium (50,000–499,999)	Large (500,000+)	Urban	Suburban	Rural
Women, Infants, and Children (WIC)	66%	61%	72%	79%	53%	75%	72%
Home visits	60%	55%	67%	72%	51%	66%	64%
Family planning	53%	50%	57%	58%	42%	62%	56%
Early and periodic screening, diagnosis, and treatment	38%	38%	39%	36%	27%	47%	42%
Well child clinic	29%	29%	30%	27%	24%	31%	35%
Prenatal care	27%	23%	33%	30%	23%	31%	25%
Obstetrical care	8%	6%	11%	17%	8%	9%	6%

n=1,700–1,899

- Many LHDs provide services to support the health of mothers and children, including Women, Infants, and Children (WIC) services (66%), home visits (60%), and family planning (53%).
- Few LHDs provide other direct clinical services to mothers and children, such as obstetrical care (8%), prenatal care (27%), and well child clinics (29%).

Technical notes

Omitting Massachusetts LHDs increases the percentages of urban jurisdictions directly providing these services by an average of 5 percentage points.

NACCHO classified each LHD into urban (1–3), suburban (4–7), or rural (8–10) categories based on U.S. Department of Agriculture Rural Urban Commuting Area codes.

FIGURE 7.6

Other clinical services provided directly in the past year by LHD characteristics

		Size of population served			Degree of urbanization		
	All LHDs	Small (<50,000)	Medium (50,000–499,999)	Large (500,000+)	Urban	Suburban	Rural
Laboratory services	38%	33%	43%	70%	36%	40%	40%
School-based clinics	34%	39%	27%	24%	24%	35%	50%
Oral health	28%	22%	35%	52%	30%	27%	27%
Asthma prevention and/or management	22%	16%	30%	45%	29%	19%	17%
Home health care	20%	24%	14%	3%	11%	23%	32%
Correctional health	13%	12%	14%	17%	12%	14%	14%
Substance abuse	11%	9%	13%	25%	14%	10%	7%
Comprehensive primary care	11%	8%	15%	17%	10%	12%	11%
Behavioral/mental health	10%	7%	13%	26%	12%	10%	7%
Emergency medical services	4%	2%	5%	15%	6%	2%	2%

n=1,847–1,896

- Few LHDs provide other clinical services, such as behavioral/mental health services (10%), substance abuse services (11%), or comprehensive primary care (11%).
- With the exception of home health care, large LHDs are more likely to provide the services presented in this table than small or medium LHDs.
- 38% of LHDs (and 70% of large LHDs) provide laboratory services.

Technical notes

LHD laboratories may test clinical or environmental specimens; the Profile questionnaire includes a single item intended to include both types.

NACCHO classified each LHD into urban (1–3), suburban (4–7), or rural (8–10) categories based on U.S. Department of Agriculture Rural Urban Commuting Area codes.

FIGURE 7.7

Epidemiology and surveillance services provided directly in the past year by LHD characteristics

		Size of population served			Degree of urbanization		
	All LHDs	Small (<50,000)	Medium (50,000–499,999)	Large (500,000+)	Urban	Suburban	Rural
Communicable/infectious disease	93%	90%	96%	97%	90%	94%	94%
Environmental health	85%	82%	89%	88%	88%	85%	79%
Maternal and child health	69%	64%	75%	82%	59%	74%	76%
Syndromic surveillance	61%	56%	66%	84%	61%	61%	60%
Chronic disease	49%	44%	56%	65%	51%	49%	47%
Behavioral risk factors	45%	39%	53%	59%	44%	46%	45%
Injury	32%	25%	40%	54%	34%	31%	29%

n=1,622–1,898

- Almost all LHDs provide communicable/infectious disease surveillance (93%); most provide environmental health surveillance (85%) and maternal child health surveillance (69%).
- Large LHDs are more likely to provide the services presented in this table than small or medium LHDs.

Technical notes

Omitting Massachusetts LHDs increases the percentages of urban jurisdictions directly providing these services by an average of 5 percentage points.

NACCHO classified each LHD into urban (1–3), suburban (4–7), or rural (8–10) categories based on U.S. Department of Agriculture Rural Urban Commuting Area codes.

FIGURE 7.8

Population-based primary prevention services provided directly in the past year by LHD characteristics

		Size of population served			Degree of urbanization		
	All LHDs	Small (<50,000)	Medium (50,000–499,999)	Large (500,000+)	Urban	Suburban	Rural
Nutrition	74%	70%	81%	85%	69%	79%	75%
Tobacco	74%	72%	77%	86%	70%	76%	79%
Physical activity	60%	55%	68%	73%	59%	61%	61%
Chronic disease programs	57%	50%	65%	79%	59%	57%	52%
Unintended pregnancy	51%	46%	56%	66%	42%	58%	51%
Injury	42%	38%	49%	51%	39%	45%	45%
Substance abuse	34%	31%	36%	43%	33%	33%	35%
Violence	22%	19%	25%	36%	21%	24%	19%
Mental illness	17%	15%	19%	31%	19%	16%	16%

n=1,672–1,886

- Most LHDs provide population-based primary prevention services focused on nutrition (74%), tobacco use (74%), and physical activity (60%).
- Large LHDs are more likely to provide these services than small or medium LHDs.

Technical notes

Omitting Massachusetts LHDs increases the percentages of urban jurisdictions directly providing these services by an average of 4 percentage points.

NACCHO classified each LHD into urban (1–3), suburban (4–7), or rural (8–10) categories based on U.S. Department of Agriculture Rural Urban Commuting Area codes.

FIGURE 7.9

Regulation, inspection, or licensing services provided directly in the past year by LHD characteristics

		Size of population served			Degree of urbanization		
	All LHDs	Small (<50,000)	Medium (50,000–499,999)	Large (500,000+)	Urban	Suburban	Rural
Food service establishments	79%	75%	87%	77%	89%	78%	61%
Schools/daycare	74%	71%	81%	75%	81%	75%	59%
Recreational water (e.g., pools, lakes, beaches)	68%	63%	76%	74%	82%	65%	45%
Septic systems	67%	64%	74%	65%	75%	65%	55%
Smoke-free ordinances	65%	63%	70%	73%	73%	63%	55%
Body art (e.g., tattoos, piercings)	60%	55%	70%	58%	66%	63%	44%
Private drinking water	60%	58%	63%	62%	62%	61%	54%
Children's camps	59%	53%	69%	61%	70%	58%	40%
Hotels/motels	58%	56%	63%	46%	59%	61%	50%
Lead inspection	53%	48%	59%	67%	63%	49%	40%
Campgrounds & RVs	46%	41%	55%	47%	48%	47%	39%
Tobacco retailers	38%	39%	38%	29%	47%	33%	30%
Health-related facilities	38%	36%	40%	41%	44%	36%	28%
Public drinking water	37%	33%	42%	42%	41%	37%	28%
Food processing	36%	36%	35%	33%	42%	33%	29%
Mobile homes	32%	29%	37%	37%	36%	33%	23%
Housing (inspections)	31%	32%	28%	29%	45%	23%	15%
Solid waste haulers	31%	30%	31%	33%	39%	26%	21%
Solid waste disposal sites	30%	29%	32%	38%	38%	27%	22%
Milk processing	18%	19%	16%	18%	20%	15%	18%

n=1,521–1,864

- LHDs are most likely to provide regulation, inspection, or licensing services of food service establishments (79%), schools/daycares (74%), and recreational water (68%).
- With the exception of hotels/motels, LHDs serving urban jurisdictions are more likely to provide regulation, inspection, and/or licensing than LHDs serving suburban or rural jurisdictions.

Technical note

NACCHO classified each LHD into urban (1–3), suburban (4–7), or rural (8–10) categories based on U.S. Department of Agriculture Rural Urban Commuting Area codes.

FIGURE 7.10

Environmental health services provided directly in the past year by LHD characteristics

		Size of population served			Degree of urbanization		
	All LHDs	Small (<50,000)	Medium (50,000–499,999)	Large (500,000+)	Urban	Suburban	Rural
Food safety education	77%	72%	84%	80%	81%	78%	67%
Public health nuisance abatement	76%	74%	79%	71%	84%	72%	66%
Vector control	53%	50%	55%	60%	59%	51%	42%
Groundwater protection	44%	40%	48%	62%	53%	39%	36%
Surface water protection	35%	31%	40%	45%	44%	30%	28%
Indoor air quality	35%	32%	38%	46%	44%	31%	23%
Hazmat response	21%	20%	22%	31%	27%	18%	16%
Radiation control	21%	20%	21%	27%	22%	18%	23%
Air pollution	20%	18%	20%	31%	30%	12%	10%
Land use planning	19%	15%	23%	28%	26%	16%	9%
Hazardous waste disposal	18%	18%	16%	30%	25%	13%	15%
Noise pollution	16%	17%	15%	20%	31%	5%	6%

n=1,461–1,865

- More than three-quarters of LHDs provide food safety education (77%) and public health nuisance abatement (76%). Few provide noise pollution control (16%) or hazardous waste disposal (18%).
- With the exception of radiation control, LHDs serving urban jurisdictions are more likely to provide these environmental health services than LHDs serving suburban or rural jurisdictions.

Technical note

NACCHO classified each LHD into urban (1–3), suburban (4–7), or rural (8–10) categories based on U.S. Department of Agriculture Rural Urban Commuting Area codes.

FIGURE 7.11

Other population-based services provided directly in the past year by LHD characteristics

		Size of population served			Degree of urbanization		
	All LHDs	Small (<50,000)	Medium (50,000–499,999)	Large (500,000+)	Urban	Suburban	Rural
Vital records	62%	57%	68%	70%	62%	62%	61%
Outreach and enrollment for medical insurance	44%	40%	49%	56%	41%	46%	45%
School health	41%	41%	39%	44%	36%	41%	49%
Collection of unused pharmaceuticals	18%	18%	18%	23%	22%	16%	16%
Animal control	18%	16%	19%	23%	24%	14%	12%
Occupational safety and health	15%	15%	14%	19%	18%	12%	13%

n=1,674–1,897

- More than half of LHDs provide vital records services (62%); LHDs serving urban, suburban, or rural jurisdictions are equally likely to provide these services.
- Eighteen percent of LHDs provide animal control services; large LHDs are slightly more likely to provide these services than small or medium LHDs.

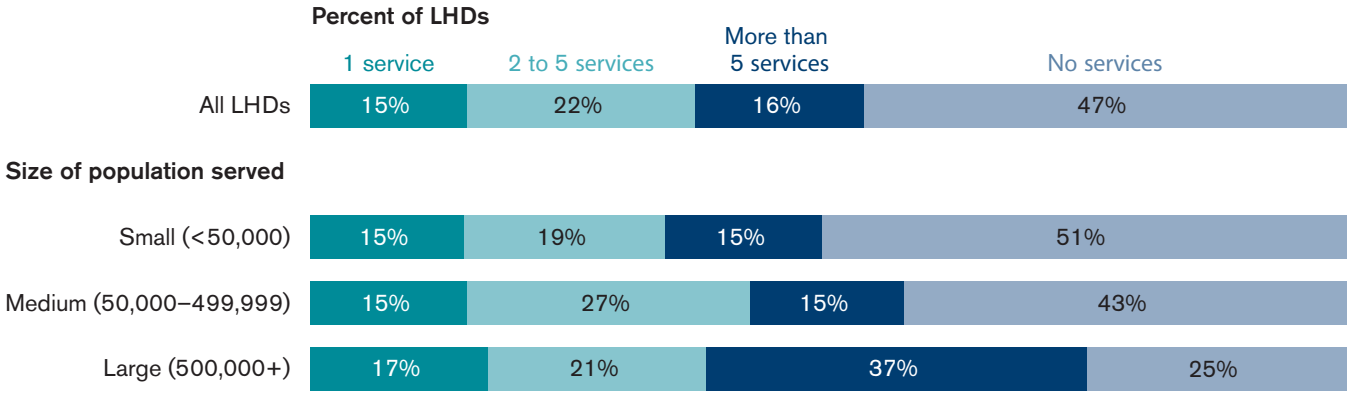
Technical notes

School health programs may include both clinical services and populated-based prevention programs.

NACCHO classified each LHD into urban (1–3), suburban (4–7), or rural (8–10) categories based on U.S. Department of Agriculture Rural Urban Commuting Area codes.

FIGURE 7.12

Number of services contracted out by LHDs by size of population served



n=1,915

- Over half of all LHDs (and three-quarters of large LHDs) contract out for at least one service (i.e., pay another organization to perform this service on behalf of the LHD).
- Only 16% of all LHDs and 37% of large LHDs contract out for more than five services.

FIGURE 7.13

Programs and services provided most frequently via contracts

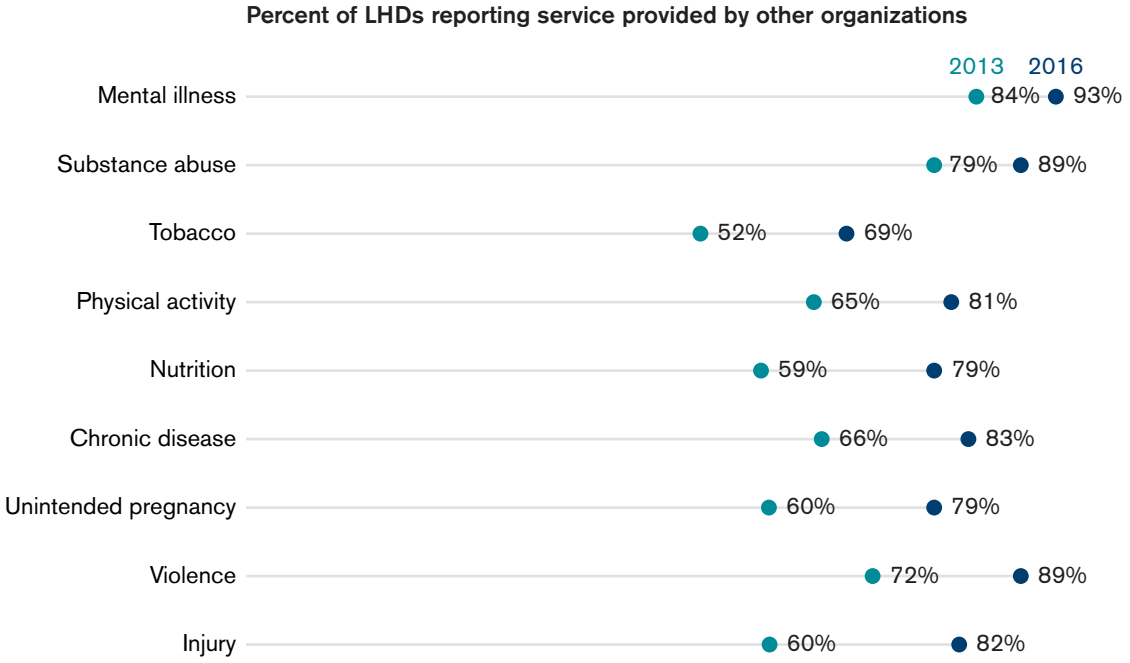
	Percent of LHDs contracting service
Laboratory services	14%
HIV/AIDS treatment	9%
HIV/AIDS screening	8%
STD screening	8%
Lead inspection	7%
Tuberculosis treatment	7%
Population-based tobacco prevention services	7%
STD treatment	7%
Women, Infants, and Children (WIC)	6%
Family planning	6%
Cancer screening	6%
Prenatal care	6%
Tuberculosis screening	6%
Population-based nutrition services	6%
Oral health	6%

n=1,461–1,899

- LHDs are most likely to contract out their laboratory services.
- Six of these services (laboratory services, HIV/AIDS treatment, STD screening, population-based tobacco prevention services, STD treatment, and cancer screening) have been among the top 10 services to be consistently contracted out since 2005 (not shown).

FIGURE 7.14

Provision of population-based primary prevention services over time by other organizations independent of LHD funding

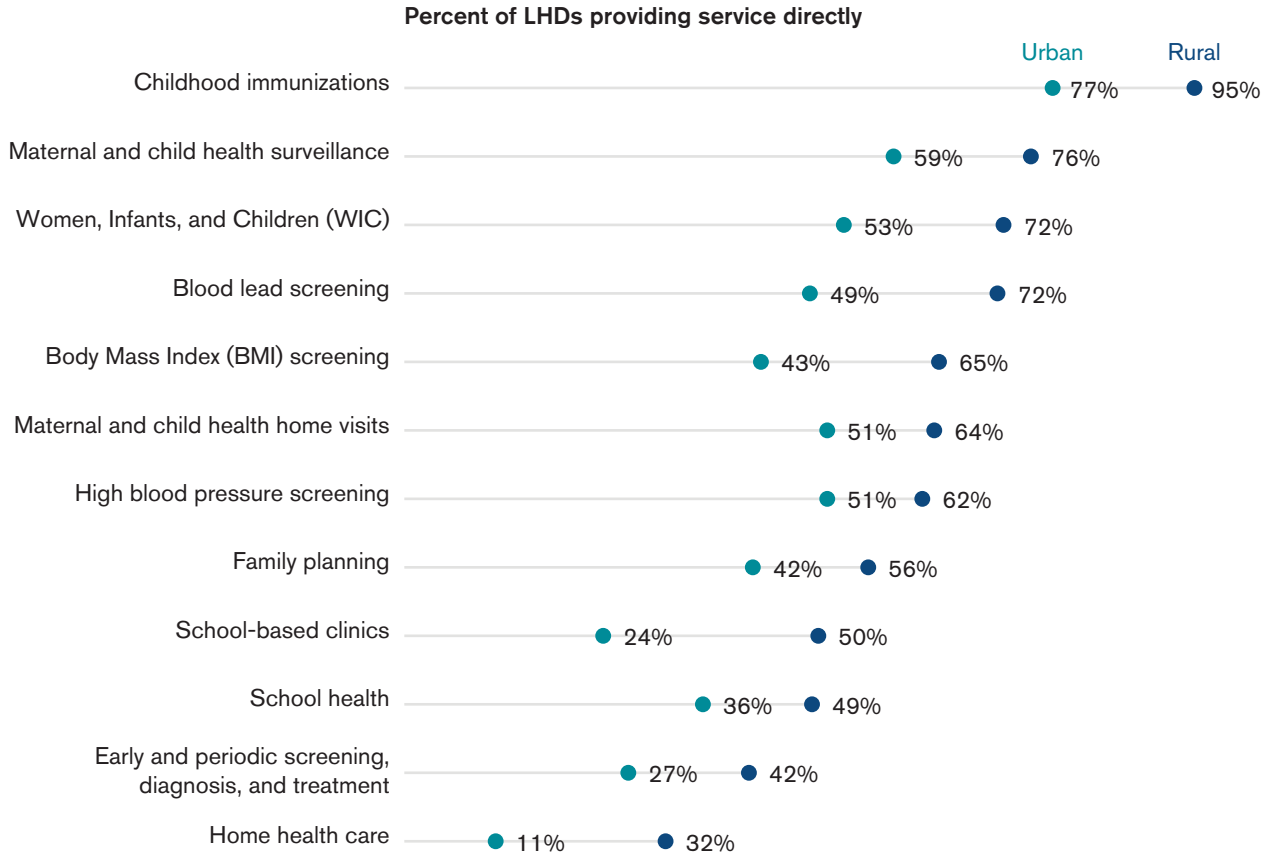


n=1,672–1,857

- Since 2013, the percentages of LHDs reporting that primary prevention services are provided by other organizations independent of LHD funding increased for every activity, from eight percentage points for mental illness prevention to 21 percentage points for injury prevention.

