An Examination of Public Health Financing in the United States

Final Report

PRESENTED TO:

Office of the Assistant Secretary for Planning and Evaluation (ASPE), Department of Health and Human Services (HHS)

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Executive Summary

Introduction

Renewed interest in public health financing has been driven by increased demands for accountability of public resources, recent state budget constraints resulting from the economic downturn, and shifting demands and expectations arising from the passage of the Patient Protection and Affordable Care Act (ACA). Despite these drivers, there is limited understanding of public health financing due to the lack of consistent tracking of public health funding in states and localities throughout the United States (U.S.). The gap in available public health financing data affects the ability of public health practitioners, researchers, and policymakers to define effective and efficient decision-making processes for public health resource allocations. In addition, deficiencies in public health funding data hinder the ability of stakeholders to identify the key roles of public health in maintaining a healthy nation and their ability to quantify the economic impact of public health.

Methodology/Key Research Questions

To articulate the current challenges posed by the limited availability of public health financing data, and the anticipated policy impacts on the ways that public health is funded, NORC at the University of Chicago (NORC) was contracted by the Office of the Assistant Secretary for Planning and Evaluation (ASPE) of the United States Department of Health and Human Services (HHS) to conduct a mixed-methods study that included an environmental scan, analysis of financial data collected from select states, interviews with expert consultants, and site visits to seven states (Alabama, Arkansas, California, Georgia, Massachusetts, North Dakota, and Oregon). The project sought to address a number of key research questions around expenditures and revenues for public health in the U.S., financing of select public health program areas, how health departments maximize the resources they have, and challenges and implications moving forward.

Findings

Below, we highlight key findings grouped by topic area and spanning our qualitative and quantitative analyses.

Public Health Expenditures

- Federal expenditures for public health make up a very small proportion of federal health-related funding. Annual federal public health expenditures average only 0.08 percent of Gross Domestic

Product (GDP), 1.5 percent of federal health-related expenditures, and 0.5 percent of total health-related US public and private sector expenditures.[1] The largest proportion of federal health expenditures supports the payment and provision of health care services.

- Trends in federal expenditures for public health show variance in funding. Federal expenditures for public health often ebb and flow based upon emerging needs, such as increases in emergency preparedness funding following the 2001 terrorist attacks on September 11 or pandemic flu funding following H1N1.
- Tracking state and local public health expenditures is complicated by differences in definitions about the scope of public health and the programs and services it includes.

Source of Funding for Public Health

- Public health faces significant challenges due to tightening budgets and unpredictable funding streams, and health departments have suffered significant cuts in the wake of the recent financial downturn. In fact, all seven case study health departments have seen their budgets reduced in recent years, in large part due to the economic downturn. While some of the most dramatic decreases came from diminished state revenue and reductions in tobacco Master Settlement Agreement allocations, federal funding has also decreased, including categorical funding and block grants. This shift has resulted in program reductions, program cuts, and layoffs—17% of non-clinical staff were laid off between 2008 and 2011 in one of the health departments visited as part of this study.
- Generally, state health departments have received the largest percentage of their revenue from federal sources, a smaller but significant percentage from state sources, and much smaller percentages from fees and fines and other sources. As state General Funds have diminished due to the recession, federal funding has become a larger percentage of health departments' total revenue. For five of the health departments visited, the percentage of federal funding ranged from 57.5% to 74.7% of their total revenue. It is important to note that federal funding has not grown to make up for decreased state funding; in fact, federal funding has also decreased. However, federal funding has decreased at a slower rate than state funding and therefore has grown as a percentage of total public health revenue.
- Health departments generally receive the largest percentage of their federal revenue from the U.S. Department of Agriculture (USDA), followed by the Centers for Disease Control and Prevention (CDC), the Health Resources and Services Administration (HRSA), the Environmental Protection

[1] Kinner, K., & Pellegrini, C. (2009). Expenditures for Public Health: Assessing Historical and Prospective Trends. American Journal of Public Health, 99(10), 1780-91.

Agency (EPA), the Food and Drug Administration (FDA), and finally the Department of Homeland Security (DHS). Some health departments reported receiving no funding from DHS.

- State General Funds are an important source of revenue for state health departments, as they typically serve as a flexible source of funding. State health departments in this study tended to use General Fund money to finance areas not covered by categorical funding streams (such as infrastructure activities and administrative costs), or to support programs whose costs were higher than their dedicated revenues.