FIGURE 7.15

Programs and services more likely to be provided in rural jurisdictions



n=1,461–1,899

- This figure includes 12 services that rural LHDs provide more frequently than urban LHDs (with differences of more than 10 percentage points).
- LHDs serving rural jurisdictions are more likely to provide certain clinical services, including school-based clinics, blood lead screening, BMI screening, home health care, and WIC.

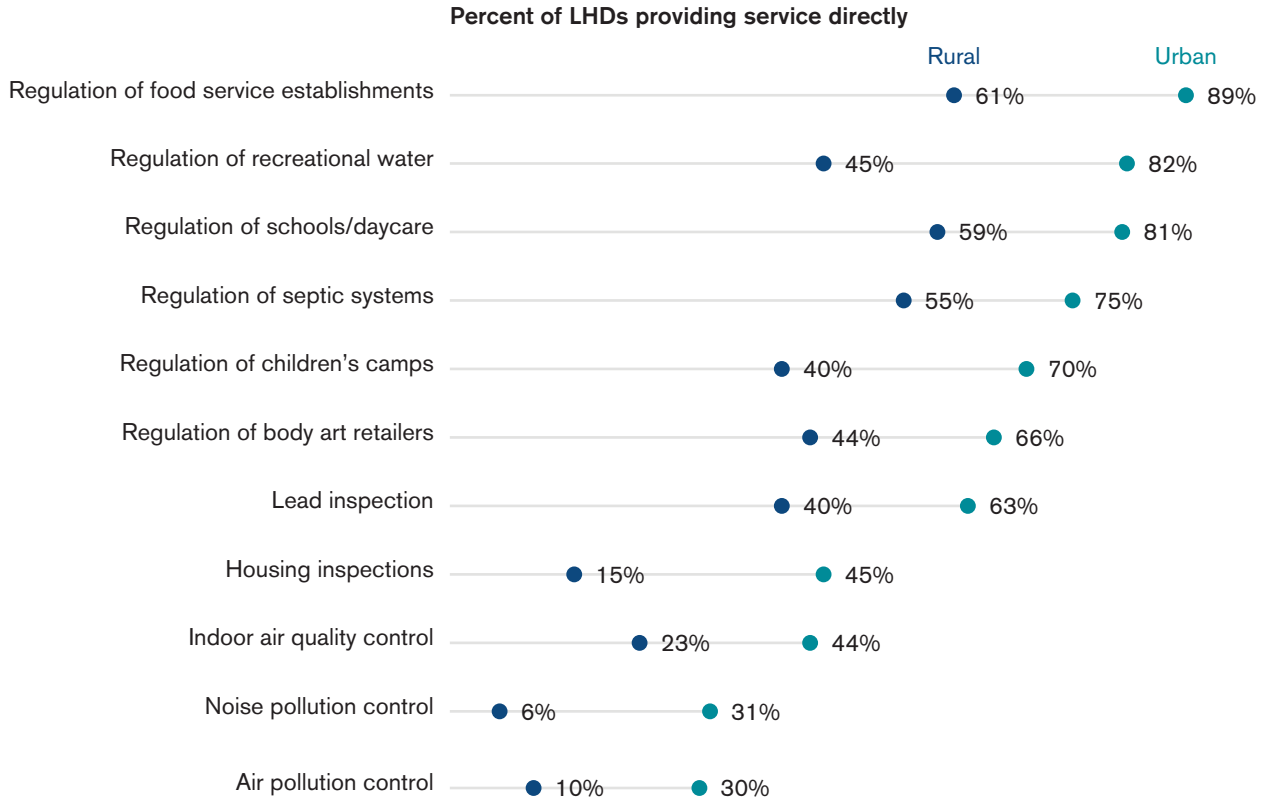
Technical notes

Massachusetts LHDs skew the statistics among urban LHDs because there are a large number of Massachusetts LHDs and they are typically quite different from other urban LHDs across the United States. See notes in Figures 7.3 through 7.8 for more information.

NACCHO classified each LHD into urban (1–3), suburban (4–7), or rural (8–10) categories based on U.S. Department of Agriculture Rural Urban Commuting Area codes.

FIGURE 7.16

Programs and services more likely to be provided in urban jurisdictions



Regulation includes inspections and/or licensing.

n=1,461–1,899

- The following figure shows the 11 services that urban LHDs provide more frequently than rural LHDs (with differences of more than 20 percentage points).
- LHDs serving urban jurisdictions are more likely to provide certain regulation, inspection, licensing, and environmental health services.

Technical notes

Massachusetts LHDs skew the statistics among urban LHDs because there are a large number of Massachusetts LHDs and they are typically quite different from other urban LHDs across the United States. See notes in Figures 7.3 through 7.8 for more information.

NACCHO classified each LHD into urban (1–3), suburban (4–7), or rural (8–10) categories based on U.S. Department of Agriculture Rural Urban Commuting Area codes.

FIGURE 7.17

Programs and services provided by more LHDs since 2008

	Change since 2008	2008	2010	2013	2016
Syndromic surveillance	22%	40%	45%	47%	61%
HIV/AIDS treatment	15%	20%	21%	24%	35%
Laboratory services	13%	25%	30%	27%	38%
Behavioral risk factors surveillance	12%	33%	36%	36%	45%
Vital records	12%	50%	54%	54%	62%
Regulation of tobacco retailers	11%	27%	27%	25%	38%
Regulation of children's camps	11%	48%	54%	48%	59%
Chronic disease surveillance	10%	39%	41%	44%	49%
Regulation of body art retailers	10%	50%	55%	55%	60%
Radiation control	10%	11%	13%	13%	21%
Environmental health surveillance	10%	75%	77%	78%	85%
Population-based substance abuse prevention	10%	24%	27%	24%	34%
		n=2,230–2,316	n=1,987–2,091	n=1,904–1,975	n=1,461–1,899

Regulation includes inspections and/or licensing.

- The following table shows the 12 services for which the percentage of LHDs providing that service directly increased the most since 2008.
- Ten of these 12 programs and services are population-based, one is clinical (HIV/AIDS treatment), and one can include both environmental and clinical activities (laboratory services).

Technical note

The Profile questionnaire includes two sections on LHD programs and services. One section asks LHDs to indicate whether or not they provide that service (regardless of scope) and a second asks LHDs to indicate how 11 service areas have changed during calendar year 2015 (i.e., increased, reduced, did not change). Figures 7.17 and 7.18 show the change in the overall percentage of LHDs that indicated they provided that service (regardless of scale or scope) over time by comparing results from the 2016 Profile to previous Profiles. Figures 7.19, 7.20, and 7.21 show the percentage of LHDs that reported how service areas have changed in scale or scope during 2015.

FIGURE 7.18

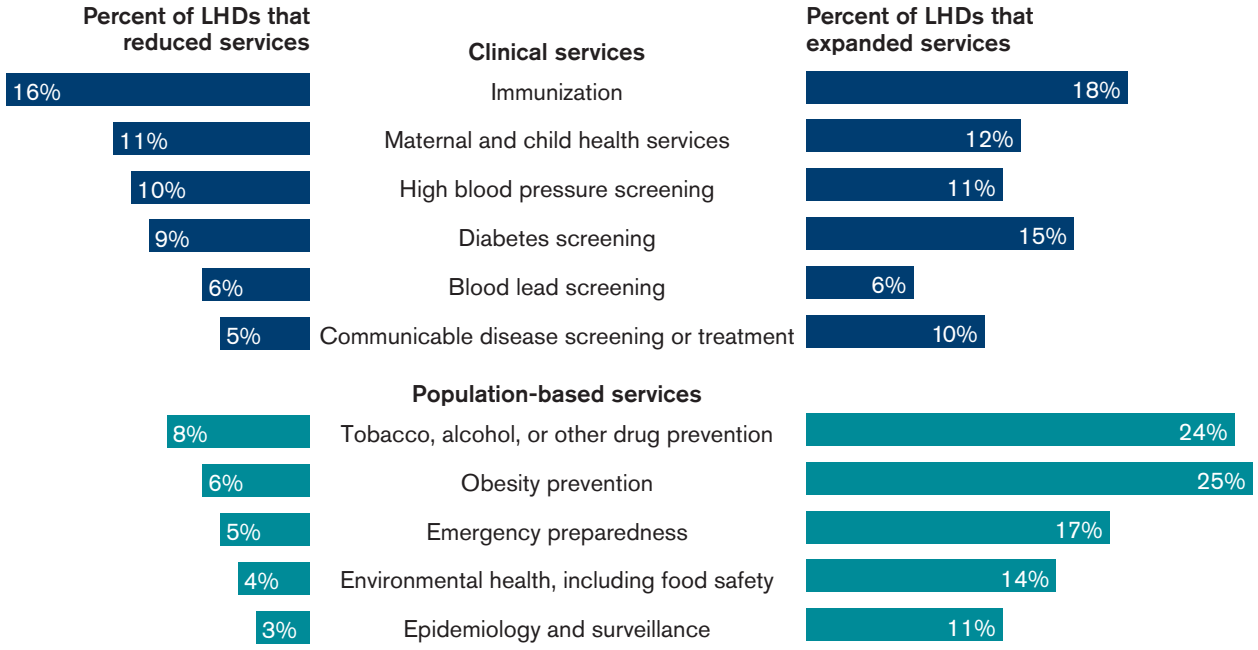
Programs and services provided by fewer LHDs since 2008

	Change since 2008	2008	2010	2013	2016
High blood pressure screening	-14%	68%	67%	57%	54%
Well child clinic	-11%	41%	36%	32%	29%
Diabetes screening	-11%	45%	44%	36%	34%
Cardiovascular disease screening	-10%	35%	33%	27%	25%
Cancer screening	-10%	42%	39%	36%	32%
Prenatal care	-7%	33%	30%	27%	27%
Outreach and enrollment for medical insurance	-6%	50%	49%	42%	44%
Early and periodic screening, diagnosis, and treatment	-6%	44%	40%	36%	38%
Home health care	-5%	25%	25%	21%	20%
Asthma prevention and/or management	-4%	26%	23%	19%	22%
		n=2,230–2,316	n=1,987–2,091	n=1,904–1,975	n=1,461–1,899

- The following table shows the 10 services for which the percentage of LHDs providing that service directly decreased the most since 2008.
- All of these 10 programs and services are clinically oriented.

FIGURE 7.19

Changes in provision of services in the past year



n=776–1,806

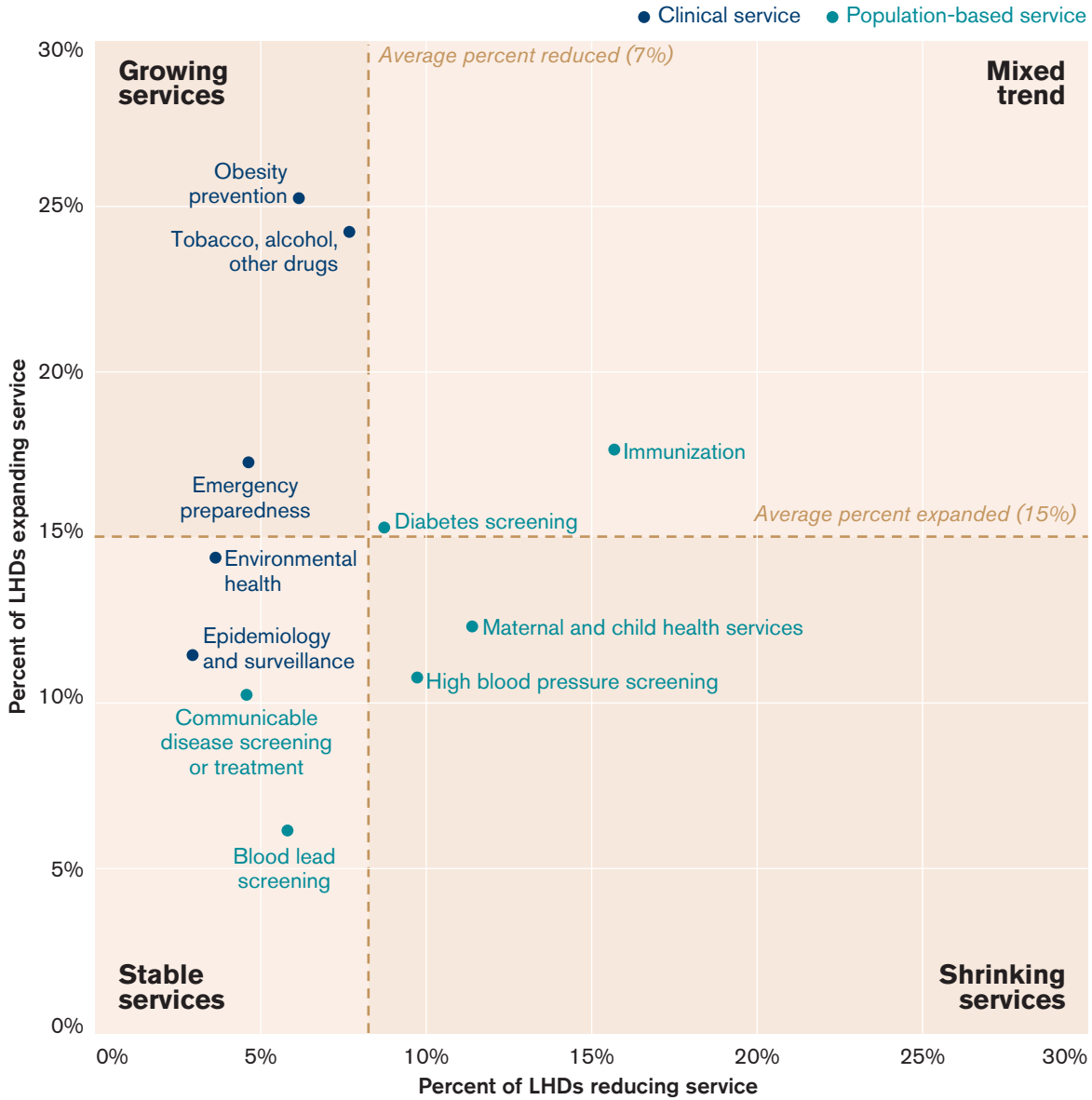
- A larger proportion of LHDs expanded than reduced both clinical and population-based services in the past year compared to the previous year.
- The difference between the proportions of LHDs expanding versus reducing clinical services is smaller than the difference between LHDs expanding versus reducing population-based services.
- In particular, 25% expanded their obesity prevention services and 24% expanded their tobacco, alcohol, and other drug prevention services, compared to only 6% and 8% of LHDs that reduced these services respectively.

Technical note

The Profile questionnaire includes two sections on LHD programs and services. One section asks LHDs to indicate whether or not they provide that service (regardless of scope) and a second asks LHDs to indicate how 11 service areas have changed during calendar year 2015 (i.e., increased, reduced, did not change). Figures 7.17 and 7.18 show the change in the overall percentage of LHDs that indicated they provided that service (regardless of scale or scope) over time by comparing results from the 2016 Profile to previous Profiles. Figures 7.19, 7.20, and 7.21 show the percentage of LHDs that reported how service areas have changed in scale or scope during 2015.

FIGURE 7.20

Growing, stable, and shrinking services in the past year



n=776–1,806

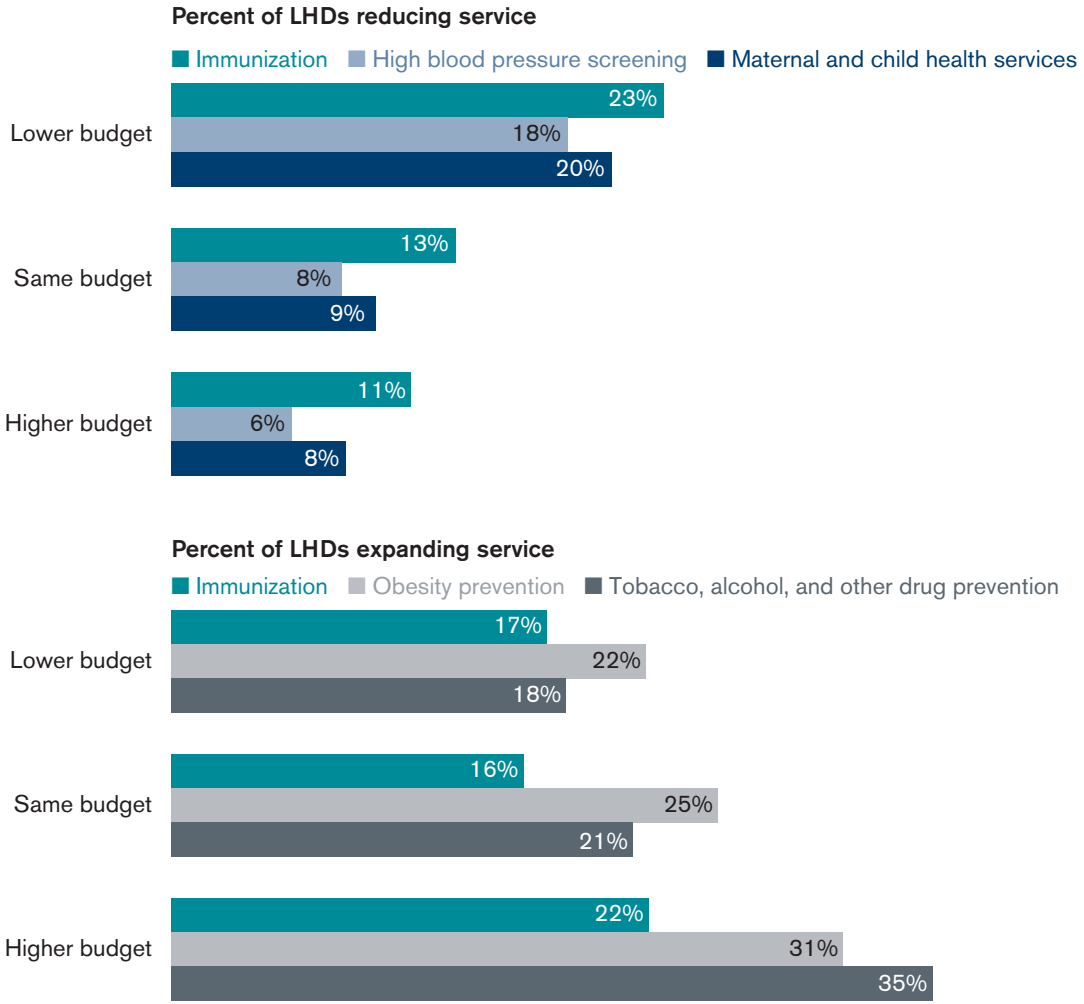
This diagram illustrates how LHDs are changing their levels of service provision in 11 programmatic areas. The horizontal and vertical lines represent the average percentages of LHDs expanding and reducing services across these 11 programmatic areas. The direction and distance from the average lines illustrate whether programs are being expanded and reduced more or less than average.

- Programs in the lower left quadrant are *stable services*—those that few LHDs are expanding or reducing. These include communicable disease screening or treatment, epidemiology and surveillance, and environmental health.
- Programs in the upper left quadrant are *growing services*—those that relatively few LHDs are reducing and more are expanding. These include obesity prevention and emergency preparedness.
- Programs in the lower right quadrant are *shrinking services*—those that relatively more LHDs are reducing and few are expanding. These include maternal and child health services and high blood pressure screening.
- Programs in the upper right quadrant are services where the trends are *mixed*—those that relatively high percentages of LHDs are expanding and reducing. These include immunization and diabetes screening.

Population-based services are more likely to be stable or growing than clinical services.

FIGURE 7.21

Changes in provision of services by changes in budgets in the past year



n=1,083–1,561

- In general, the services that LHDs are most likely to expand or reduce are the same in LHDs with varying budget situations. However, the degree to which LHDs are expanding or reducing the programs varies by budget situation.
- LHDs with higher budgets compared to the previous fiscal year are more likely to expand and less likely to reduce services than LHDs with lower or unchanging budgets.
- Similarly, LHDs with lower budgets than the previous fiscal year are more likely to reduce and less likely to expand services than LHDs with higher or unchanging budgets.

Technical note

This figure shows the three programmatic areas LHDs were most likely to report reducing and expanding. Note that immunization appears in both categories.

CHAPTER 8

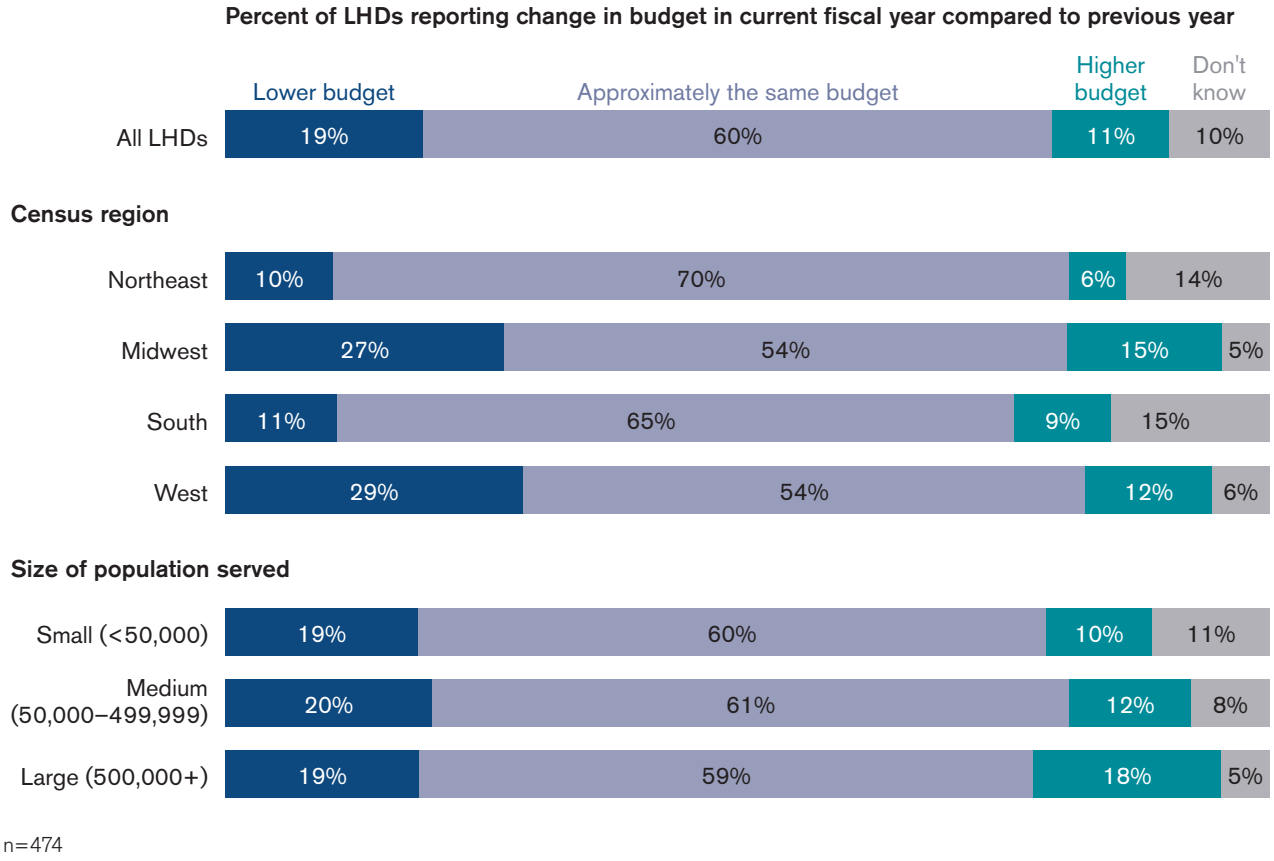
Emergency Preparedness and Response

This chapter includes the following:

- Local health department (LHD) budget changes for emergency preparedness activities.
- Response to all-hazards events.
- Emergency preparedness planning, exercises, and training.
- Use of volunteers for emergency preparedness and response.

FIGURE 8.1

LHD budget changes for emergency preparedness activities by LHD characteristics

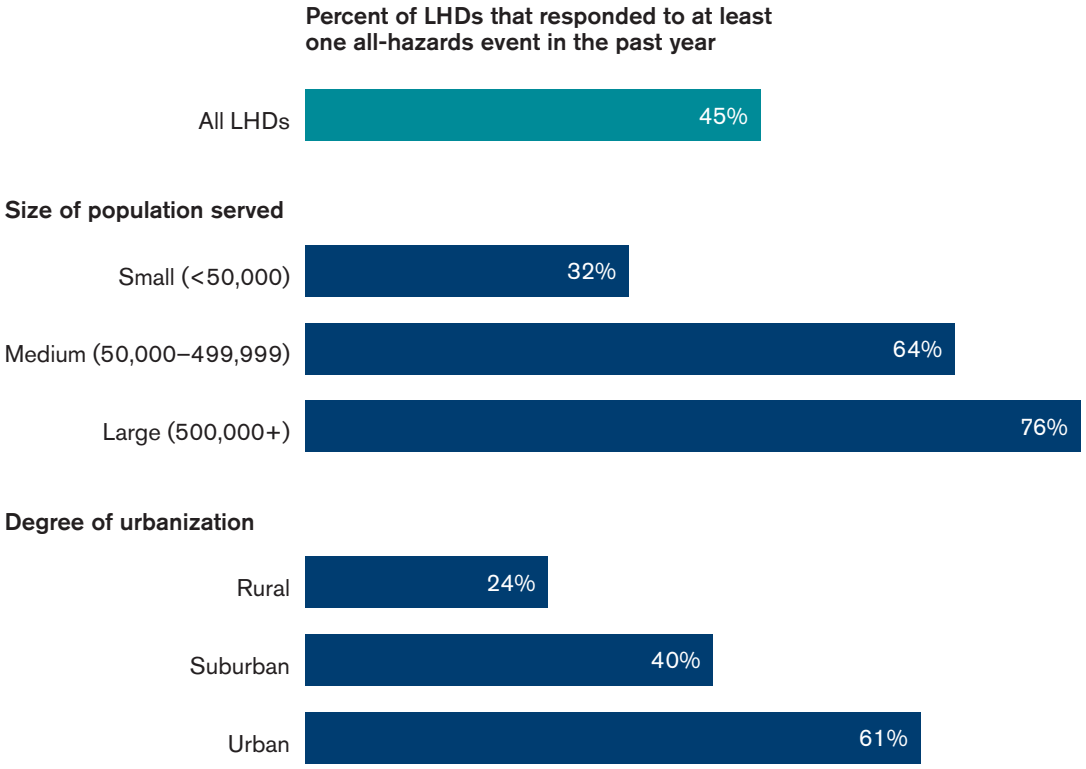


n=474

- Approximately one-fifth of LHDs (19%) report a lower budget for emergency preparedness in the current fiscal year compared to the previous fiscal year, while 11% report a higher budget.
- LHDs in the West and Midwest were more likely than LHDs in South and Northeast to report a lower budget for emergency preparedness.
- The proportion of LHDs reporting a change in emergency preparedness budgets was similar among LHDs serving populations of different sizes.

FIGURE 8.2

Response to any all-hazards event in past year by LHD characteristics



n=465

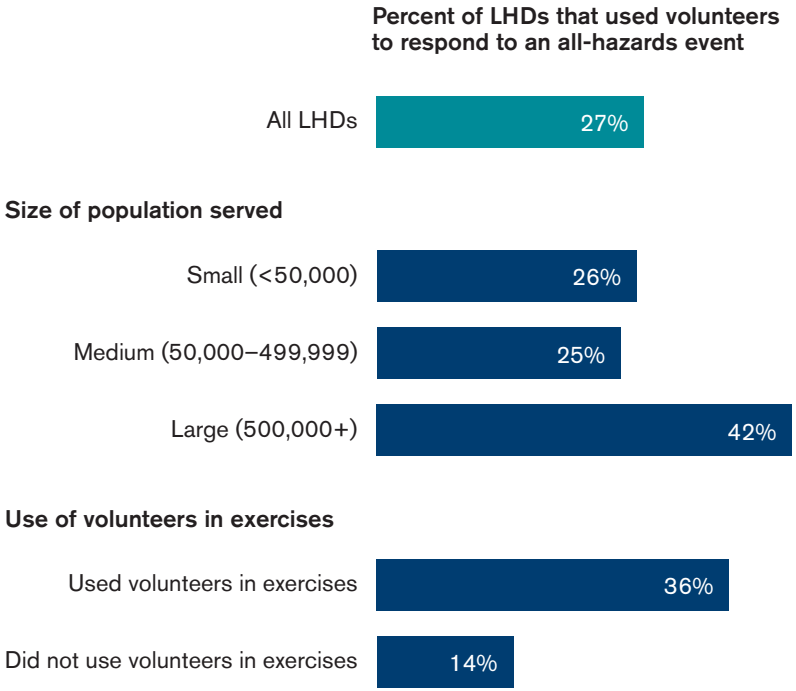
- Almost half (45%) of LHDs report having responded to an all-hazards event in the past year.
- Large LHDs were more than twice as likely as small LHDs to have responded to an all-hazards event in the past year.
- Similarly, LHDs in urban areas were more likely to have responded to an all-hazards event (61%) than LHDs in suburban (40%) or rural areas (24%).

Technical note

NACCHO classified each LHD into urban (1–3), suburban (4–7), or rural (8–10) categories based on U.S. Department of Agriculture Rural Urban Commuting Area codes.

FIGURE 8.3

Use of volunteers to respond to an all-hazards event in past year by LHD characteristics*



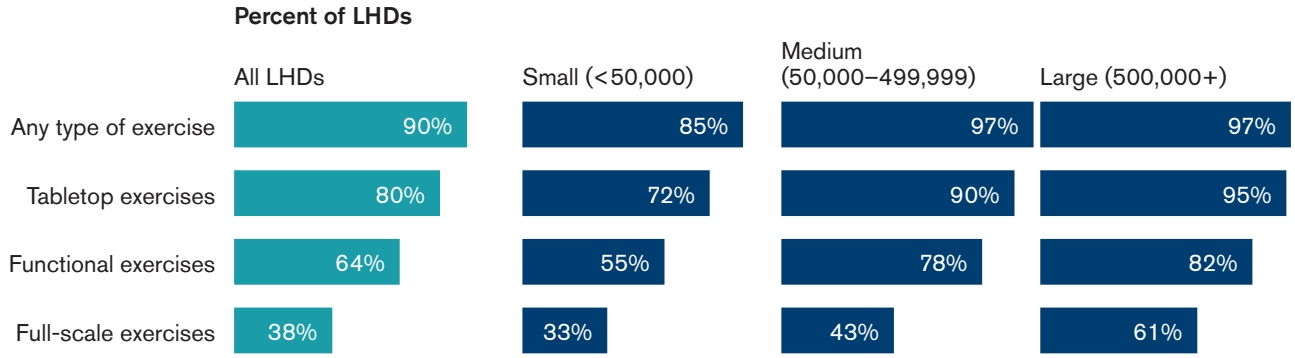
*Among LHDs that responded to an event.

n=230

- More than one-quarter (27%) of LHDs that responded to an all-hazards event reported using volunteers to help with the response.
- Similar percentages of small and medium LHDs use volunteers to help with responding to an all-hazards event (26% and 25% respectively), but large LHDs were more likely to use volunteers (42%).
- LHDs that used volunteers in an exercise in the past year were more than twice as likely to use volunteers during an event.

FIGURE 8.4

Participation in emergency preparedness exercises by size of population served



n=464

- Nearly all LHDs (90%) participated in some kind of exercise in the past year; 80% participated in tabletop exercises, 64% participated in functional exercises, and 38% participated in full-scale exercises.
- Small LHDs are less likely to participate in all three types of exercises than medium or large LHDs.

Technical note

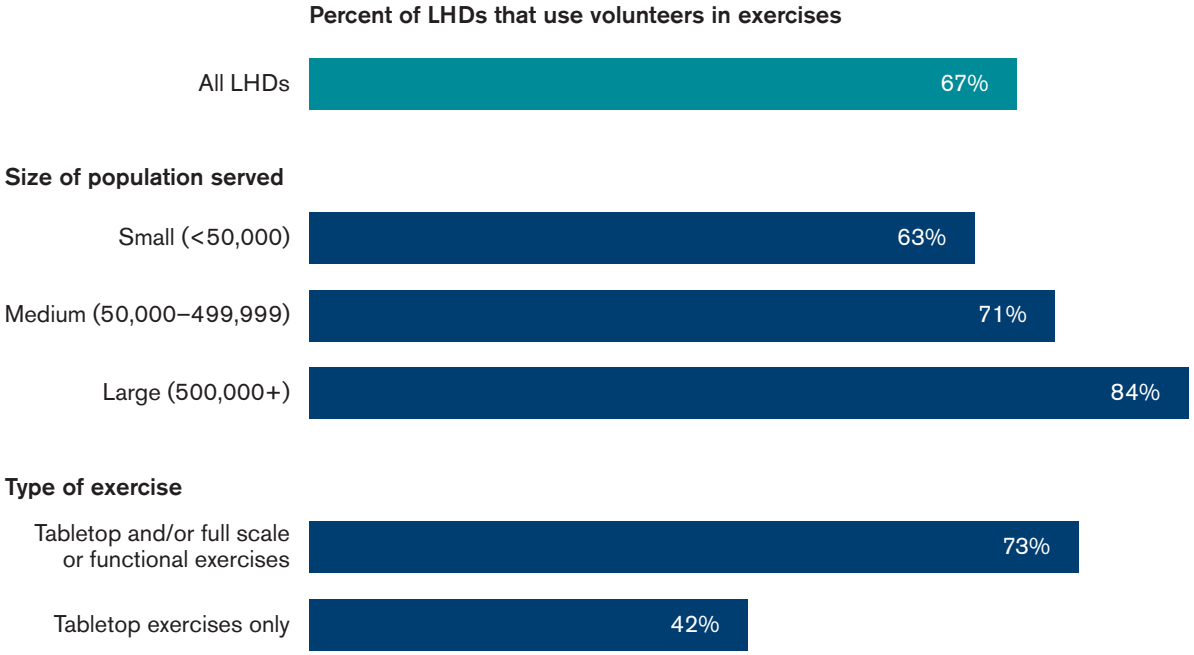
A **Tabletop Exercise** is a scenario-based discussion that permits evaluation of all or portions of the Emergency Operations Plan, through *oral interaction* and application of plan guidance.

A **Functional Exercise** is a scenario-based execution of *selected* tasks or activities within a functional area of the Emergency Operations Plan.

A **Full-Scale Exercise** is a scenario-based exercise that includes *all or most* of the functions and complex activities of the Emergency Operations Plan and is intended to replicate real-world response situations.

FIGURE 8.5

Use of volunteers in any emergency preparedness exercises (tabletop, functional, or full-scale) in the past year by size of population served and type of exercise*



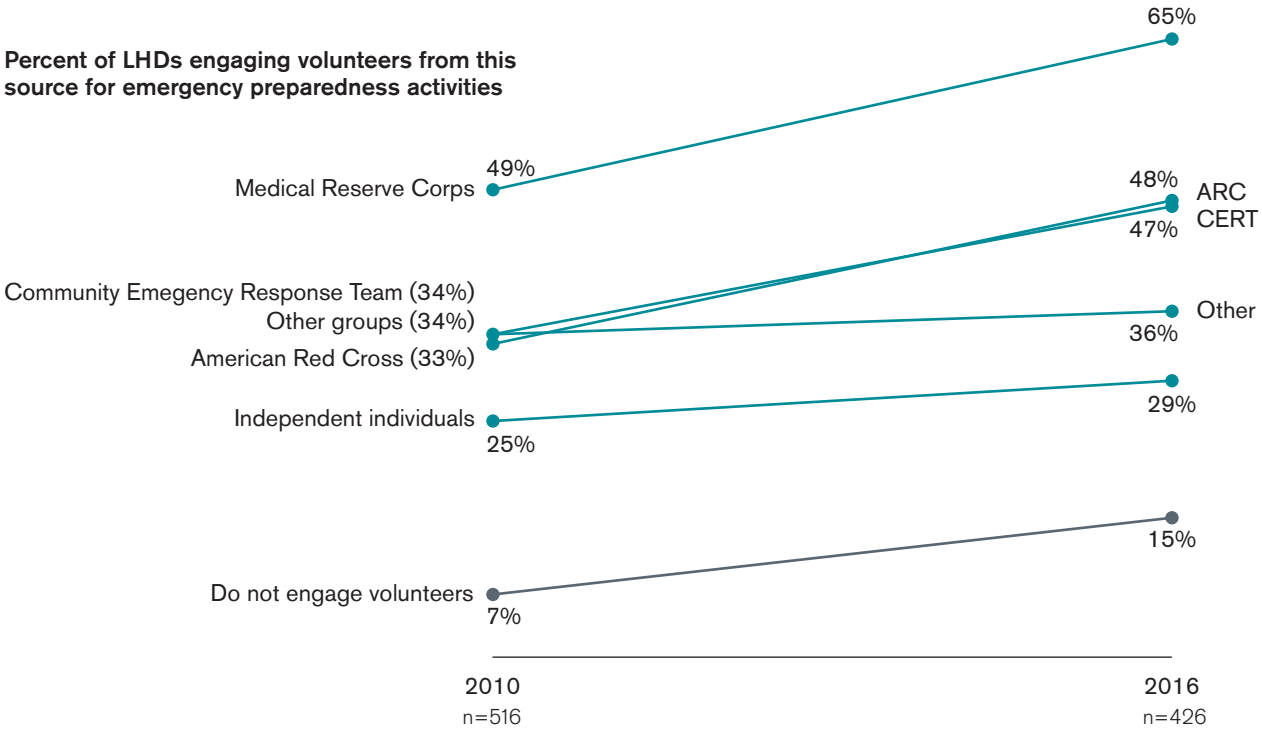
*Among LHDs that indicated they participated in exercises.

n=420

- Two-thirds of LHDs (67%) included volunteers in at least one exercise in the past year.
- Volunteers were included less often in tabletop exercises (42%) than in functional or full-scale exercises.
- Small LHDs were less likely to use volunteers for any exercises (63%) than large LHDs (84%).

FIGURE 8.6

Source of volunteers for emergency preparedness activities over time



- LHDs are most likely to engage volunteers from the Medical Reserve Corps (MRC) for emergency preparedness activities; the percentage of LHDs that engaged volunteers from the MRC increased from 49% in 2010 to 65% in 2016.
- A similar proportion of LHDs engage volunteers from the Community Emergency Response Team (47%) and the American Red Cross (48%).
- LHDs are less likely to engage independent individuals (i.e., volunteers who are not affiliated with any volunteer organization) than volunteer organizations (25% in 2010 and 29% in 2016).

FIGURE 8.7

Involvement in planning for emergencies by LHD characteristics

		Size of population served			Type of governance		
	All LHDs	Small (<50,000)	Medium (50,000–499,999)	Large (500,000+)	State	Local	Shared
Developed or updated a written emergency plan	87%	85%	89%	95%	75%	90%	93%
Planned for emergencies through participation in a health care coalition	69%	63%	75%	89%	45%	74%	83%
Developed or updated plans to ensure the inclusion of vulnerable populations	58%	54%	65%	71%	42%	62%	66%
Reviewed relevant legal authorities	44%	36%	57%	61%	21%	51%	50%
Developed or updated a written recovery plan	41%	37%	46%	51%	40%	39%	64%
Developed or updated expedited administrative processes*	34%	29%	41%	34%	25%	36%	34%

*For example, government funding, procurement, contracting, and hiring for use during emergencies

n=464

- Almost all LHDs developed or updated a written emergency plan (87%); more than two-thirds of LHDs participated in health care coalitions (69%).
- With the exception of developing or updating expedited administrative processes, large LHDs are more likely than medium or small LHDs to participate in these planning activities.
- With the exception of developing or updating a written recovery plan, LHDs governed by state authorities are less likely than LHDs governed by local authorities or LHDs governed by both state and local authorities to participate in these planning activities.

FIGURE 8.8

Involvement in emergency preparedness training and education activities by LHD characteristics

		Size of population served			Type of governance		
	All LHDs	Small (<50,000)	Medium (50,000–499,999)	Large (500,000+)	State	Local	Shared
Provided emergency preparedness training to staff	81%	77%	86%	95%	74%	81%	98%
Assessed emergency preparedness competencies of staff	61%	59%	64%	62%	53%	61%	78%
Educated community members on emergency preparedness	62%	57%	70%	80%	46%	66%	74%

n=464

- LHDs are more likely to provide staff with emergency preparedness training (81%) than to assess staff emergency preparedness competencies (61%).
- Over half of LHDs (62%) educated community members on emergency preparedness.
- Large LHDs are more likely to train staff and educate community members than small LHDs. However, there is little variation by size of population served in the percentage of LHDs that assess staff competencies.
- LHDs governed by state authorities are less likely to participate in these training/education activities than LHDs governed by local authorities or LHDs governed by both state and local authorities.

CHAPTER 9

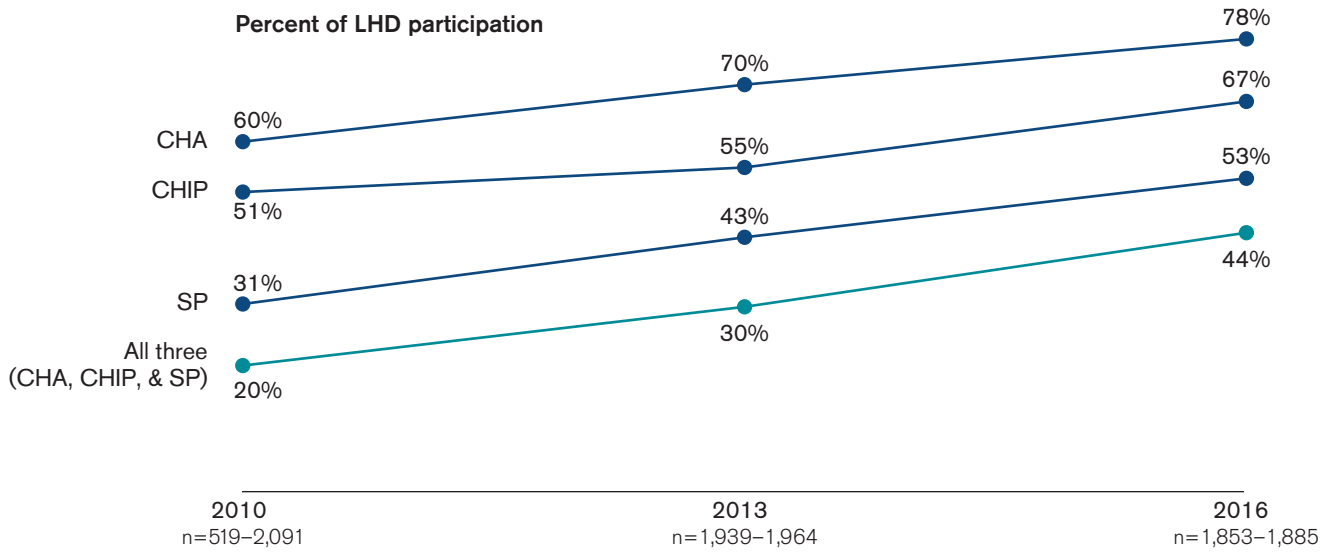
Assessment, Planning, and Accreditation

This chapter includes the following:

- Community health assessment (CHA).
- Community health improvement planning (CHIP).
- Strategic planning (SP).
- Collaboration with non-profit hospitals on community health needs assessments (CHNA).
- Public Health Accreditation Board (PHAB) engagement.

FIGURE 9.1

Participation over time in a community health assessment (CHA), community health improvement plan (CHIP), and/or strategic plan (SP) within five years



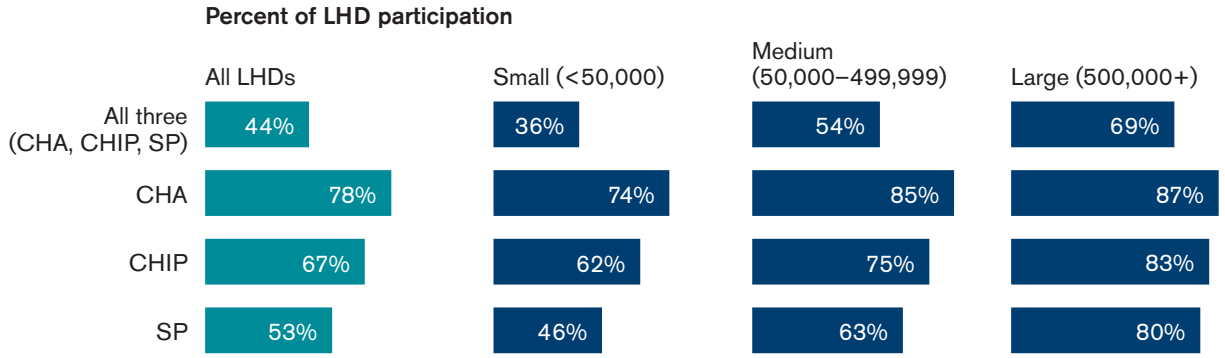
- Participation by LHDs in a CHA, CHIP, and SP within the past five years has increased since 2010.
- In 2016, more than three-quarters of LHDs had completed a CHA (78%), two-thirds had completed a CHIP (67%), and approximately half had completed a SP (53%) within the past five years.
- Just under half (44%) had completed all three processes within the past five years, a requirement for PHAB accreditation.

Technical note

In 2010, the strategic planning question was included in a module, resulting in a lower number of respondents.

FIGURE 9.2

2016 Participation in a community health assessment (CHA), community health improvement plan (CHIP), and/or strategic plan (SP) within five years by size of population served

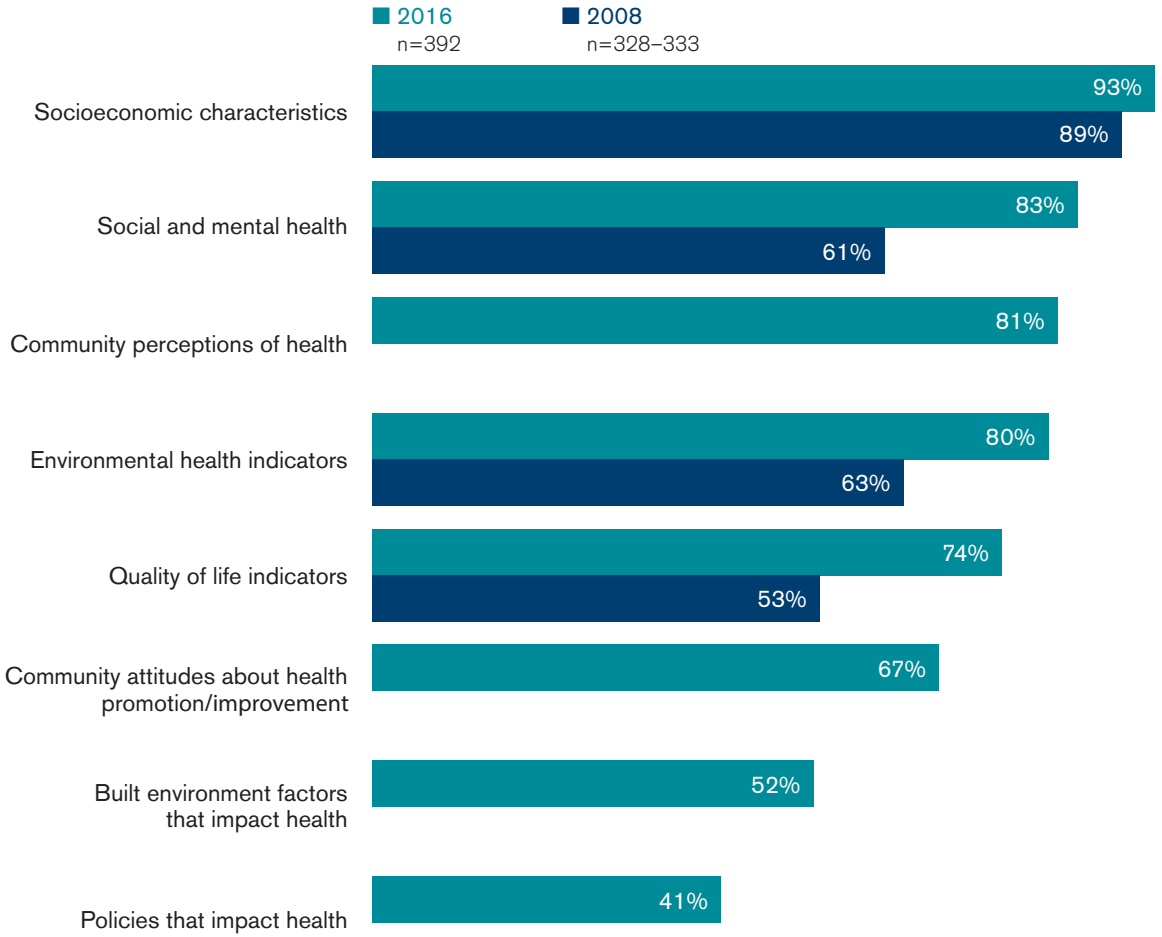


n=1,853–1,885

- Almost three-quarters of small LHDs have completed a CHA within the past five years.
- Over half of medium LHDs have completed all three accreditation prerequisites.
- Over 80% of large LHDs have completed each of the three accreditation prerequisites, and almost 70% have completed all three.

FIGURE 9.3

Data included in most recent community health assessment (CHA) over time*



*Among LHDs that completed a CHA.

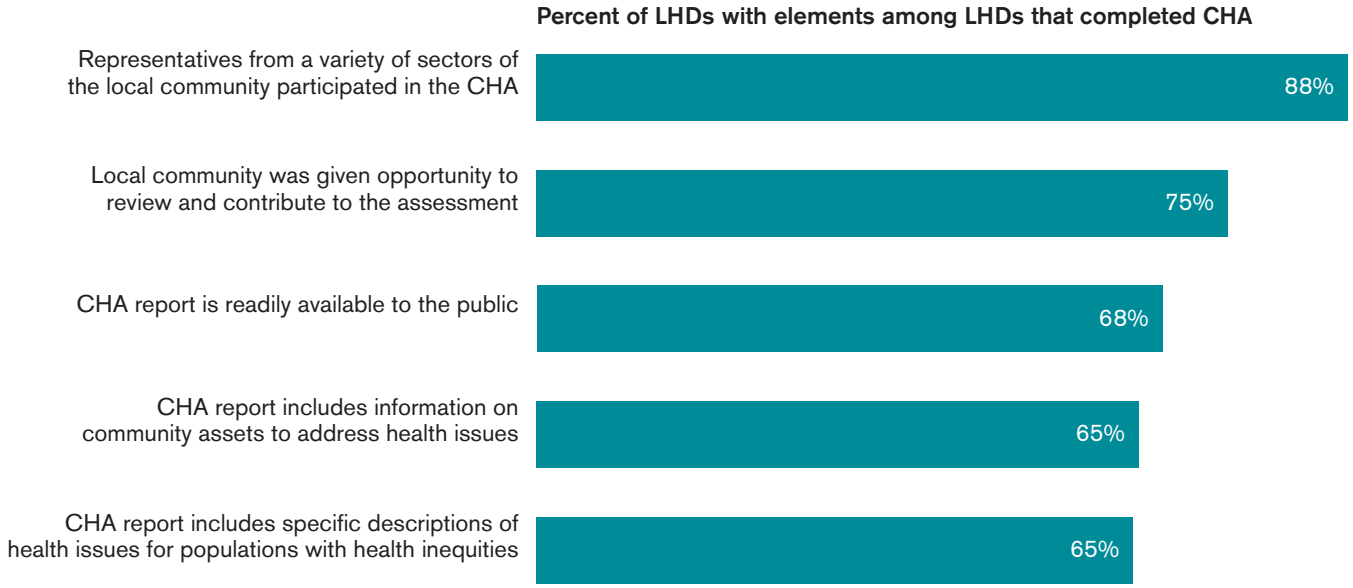
- LHDs use a variety of data sources in their CHAs, including data on socioeconomic characteristics (93%), social and mental health (83%), community perceptions of health (81%), and environmental health indicators (80%).
- LHDs are less likely to use data on the built environment factors that impact health (52%) or data on policies that impact health (41%).
- Compared to 2008, larger percentages of LHDs are using data on socioeconomic characteristics, social and mental health, environmental health indicators, and quality of life indicators.

Technical note

Certain items were not inlcuded in the 2008 Profile.

FIGURE 9.4

Elements of most recent community health assessment (CHA)*



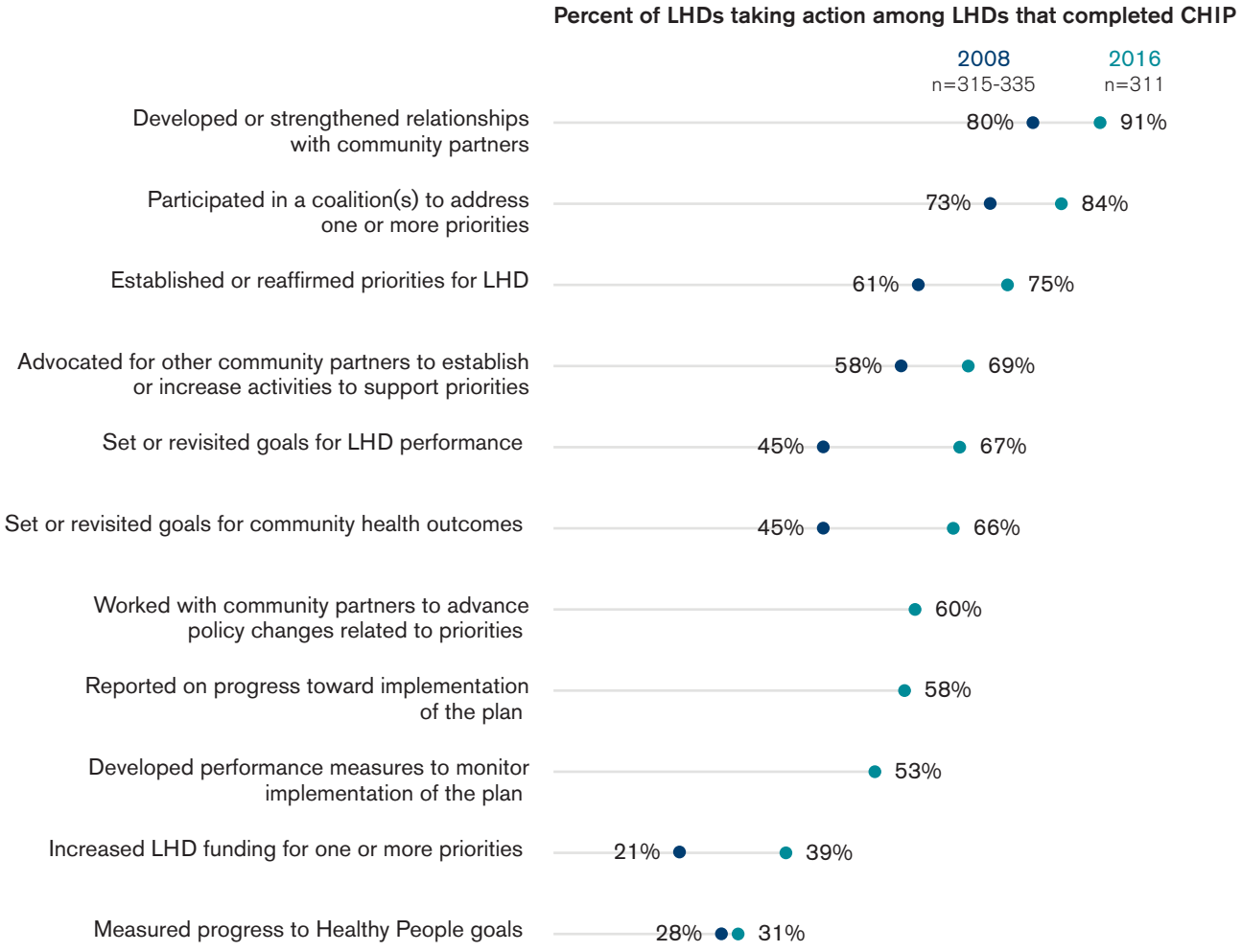
*Among LHDs that completed a CHA.

n=393

- Almost all LHDs that completed a CHA report that representatives from a variety of sectors of their local community participated in their CHA (88%) and three-quarters (75%) gave their community the opportunity to review and contribute to their CHA.
- Approximately two-thirds of LHDs made their CHA report available to the public (68%) and included information on community assets to address health issues (65%) and specific descriptions of health issues for populations with health inequities (65%).

FIGURE 9.5

Actions taken in the past three years to implement or sustain a community health improvement plan (CHIP) over time*



*Among LHDs that completed a CHIP.

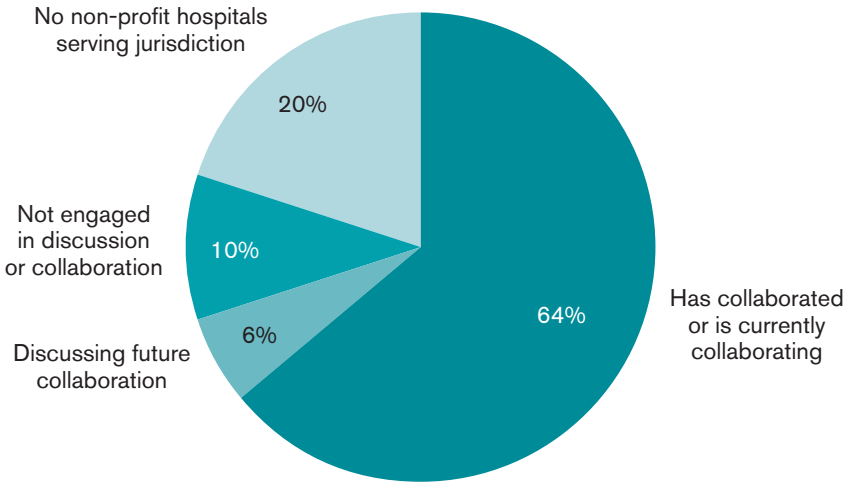
- LHDs take a variety of actions to implement or sustain their CHIPs, including developing or strengthening relationships with community partners (91%), participating in a coalition to address one or more priorities (84%), and establishing or reaffirming priorities for LHDs (75%).
- Compared to 2008, larger proportions of LHDs have taken these actions; notably, two-thirds of LHDs set or revisited goals for LHD performance (67%) and community health outcomes (66%) in 2016 compared to less than half (45%) in 2008.

Technical note

Certain items were not inlcuded in the 2008 Profile.

FIGURE 9.6

Level of collaboration with non-profit hospitals on most recent community health needs assessment (CHNA)



n=1,693

- Just under two-thirds of LHDs (64%) collaborated or are currently collaborating with a non-profit hospital on a CHNA; 6% are discussing future collaboration; 10% are neither collaborating nor discussing collaboration.
- Twenty percent of LHDs report there is no non-profit hospital serving their jurisdiction.

Technical note

The Patient Protection and Affordable Care Act (ACA) includes a requirement that non-profit hospitals must conduct a **community health needs assessment** (CHNA) at least once every three years. The CHNA must take into account input from persons who represent the broad interests of the community served by the hospital, including those with special knowledge of or expertise in public health.

FIGURE 9.7

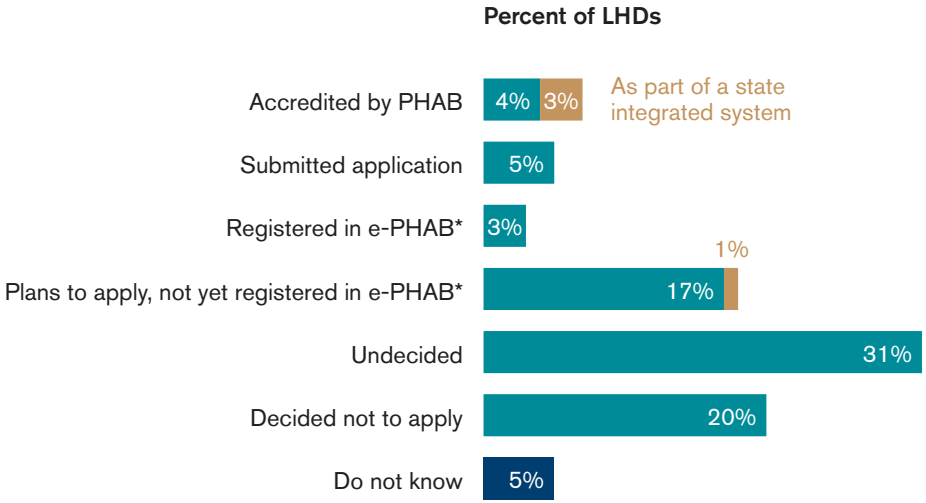
Types of collaboration with non-profit hospitals on most recent community health needs assessment (CHNA)

	Among all LHDs	Among LHDs collaborating on a CHNA
LHD shared local data resources on health status and/or social determinants of health	37%	62%
LHD provided input on strategies to improve community health	37%	60%
LHD and non-profit hospital jointly conducted an assessment that serves as both the LHD's Community Health Assessment and the hospital's CHNA	35%	58%
LHD assisted in engaging community organizations and residents in CHNA process	32%	53%
LHD provided technical assistance on data collection, analysis, synthesis, or interpretation	17%	28%
LHD coordinated joint efforts by multiple hospitals to pool resources and information for a CHNA	15%	24%
LHD provided technical assistance to hospital on how to design and implement a CHNA	12%	19%
LHD served as a neutral facilitator to ensure a collaborative CHNA process	10%	17%
Not sure	1%	2%
None of the above	1%	1%
	n=452	n=296

- Among LHDs that are collaborating with a non-profit hospital on a CHNA, more than half share local data resources on health status and/or social determinants of health (62%), provide input on strategies to improve community health (60%), and jointly conduct an assessment that serves as both the LHD's CHA and hospital's CHNA (58%).
- Approximately one-third of all LHDs collaborate with non-profit hospitals in each of these ways.

FIGURE 9.8

Level of engagement with Public Health Accreditation Board (PHAB) accreditation in 2016



*PHAB's online information system.

n=1,930

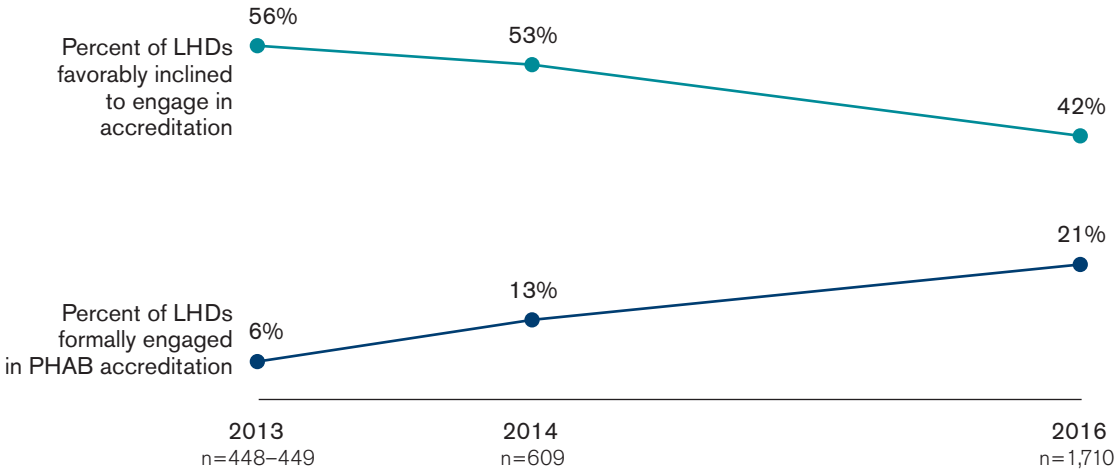
- Four percent of LHDs are accredited by PHAB, and an additional 3% are part of a PHAB-accredited state integrated system.
- Eighteen percent of LHDs report that they plan to apply for accreditation but have not yet registered in e-PHAB.
- Thirty-one percent of LHDs are undecided about PHAB accreditation and 20% decided not to apply.

Technical note

All LHDs in Florida are accredited as part of a state integrated system. As of early 2016, no other states were actively engaged in this option. Responses of LHDs in states other than Florida that erroneously reported accreditation activities as part of a state integrated system were removed, and special estimation weights were used to account for the special status of Florida LHDs.

FIGURE 9.9

Level of engagement with Public Health Accreditation Board (PHAB) accreditation over time



- The percentage of LHDs favorably inclined to engage in PHAB accreditation has decreased from 56% in 2013 to 42% in 2016.
- However, the percentage of LHDs formally engaged in PHAB accreditation has increased from 6% in 2013 to 21% in 2016.

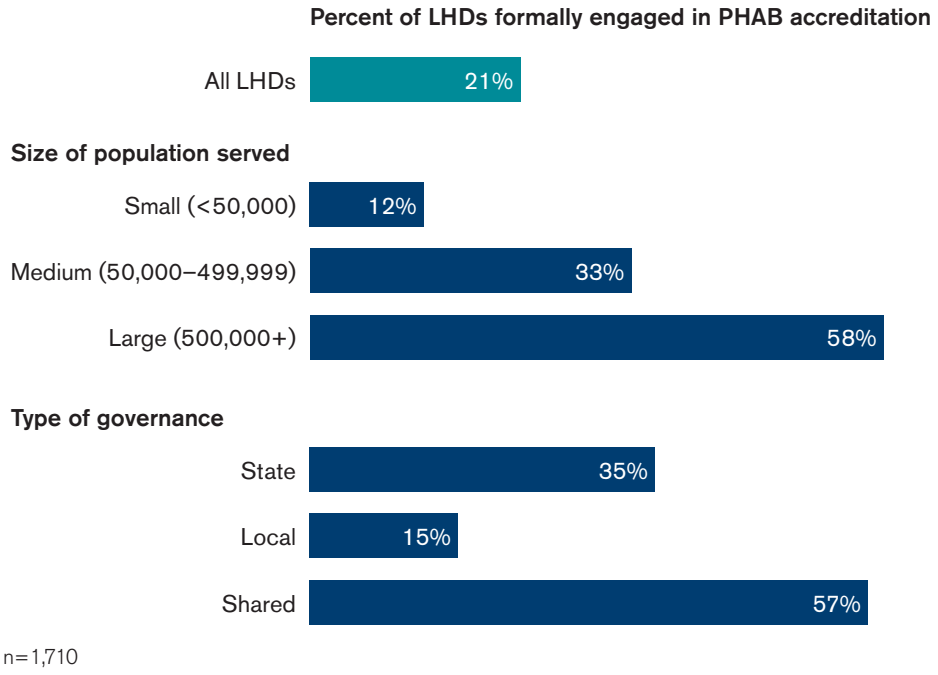
Level of engagement in PHAB accreditation

Formally engaged in PHAB accreditation: LHDs that are accredited, have submitted application or registered in e-PHAB, or are part of a state integrated system that is accredited or registered in e-PHAB.

Favorably inclined to engage in PHAB accreditation: LHDs that are formally engaged in PHAB accreditation or plan to apply either individually or as part of a state integrated system (all LHDs except those that are undecided or decided not to apply for PHAB accreditation).

FIGURE 9.10

Formal engagement in Public Health Accreditation Board (PHAB) accreditation by LHD characteristics



n=1,710

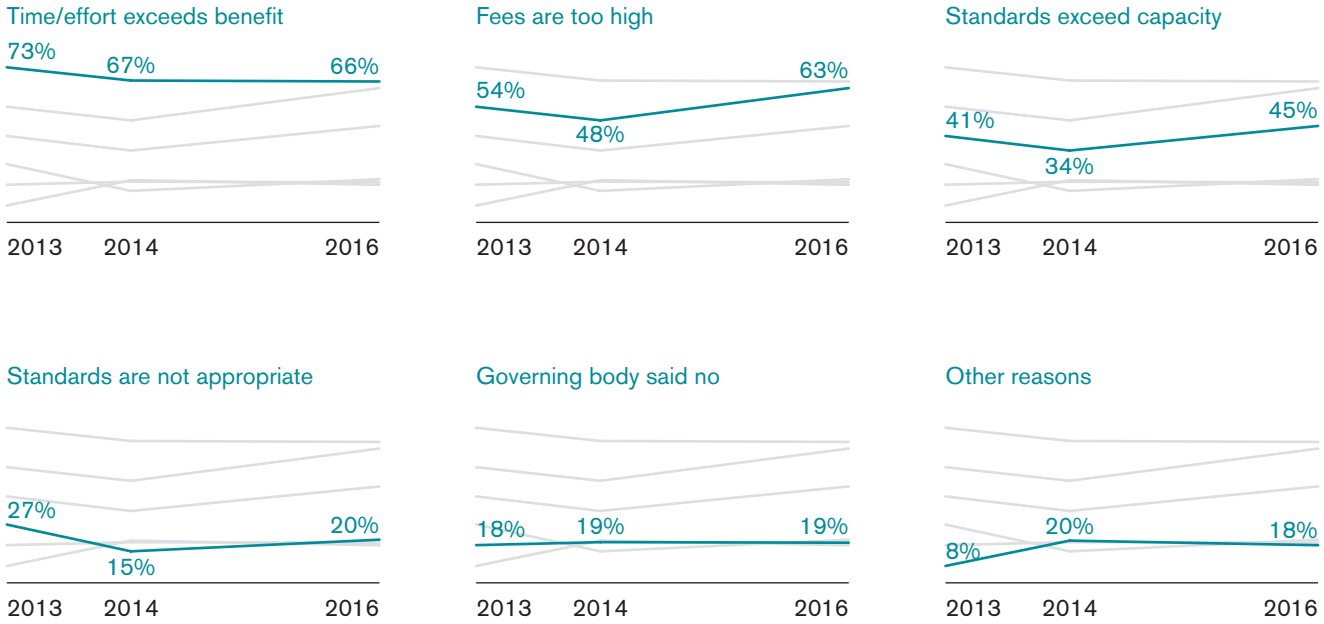
- A larger proportion of large LHDs are formally engaged in PHAB accreditation than small and medium LHDs.
- Locally governed LHDs are less likely to be formally engaged in PHAB accreditation than state governed LHDs or LHDs governed by both state and local authorities.

Level of engagement in PHAB accreditation

Formally engaged in PHAB accreditation: LHDs that are accredited, have submitted application or registered in e-PHAB, or are part of a state integrated system that is accredited or registered in e-PHAB.

FIGURE 9.11

Reasons for not pursuing Public Health Accreditation Board (PHAB) accreditation over time



n(2013)=61 (Profile module)

n(2014)=103 (Forces of Change survey)

n(2016)=371 (Profile core)

- Since 2013, LHDs are most likely to report the reason they are not applying for PHAB accreditation is that the time/effort required for PHAB accreditation exceeds its perceived benefit. This percentage has decreased slightly since 2013.
- The percent of LHDs reporting that fees are too high for accreditation has increased from 48% in 2014 to 63% in 2016.
- The percent of LHDs reporting that PHAB accreditation standards exceed their LHD's capacity increased from 34% in 2014 to 45% in 2016.

CHAPTER 10

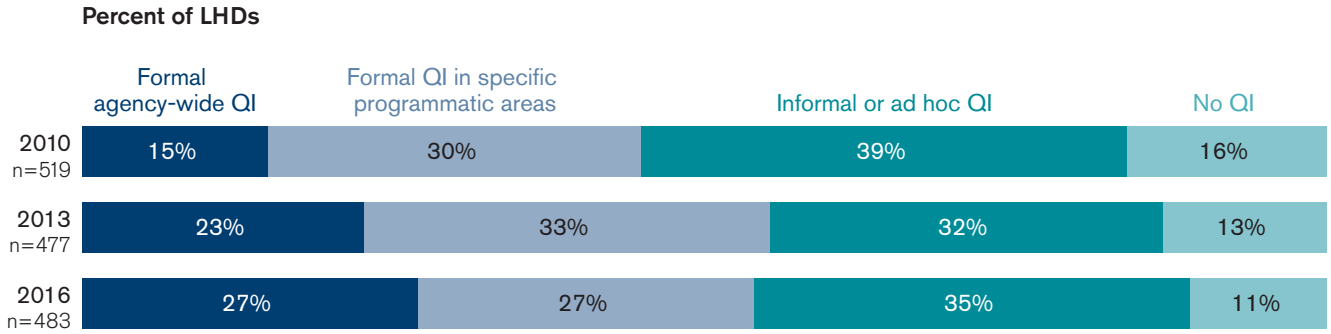
Quality Improvement and Workforce Development

This chapter includes the following:

- Level of quality improvement implementation at local health departments (LHDs).
- Number of quality improvement projects.
- Elements used in quality improvement efforts.
- Use of core competencies for public health workers.

FIGURE 10.1

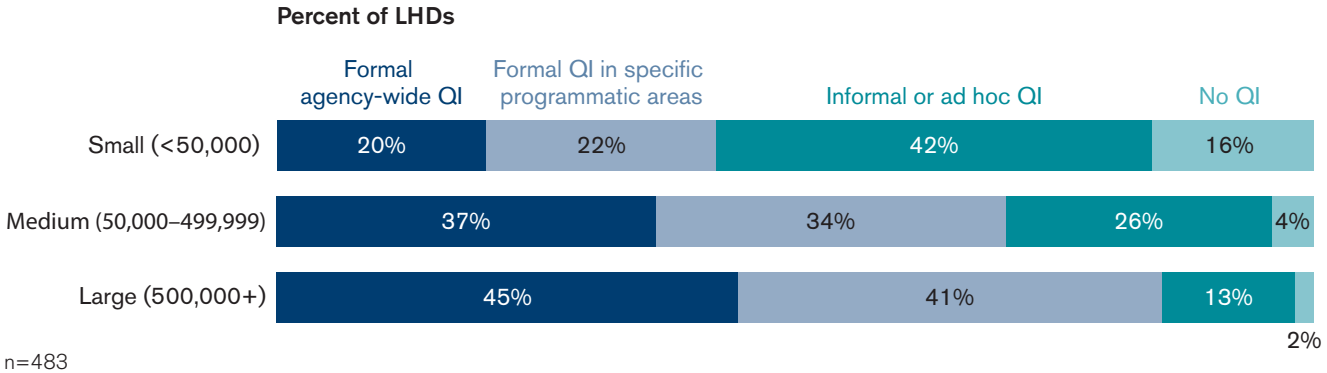
Level of quality improvement (QI) implementation over time



- In 2016, 54% of LHDs were engaged in formal QI; half of them report formal agency-wide QI programs.
- Since 2010, the percentages of LHDs reporting informal or no QI have decreased, while the percentage of LHDs reporting formal QI programs has increased.
- Between 2013 and 2016, the percentage of LHDs engaged in formal QI (either agency-wide or in specific programmatic areas) did not change significantly. However, a larger proportion of LHDs participated in agency-wide QI in 2016 than in 2013.

FIGURE 10.2

Level of quality improvement (QI) implementation by size of population served

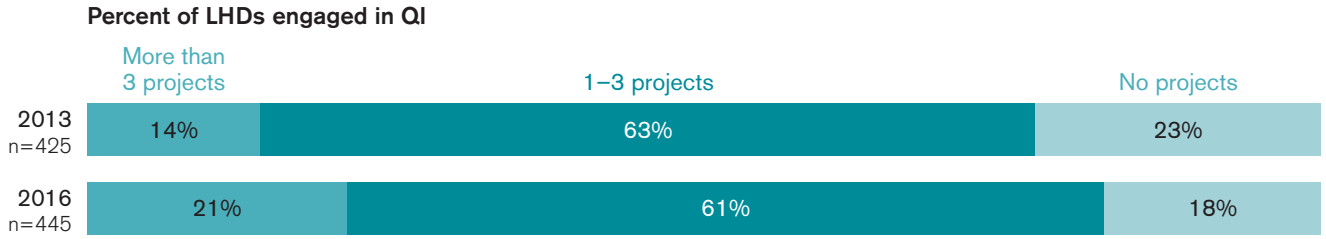


n=483

- Large LHDs are more likely to be involved in formal QI (agency-wide as well as in specific programmatic areas) than small or medium LHDs.
- Sixteen percent of small LHDs are not involved in any QI at their agency—formal or informal.

FIGURE 10.3

Number of quality improvement (QI) projects implemented in the past year over time



Excludes LHDs not invovled in QI activities.

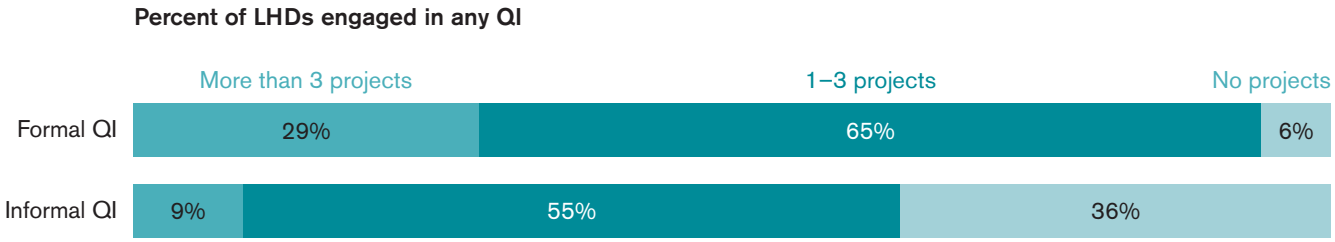
- Among LHDs involved in QI, most reported having implemented one to three formal QI processes in the past year, both in 2013 and 2016.
- The proportion of LHDs reporting more than three formal QI projects in the past year increased from 14% in 2013 to 21% in 2016.

Technical note

A systematic quality improvement initiative that includes an aim statement; a work plan with tasks, responsibilities, and timelines; intervention strategy/strategies; and measures for tracking change.

FIGURE 10.4

Number of quality improvement (QI) projects implemented in the past year by level of QI implementation



Excludes LHDs not invovled in QI activities.

n=445

- LHDs involved in formal QI are more likely to have implemented one or more formal QI projects and more than three times as likely to have implemented more than three formal QI projects as LHDs involved in only informal QI at their agency.

Technical note

A systematic quality improvement initiative that includes an aim statement; a work plan with tasks, responsibilities, and timelines; intervention strategy/strategies; and measures for tracking change.

FIGURE 10.5

Quality improvement (QI) elements used in QI efforts in the past year by size of population served

	Among LHDs involved in any QI at their agency	Size of population served		
		Small (<50,000)	Medium (50,000–499,999)	Large (500,000+)
Setting measurable objectives	73%	67%	81%	89%
Obtaining baseline data	69%	60%	82%	82%
Identifying root causes	54%	48%	58%	77%
Mapping a process	45%	37%	53%	77%
Analyzing results of the test	37%	27%	50%	62%
Testing effects of intervention	36%	28%	45%	62%
Formally adopting a tested intervention	28%	19%	39%	50%
None of the above	12%	15%	8%	5%

Excludes LHDs not invovled in QI activities.

n=444

- Most LHDs involved in QI set measurable objectives (73%) or obtain baseline data (69%) as a part of their QI efforts.
- However, only 37% analyze results of a test, 36% test effects of an intervention, and 28% formally adopt a tested intervention.
- Small LHDs are less likely to use any of these QI elements than medium and large LHDs.

FIGURE 10.6

Elements of an agency-wide quality improvement (QI) program currently in place at LHD by level of QI Implementation

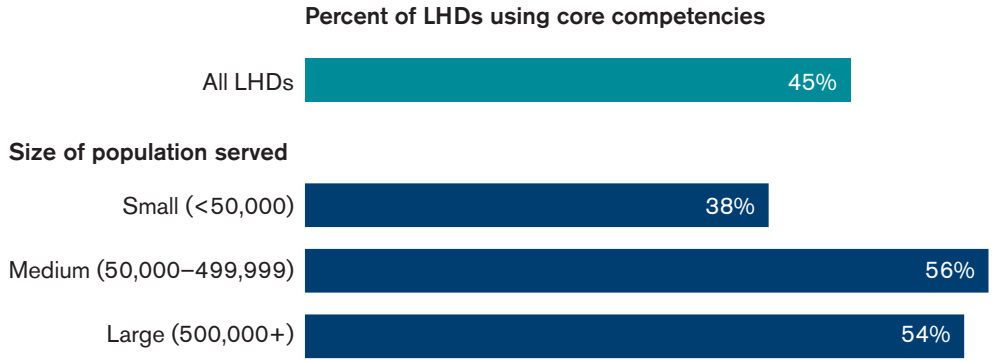
	All LHDs involved in QI	Level of QI implementation	
		Formal QI	Informal QI
Leadership dedicates resources for QI	44%	60%	18%
QI resources and training offered on ongoing basis	43%	54%	26%
Use performance data to drive improvement efforts	40%	54%	17%
Staff member with dedicated time	35%	50%	14%
QI Council	33%	50%	9%
Agency-wide QI plan	30%	46%	7%
QI incorporated into performance appraisals	28%	37%	13%
QI incorporated into job descriptions	26%	34%	14%
None of the above	18%	5%	39%

n=443

- More than two in five LHDs have leadership that dedicates resources for QI (44%) and have QI resources and trainings offered on an ongoing basis at their agency (43%). Fewer LHDs have QI incorporated into performance appraisals (28%) or job descriptions (26%).
- Few LHDs reporting informal QI have these elements in place at their LHD. Offering QI resources and training is the only element reported by more than 25% of LHDs with informal QI programs.

FIGURE 10.7

Any use of core competencies for public health professionals by size of population served



n=462

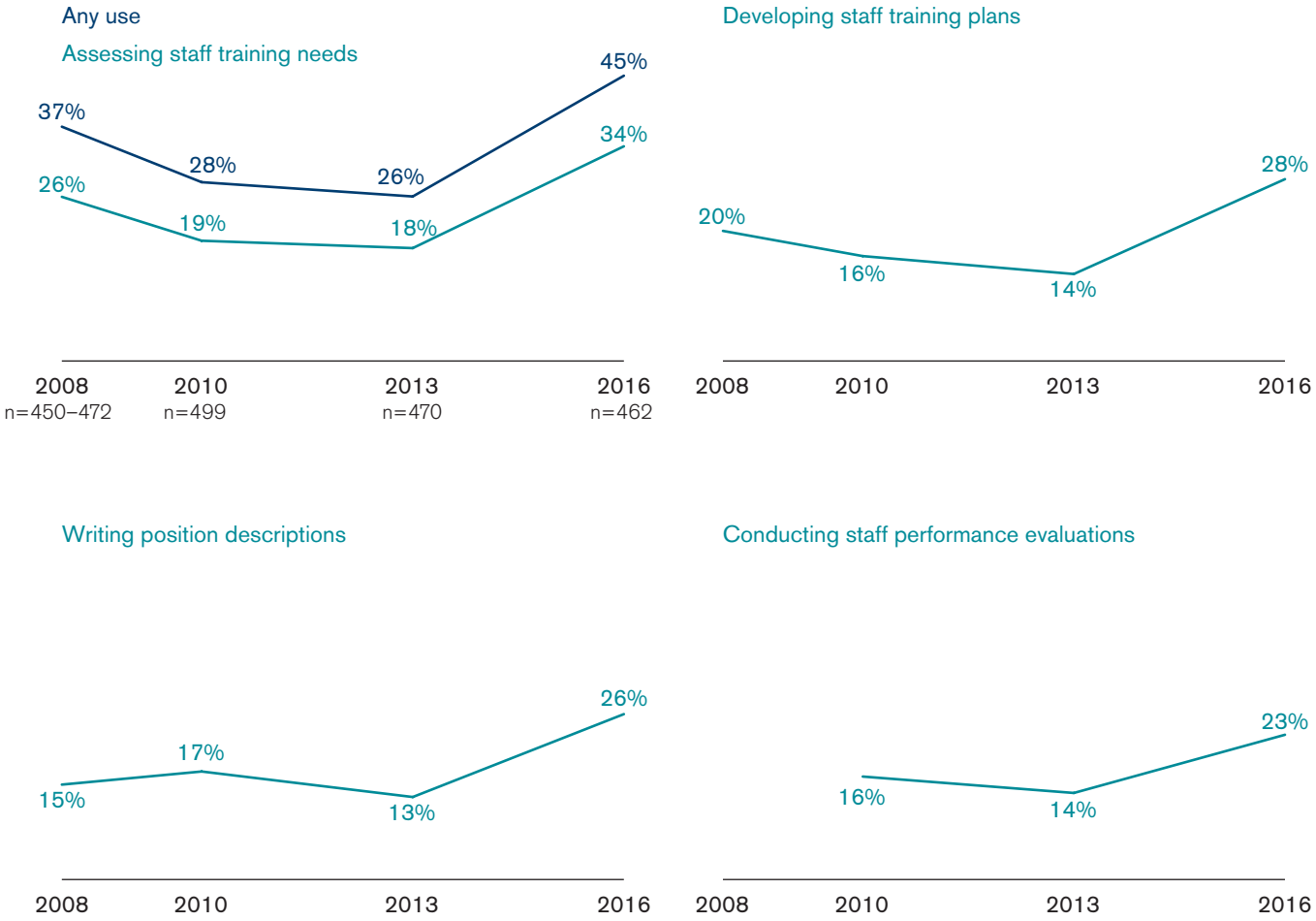
- Almost half (45%) of LHDs have used the core competencies in their workforce development programs.
- Medium and large LHDs are more likely to have used the core competencies than small LHDs.

Technical note

The Core Competencies for Public Health Professionals (developed by the Council on Linkages between Academia and Public Health Practice) are a consensus set of skills for the broad practice of public health. The Core Competencies can provide a framework for workforce development planning and action. More information is available at www.phf.org/link/corecompetencies.htm.

FIGURE 10.8

Use of core competencies for public health professionals over time



- After several years of declining use, more LHDs reported using the core competencies in some way to support their workforce development effort. The percentage of LHDs using the core competencies in some way increased from 26% in 2013 to 45% in 2016 (a 73% increase).
- In particular, the percent of LHDs developing staff training plans and writing position descriptions doubled in 2016 compared to 2013.

Technical note

Core Competencies for Public Health Professionals developed by the Council on Linkages (www.phf.org/link/corecompetencies.htm).

CHAPTER

11

Public Health Policy

This chapter includes the following:

- Local health department (LHD) policy development, including social determinants of health; tobacco, alcohol, or other drugs; and obesity or chronic disease.
- Land use planning.
- Health impact assessments.
- Public health ordinances and regulations.
- Addressing health disparities.
- Access to health care services.

FIGURE 11.1

Involvement in policy areas in the past two years by size of population served

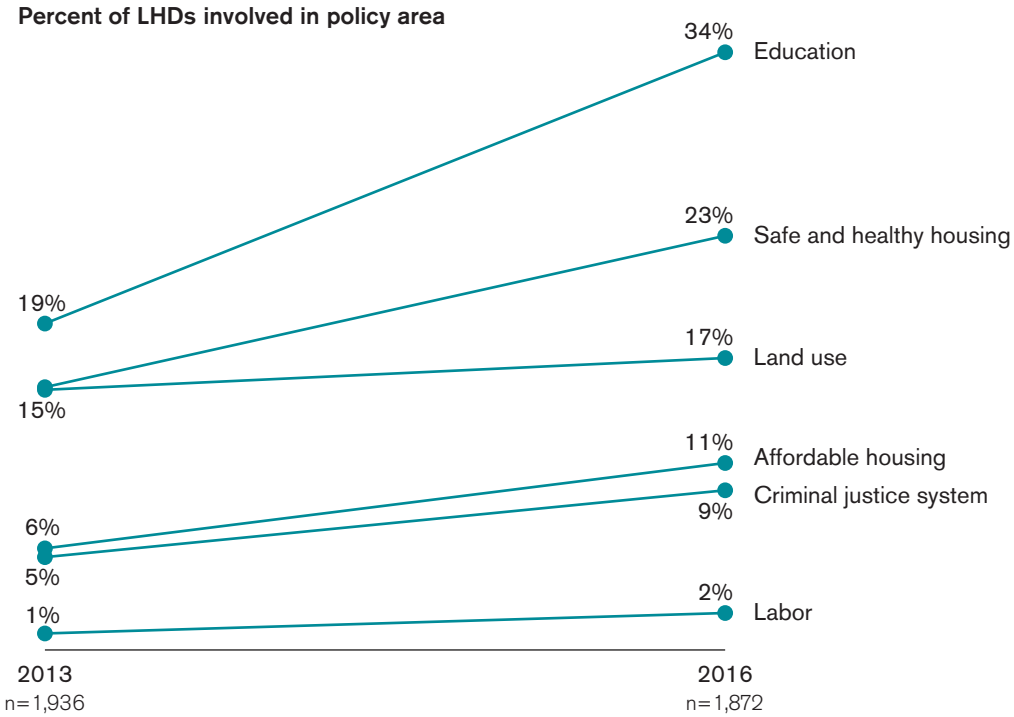
	All LHDs	Size of population served		
		Small (<50,000)	Medium (50,000–499,999)	Large (500,000+)
Tobacco, alcohol, or other drugs	74%	72%	78%	81%
Emergency preparedness and response	72%	73%	70%	75%
Infectious disease (e.g., vaccination)	68%	66%	68%	79%
Food safety	57%	53%	62%	67%
Obesity/chronic disease	55%	48%	62%	82%
Waste, water, or sanitation	43%	40%	47%	46%
Animal control or rabies	41%	38%	45%	49%
Education	34%	33%	35%	40%
Oral health	31%	27%	35%	44%
Injury or violence prevention	29%	26%	32%	51%
Mental health	27%	22%	36%	40%
Funding for access to health care	27%	21%	36%	44%
Safe and healthy housing	23%	19%	28%	40%
Body art	18%	15%	23%	23%
Land use	17%	12%	21%	33%
Affordable housing	11%	8%	13%	21%
Occupational health and safety	10%	9%	10%	15%
Criminal justice system	9%	5%	14%	20%
Labor	2%	2%	2%	9%
None	7%	8%	6%	3%

n=1,872

- Over 90% of LHDs report involvement in at least one policy area during the past two years.
- LHDs most often report involvement in policies related to tobacco, alcohol, or other drugs (74%), emergency preparedness and response (72%), and infectious disease (68%).
- Large LHDs are more likely to be involved in all policy areas than small LHDs and this difference is greater for areas that relate to the social determinants of health than for other health-related areas. For example, large LHDs are more than twice as likely as small LHDs to be involved in policy activities related to affordable housing, access to health care, and safe and healthy housing.

FIGURE 11.2

Involvement in policy areas related to social determinants of health over time



- Since 2013, a larger proportion of LHDs have been involved in policy areas related to the social determinants of health. LHDs reporting involvement in policy activities related to education and safe and healthy housing increased by 15 and 8 percentage points, respectively.
- LHD involvement in land use and labor policy areas has also increased among LHDs since 2013 but only by a few percentage points.

FIGURE 11.3

Involvement in policy areas related to tobacco, alcohol, or other drugs in the past two years by size of population served

		Size of population served		
	All LHDs	Small (<50,000)	Medium (50,000–499,999)	Large (500,000+)
Smoke-free indoor air (e.g., workplace, multi-unit residential)	57%	52%	61%	76%
Smoke-free outdoor air (e.g., parks, beaches, playgrounds, sporting events)	44%	41%	49%	57%
Reducing sale of tobacco to minors	42%	39%	43%	59%
Regulating e-cigarettes or other electronic smoking devices	38%	34%	43%	52%
Reducing exposure to alcohol or tobacco advertising	25%	24%	25%	35%
Increasing use of medications to prevent drug overdose (e.g., Naloxone)	22%	15%	32%	42%
Reducing alcohol or drug impaired driving	16%	15%	16%	18%
Raising cigarette taxes	12%	9%	13%	24%
Increasing access to clean syringes	9%	5%	12%	26%
Diverting certain drug offenders into treatment rather than incarceration	8%	5%	11%	22%
Raising alcohol taxes	2%	2%	2%	4%

n=1,827

- Over one-third of all LHDs (38%) and over half of large LHDs (52%) were involved in policies related to e-cigarette use in the past two years.
- More than one-fifth (22%) of all LHDs (and 42% of large LHDs) were involved in policies to increase use of medications to prevent drug overdose, such as Naloxone.
- Large LHDs are more likely to be involved in these policy areas than small LHDs, especially areas related to drug abuse. For example, large LHDs are almost three times as likely as small LHDs to be involved in policy activities related to increasing access to clean syringes and diverting certain drug offenders into treatment rather than incarceration.

FIGURE 11.4

Involvement in policy areas related to obesity or chronic disease in the past two years by size of population served

	All LHDs	Size of population served		
		Small (<50,000)	Medium (50,000–499,999)	Large (500,000+)
Policies to promote breastfeeding	39%	32%	47%	67%
School or child care policies that encourage physical activity	35%	29%	42%	61%
School or child care policies that reduce availability of unhealthy foods	32%	25%	40%	60%
Increasing retail availability of fruits and vegetables	28%	19%	39%	57%
Community level urban design and land use policies to encourage physical activity	26%	17%	37%	58%
Expanding access to recreational facilities	25%	20%	31%	47%
Active transportation options	18%	11%	26%	46%
Nutritional labeling	9%	7%	10%	23%
Fiscal policies to decrease consumption of unhealthy foods or beverages	6%	4%	8%	20%
Limiting fast food outlets	1%	1%	2%	4%

n=1,810

- More than one-third of LHDs are involved in policies to promote breast-feeding (39%) and school or child care policies that encourage physical activity (35%).
- Few LHDs are involved in fiscal policies to decrease consumption of unhealthy foods or beverages (6%) or efforts to limit fast food outlets (1%).
- Large LHDs are more than twice as likely as small LHDs to be involved in each of these policy areas.

FIGURE 11.5

Involvement over time in land use planning activities in the past year over time

	2008	2016
Healthy eating, active living		
Access to healthy food resources	35%	45%
Safe, convenient walking or biking access	31%	41%
Safe routes to school	20%	25%
School locations encourage walking and biking	12%	10%
Connecting safe walking and biking routes with mass transit options	12%	17%
Road designs that support and encourage walking and biking	12%	14%
Access to or protection of recreation areas		25%
Zoning		
Use of school grounds for other community activities	22%	20%
Discourage the location of alcohol sales within neighborhoods	9%	6%
Neighborhoods that meet life needs without car use	7%	5%
Ecological		
Ecological waste management	11%	8%
Green building, ecological sustainability	10%	6%
Protection of productive agricultural land	7%	3%
Urban remediation	3%	3%
None of the above	38%	30%
	n=431–433	n=486

- Many LHDs are involved in increasing access to healthy food resources (45%) and ensuring safe, convenient walking or biking access (41%). The percentage of LHDs involved in these activities increased by 10 percentage points between 2008 and 2016.
- Few LHDs are involved in land use planning activities that focus on ecology, such as urban remediation (3%) or protecting productive agricultural land (3%). The percentages of LHDs involved in these activities were unchanged or declined between 2008 and 2016.

FIGURE 11.6

Involvement in land use planning activities in the past year by size of population served

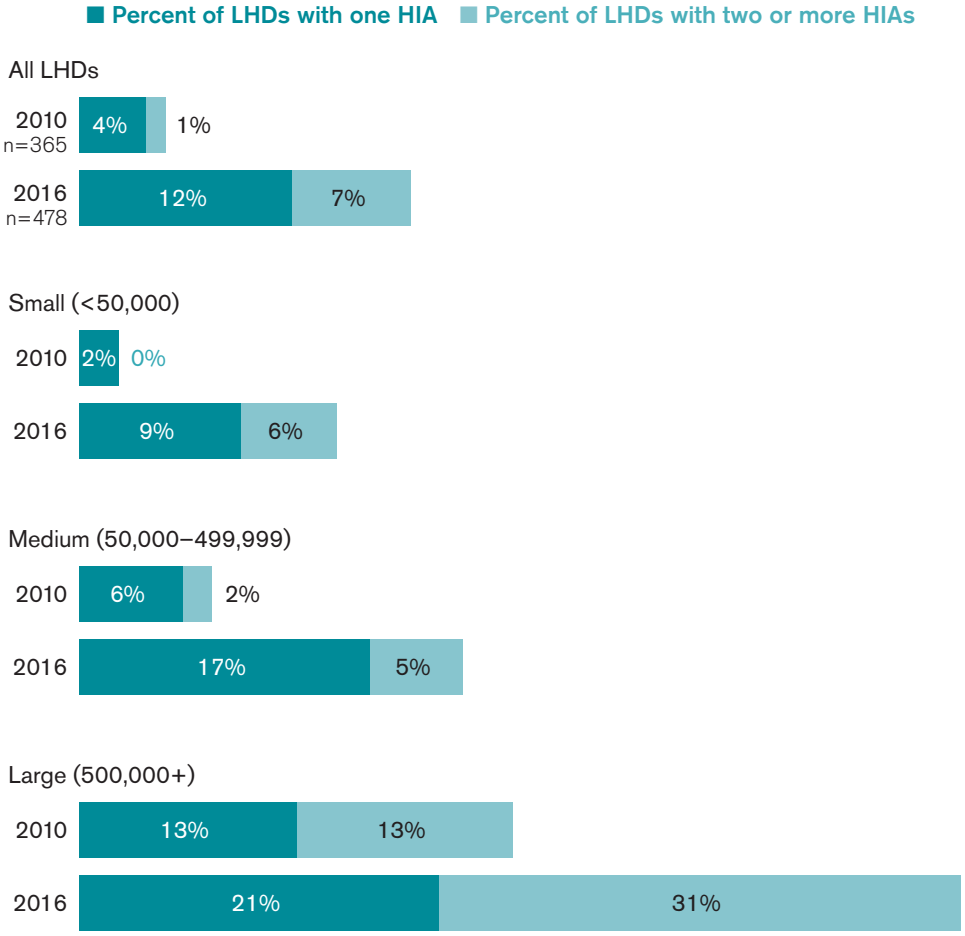
	All LHDs	Size of population served		
		Small (<50,000)	Medium (50,000–499,999)	Large (500,000+)
Healthy eating, active living				
Access to healthy food resources	45%	35%	57%	78%
Safe, convenient walking or biking access	41%	34%	49%	64%
Access to or protection of recreation areas	25%	20%	31%	53%
Safe routes to school	25%	18%	33%	58%
Connecting safe walking and biking routes with mass transit options	17%	11%	22%	49%
Road designs that support and encourage walking and biking	14%	7%	20%	48%
School locations encourage walking and biking	10%	7%	15%	24%
Zoning				
Use of school grounds for other community activities	20%	19%	19%	45%
Discourage the location of alcohol sales within neighborhoods	6%	4%	8%	9%
Neighborhoods that meet life needs without car use	5%	3%	6%	24%
Ecological				
Ecological waste management	8%	5%	11%	19%
Green building, ecological sustainability	6%	3%	10%	22%
Protection of productive agricultural land	3%	3%	2%	8%
Urban remediation	3%	2%	4%	13%
None of the above	30%	37%	21%	9%

n=486

- Large LHDs are more likely to be involved in land use planning activities than small LHDs. Over 20% of large LHDs are involved in promoting green buildings and neighborhoods that meet life needs without car use, compared with 3% of small LHDs.
- Over half of large LHDs are involved in activities focused on increasing access to healthy food resources (78%), walking or biking routes (64%), and recreation areas (53%).

FIGURE 11.7

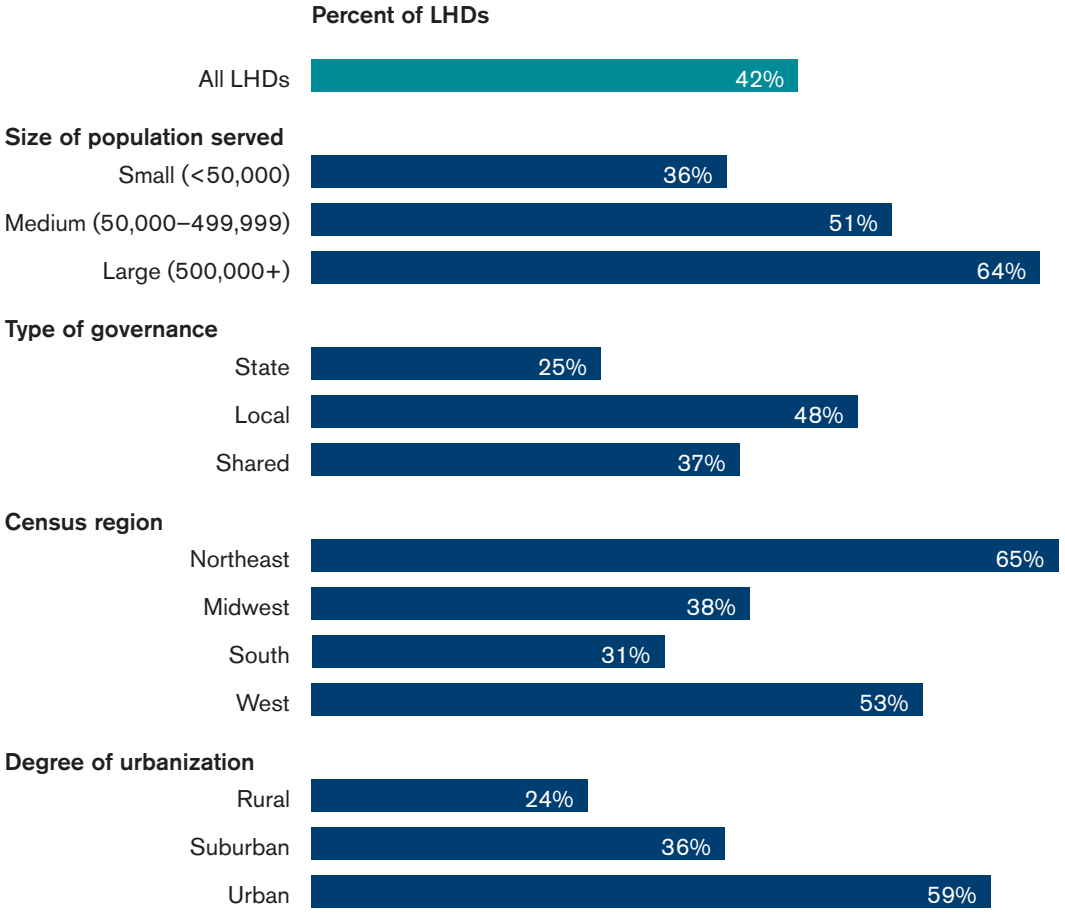
Number of health impact assessments (HIAs) completed in the past two years over time and by size of population served



- Nearly one in five LHDs were involved in at least one HIA in the past two years.
- Half of large LHDs were involved in at least one HIA in the past two years, compared to 22% of medium LHDs and 15% of small LHDs.
- A larger proportion of LHDs completed at least one HIA in the past two years in 2016 (19%) than in 2010 (5%).

FIGURE 11.8

Involvement in developing new or revising existing ordinances in the past two years by LHD characteristics



n=1,869

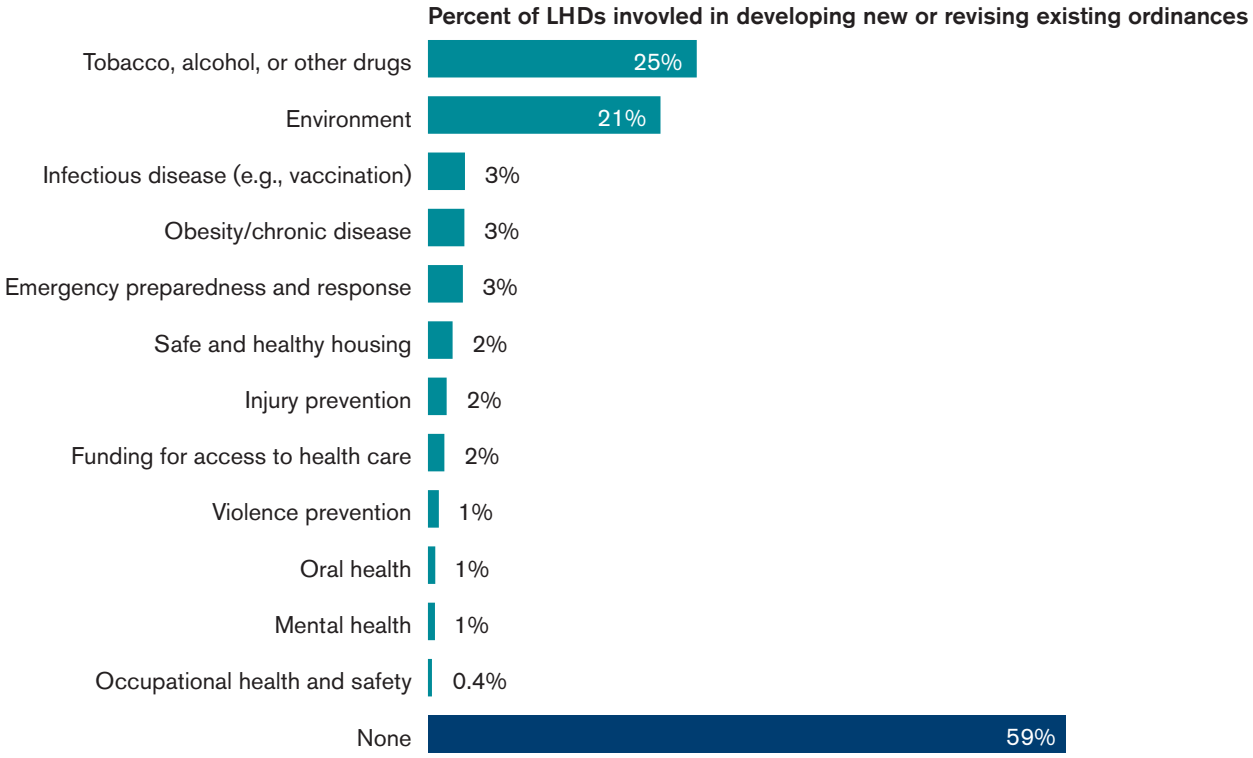
- Forty-two percent of LHDs were involved in developing a new or revising an existing public health ordinance or regulation in their jurisdiction during the past two years.
- Large LHDs are more likely to be involved in new or revised ordinances or regulations (64%) than medium (51%) or small (36%) LHDs.
- LHDs governed by state authorities are less likely to be involved in new or revised ordinances or regulations (25%) than LHDs governed by local authorities (48%) or LHDs with shared governance (37%).
- LHDs in the Northeast (65%) and West (53%) are more likely to be involved in new or revised ordinances or regulations than LHDs in the Midwest (38%) or South (31%).
- LHDs in urban areas (59%) are more likely to be involved in new or revised ordinances than LHDs in suburban (36%) or rural (24%) areas.

Technical note

NACCHO classified each LHD into urban (1–3), suburban (4–7), or rural (8–10) categories based on U.S. Department of Agriculture Rural Urban Commuting Area codes.

FIGURE 11.9

Topic areas of new or revised ordinances in the past two years



n=1,864

- One-quarter (25%) of LHDs report new or substantially revised ordinances or regulations related to tobacco, alcohol, or other drugs and one fifth (21%) LHDs report new or substantially revised ordinances or regulations related to the environment in the past two years.
- Few LHDs (3% or less) report new or substantially revised ordinances or regulations related to other topic areas.

FIGURE 11.10

Engagement in addressing health disparities in the past two years by size of population served

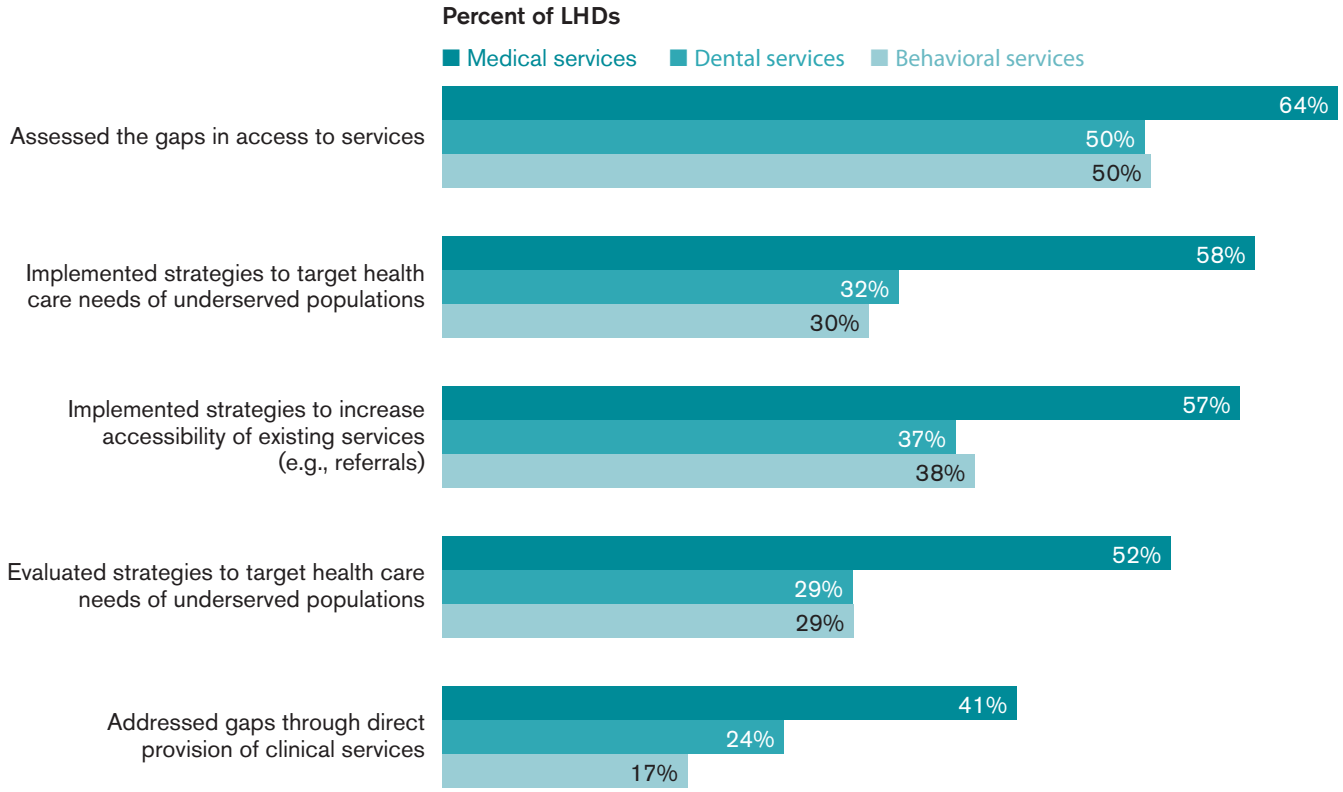
	All LHDs	Size of population served		
		Small (<50,000)	Medium (50,000–499,999)	Large (500,000+)
Supporting community efforts to change the causes of health disparities	63%	55%	74%	90%
Describing health disparities in their jurisdiction using data	61%	50%	75%	89%
Educating elected or appointed officials about health disparities and their causes	52%	46%	58%	76%
Training their workforce on health disparities and their causes	51%	42%	62%	82%
Offering staff training in cultural/linguistic competency	49%	41%	57%	75%
Prioritizing resources and programs specifically for the reduction in health disparities	39%	32%	48%	62%
Recruiting workforce from communities adversely impacted by health disparities	24%	16%	33%	53%
Taking public policy positions on health disparities (through testimony, written statements, media, etc.)	16%	12%	20%	39%
Conducting original research that links health disparities to differences in social or environmental conditions	12%	8%	17%	25%

n=470

- Almost two-thirds of LHDs (63%) and almost all large LHDs (90%) are supporting community efforts to change the causes of health disparities.
- Similarly, 61% of all LHDs and 89% of large LHDs are describing health disparities in their jurisdictions using data.
- Large LHDs are more likely to be involved in these activities related to health disparities than medium or small LHDs.

FIGURE 11.11

Engagement in assuring access to health care services in the past year

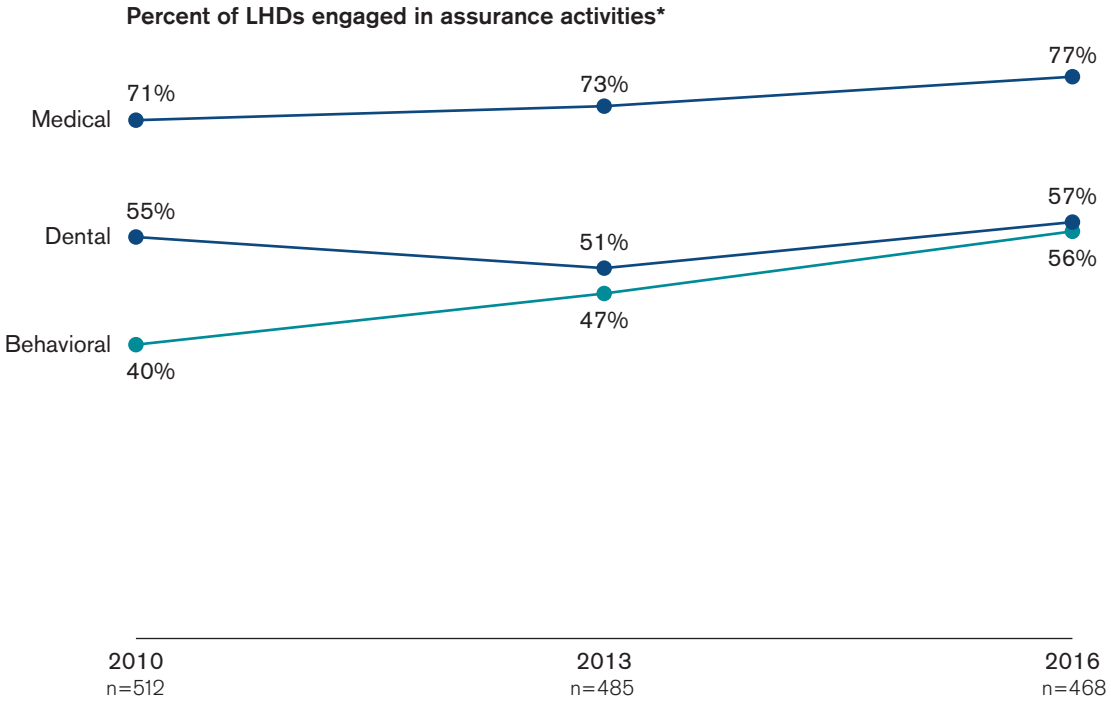


n=452–458

- LHDs are more likely to be engaged in assuring access to medical services than dental and behavioral services. For example, 58% of LHDs implemented strategies to target medical health care needs of underserved populations, while 32% implemented strategies to target dental health care needs and 30% to target behavioral health care needs.
- LHDs were least likely to report assuring access through direct provision of clinical services.

FIGURE 11.12

Engagement over time in assuring access to health care services in the past year



*Percent of LHDs reporting providing at least one of the activities listed in Figure 11.11.

- The proportion of LHDs engaged in assuring access to behavioral health care services increased from 40% in 2010 to 56% in 2016, more than the increases seen in either medical or dental health care services.

CHAPTER 12

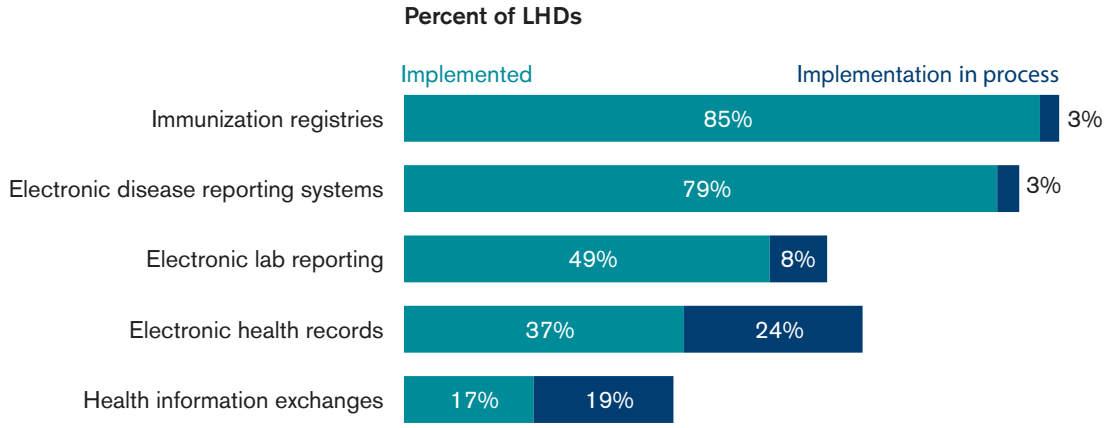
Informatics

This chapter includes the following:

- Level of implementation in information technology systems at local health departments (LHDs).
- Use of communication channels for routine or emergency response communications.

FIGURE 12.1

Current level of activity in information technology systems

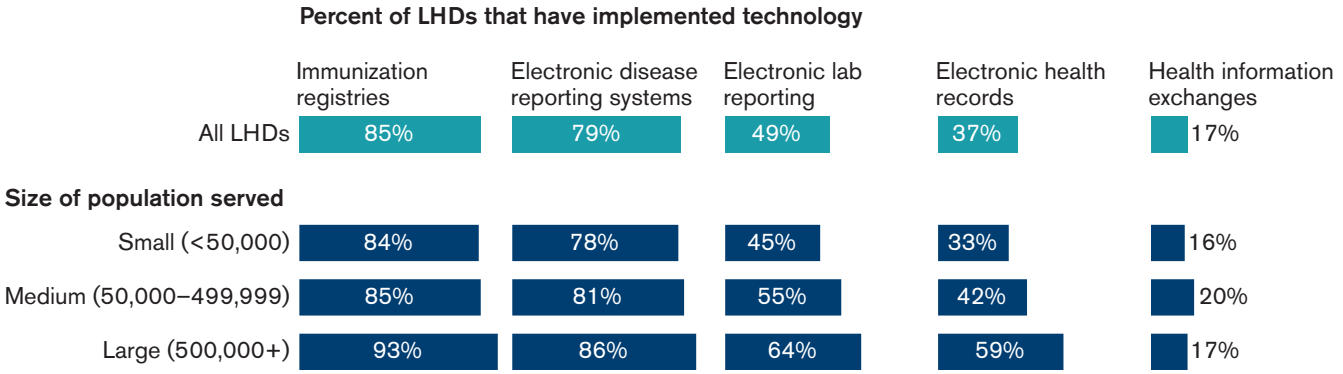


n=459

- Most LHDs use immunization registries and electronic disease reporting systems; LHDs are less likely to use electronic lab reporting, electronic health records, and health information exchanges.
- Relatively large proportions of LHDs are in the process of implementing electronic health records (24%) and health information exchanges (19%).

FIGURE 12.2

Current implementation in information technology systems by size of population served

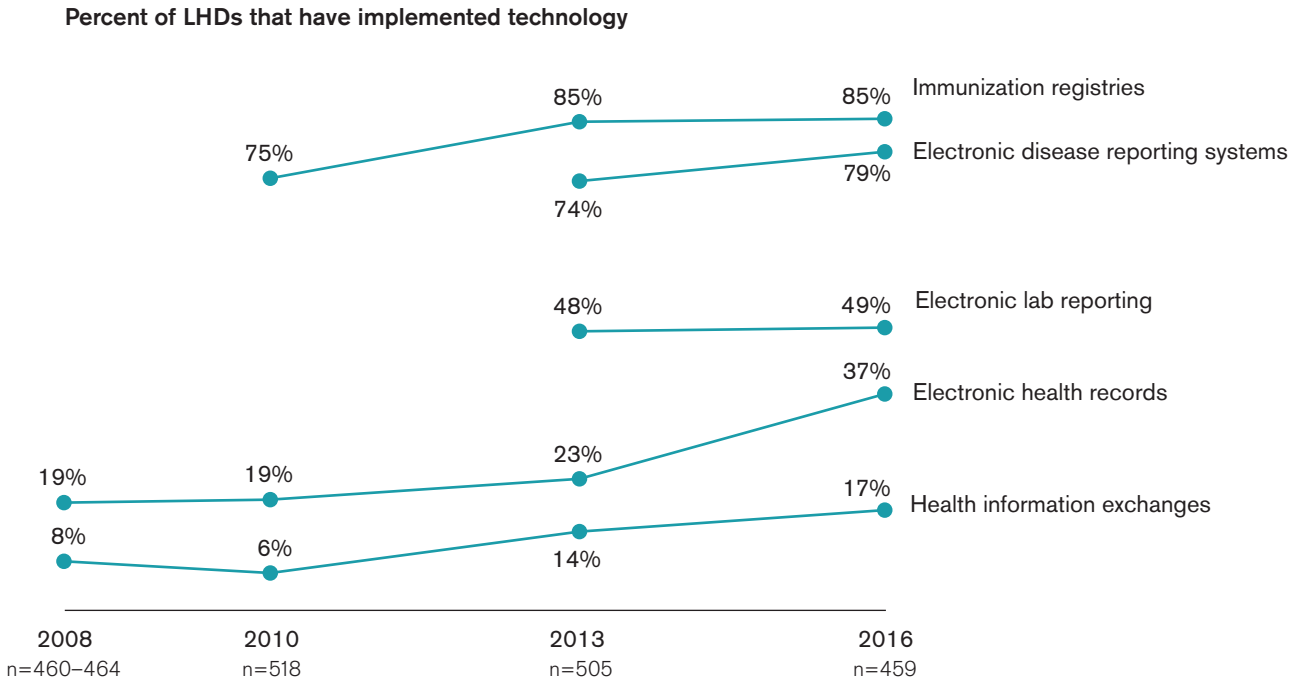


n=459

- With the exception of health information exchanges, large LHDs are more likely to have implemented most of these technology systems than LHDs serving smaller populations.
- The difference in implementation between LHDs serving small and large jurisdictions are greatest for electronic health records and electronic lab reporting.

FIGURE 12.3

Implementation of information technology systems over time



- Use of information technology systems has increased since 2008, although some have increased more than others. For example, use of electronic health records increased by 14 percentage points between 2013 and 2016, while use of immunization registries and electronic lab reporting showed very little change during that time period.

FIGURE 12.4

Use of communication channels for routine or emergency response communications

	Any use	Routine use	Use for emergency response
Print media	91%	87%	49%
LHD website	78%	76%	49%
Broadcast media	69%	61%	49%
Facebook	65%	63%	39%
E-mail	64%	60%	35%
Fax broadcast/fax blast	44%	30%	32%
Text messaging	42%	34%	15%
Automated phone calling	40%	16%	29%
Twitter	28%	27%	16%
Hotline or call center	19%	6%	16%
Video sharing sites	10%	9%	1%
LinkedIn	6%	6%	1%
Blogs	6%	5%	1%
Photo sharing sites	4%	4%	1%
None	2%	3%	19%

n=454–466

- LHDs most often use print media and websites and use them more often for routine than emergency communications.
- LHDs are more likely to use automated phone calling and a hotline or call center for emergency communications than for routine communications.
- Few LHDs use LinkedIn (6%), blogs (6%), and photo sharing sites (4%) for any use.

FIGURE 12.5

Any use of communication channels by size of population served

		Size of population served		
	All LHDs	Small (<50,000)	Medium (50,000–499,999)	Large (500,000+)
Print media	91%	89%	94%	91%
LHD website	78%	72%	87%	91%
Broadcast media	69%	64%	78%	85%
Facebook	65%	62%	69%	76%
E-mail	64%	57%	75%	75%
Fax broadcast/fax blast	44%	33%	61%	63%
Text messaging	42%	38%	46%	53%
Automated phone calling	40%	36%	48%	33%
Twitter	28%	17%	40%	74%
Hotline or call center	19%	10%	30%	66%
Video sharing sites	10%	3%	18%	41%
LinkedIn	6%	5%	8%	10%
Blogs	6%	4%	6%	16%
Photo sharing sites	4%	1%	9%	13%
None	2%	2%	1%	2%

n=466

- With the exception of automated phone calling, large LHDs are more likely to use these communication channels than small LHDs.
- In particular, a much greater proportion of large LHDs use a hotline or call center, Twitter, and video sharing sites (such as YouTube) to communicate with the public. Differences in use of print media and LinkedIn by small and large LHDs are much smaller.

FIGURE 12.6

Any use of communication channels by type of governance

		Type of governance		
	All LHDs	State	Local	Shared
Print media	91%	86%	92%	97%
LHD website	78%	46%	86%	85%
Broadcast media	69%	53%	73%	77%
Facebook	65%	44%	72%	58%
E-mail	64%	43%	69%	70%
Fax broadcast/fax blast	44%	25%	47%	62%
Text messaging	42%	30%	45%	39%
Automated phone calling	40%	35%	41%	40%
Twitter	28%	13%	32%	23%
Hotline or call center	19%	10%	21%	28%
Video sharing sites	10%	4%	11%	13%
LinkedIn	6%	4%	7%	3%
Blogs	6%	0%	7%	4%
Photo sharing sites	4%	1%	5%	4%
None	2%	4%	1%	0%

n=466

- State-governed LHDs are less likely to use nearly all of these communication channels than LHDs with local or shared governance.
- Locally governed LHDs are more likely to use Facebook and Twitter than LHDs with state or shared governance.
- LHDs governed by both state and local authorities (shared governance) are more likely to use fax broadcasts and print and broadcast media than LHDs with state or local governance.

FIGURE 12.7

Any use of communication channels by urbanization

	All LHDs	Degree of urbanization	
		Urban	Non-urban
Print media	91%	87%	93%
LHD website	78%	84%	74%
Broadcast media	69%	70%	69%
Facebook	65%	65%	65%
E-mail	64%	74%	57%
Fax broadcast/fax blast	44%	50%	40%
Text messaging	42%	39%	43%
Automated phone calling	40%	51%	33%
Twitter	28%	43%	18%
Hotline or call center	19%	35%	10%
Video sharing sites	10%	18%	5%
LinkedIn	6%	7%	5%
Blogs	6%	12%	2%
Photo sharing sites	4%	10%	1%
None	2%	2%	1%

n=466

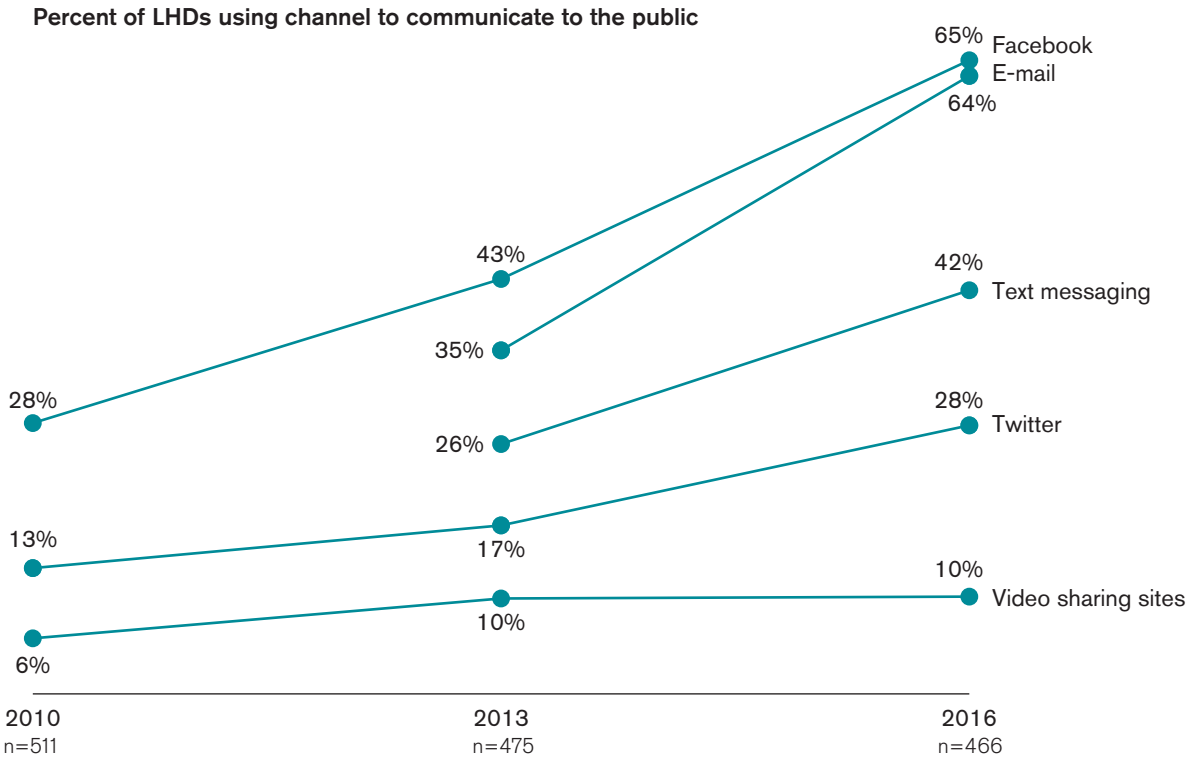
- LHDs in urban areas are more likely to use some of these communication channels. For example, half of LHDs (51%) in urban areas use automated phone calling while only one-third (33%) of LHDs in non-urban areas use this communication channel.
- Similar percentages of LHDs in urban and non-urban areas use broadcast media, Facebook, and text messaging.

Technical note

NACCHO classified each LHD into urban (1–3) or non-urban (4–10) categories based on U.S. Department of Agriculture Rural Urban Commuting Area codes.

FIGURE 12.8

Use of communication channels over time



- LHD use of newer technology to communicate with the public has increased since 2010. For instance, use of Facebook increased dramatically from 28% of LHDs in 2010 to 65% in 2016.
- Use of video sharing sites (such as YouTube) increased from 6% in 2010 to 10% in 2013, but has not increased since.

Technical note

2010 Profile did not include questions about e-mail and text messaging.

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

The mission of the National Association of County and City Health Officials (NACCHO) is to be a leader, partner, catalyst, and voice with local health departments. Funding for this project was provided by the Centers for Disease Control and Prevention (under cooperative agreement 1U38OT000172-04) 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.

1100 17th St, NW, 7th Floor
Washington, DC 20036

P 202-783-5550
F 202-783-1583

www.naccho.org
profile@naccho.org