Allocating Funds to Public Health Programs and Services

- For this study, health departments reported on their expenditures for a variety of program areas, including: administration, improving consumer health, infectious disease, chronic disease, quality of health services, all hazards preparedness and response, environmental protection, health laboratory, health data, vital statistics, and injury prevention. We also asked health departments to report detailed financing information on their maternal and child health and tobacco programs.
- There was considerable variation in funding for the same program areas across different state health departments. This variation was true even for the program areas that are traditional or key public health functions, such as infectious disease.
- We also found that the programs and services offered by state and local health departments vary across jurisdictions in ways that can affect expenditures. For instance, unlike most states, the Massachusetts Department of Public Health operates the state's five public hospitals, each of which has considerable administrative and workforce costs, thereby skewing per capita expenditure findings.
- Allocation of funds can also depend on factors such as agency structure and workforce. For instance, the governmental public health system in Massachusetts consists of the state health department and 351 city and town-level autonomous local public health agencies. While some of these agencies, such as the Boston Public Health Commission, have a robust workforce and infrastructure, many operate on minimal or no funding, with a workforce as small as a single full-time individual. Therefore, rather than rely on the local health departments (LHDs) to deliver certain key public health services such as WIC, the Massachusetts Department of Public Health has chosen to contract with a myriad of organizations to provide these services.

Maximizing Available Resources for Public Health

- Medicaid can play a large role in funding public health services through reimbursement for outreach and enrollment services, as well as for coordination of care. Some health departments leverage Medicaid reimbursement more than others. For example, Oregon, which has the second highest Medicare and Medicaid revenues relative to their total revenue among the states we

visited, developed a robust third party billing system to help finance their immunization program. This model has been successful enough that CDC is encouraging and providing support for its replication in other states.

- Public health has also benefited from federal dollars such as those from the American Recovery and Reinvestment Act (ARRA). Even where ARRA funds were not directly accessed by the health department, their use in shoring up the budgets of other state agencies and programs was perceived to have helped mitigate potential cuts in state level funding to public health.
- As local, state and federal tax-based funding streams have declined during the recession, fees and fines (such as laboratory fees, vital records, registration and licensing, environmental and building inspections, and more) are becoming more important revenue sources for health departments. However, states reported that fee amounts often do not keep pace with rising program costs, and raising fees is challenging due to both state legislation requirements and the current political climate.

Future Considerations for Public Health Financing

- A lack of consistent terminology and clearly defined categories for data collection poses significant challenges to collecting public health data that can be easily compared across jurisdictions. For example, one state's staff explained that they do not use the term 'revenue' because they often receive funds which they do not have the authority to spend.
- State agency staff reported challenges in completing the data collection templates developed by NORC for the project even though they were modeled after the Association of State and Territorial Health Officials (ASTHO) Profile that they already complete. All of the health departments found at least portions of the data collection process challenging (for instance, collecting program specific financial data was reportedly difficult because data were not always found in a centralized place, while finding and confirming old data was reported as a challenge due to restructuring or archiving of financial information), and four of the seven health departments considered the process generally difficult.
- Billing and reimbursements are likely to play an increased role for many health departments as states face ongoing competing priorities and budget cuts. While third-party reimbursement can provide a significant source of additional revenue for health departments, their ability to bill Medicaid and other payers is contingent on factors such as knowledge of available programs and resources, as well as health department structure and the degree to which the state health department provides billable services.
- The ACA brings with it an expansion of benefits and health insurance coverage, including clinical preventive services such as vaccinations and screenings. With these changes, health

departments will need to determine patients' insurance coverage and bill for covered services. Opportunities to bill for services will be limited, however, as many key public health activities (e.g., investigations for outbreaks) will never be covered through insurance.

- Finally, case study participants expressed concern that policymakers may not realize the continuing need for public health services as the number of uninsured individuals is reduced. If funding streams such as the Title V Maternal and Child Health (MCH) Program and Block Grant (commonly called the MCH Block Grant) or Title X Family Planning program were eliminated or reduced as a result of universal coverage due to the ACA, it would significantly hinder the ability of health departments to provide necessary services to populations that remain in need.

Introduction

Public health financing refers to the resources required to deliver public health functions to populations, the impact of those resources on the health of those populations,[2] and the impact on the public health system as a whole. The public health system encompasses the state, local, tribal and territorial health departments, as well as the community-based organizations that provide public health services such as immunizations, environmental inspections, and tracking of communicable diseases, among others. The federal Department of Health and Human Services (HHS) provides a range of funding to the public health system, including states, territories, tribes, localities, and non-governmental organizations. Federal funding is passed to these grantees through grants and contracts. These grants and contracts are used to support the public health systems' provision of public health functions – especially the delivery of services by state and local public health agencies. In addition to federal resources, public health agencies receive funding from state and local sources including General Fund allocations, designated tax levies, and fees and fines.

Interest in public health financing is driven by increased demands for accountability of public resources, recent state budget constraints resulting from the economic downturn, and shifting demands and expectations arising from the passage of the Patient Protection and Affordable Care Act (ACA). The growing prominence of public health financing is demonstrated by its status as one of three topics addressed in 2012 by the Institute of Medicine's (IOM) Committee on Public Health Strategies to Improve Health.[3] Pointedly, this IOM report characterizes the United States (U.S.) public health financing structure as "broken." Understanding public health finance has been limited by the current systems for tracking public health funding. An approach to public health resource monitoring was in place from 1970 to 1995 that collected state public health financial data, as part of extensive federally-funded annual reports.[4] When funding for this program ended, however, it was never replaced, and public health financial data have been far less robust in the ensuing 17 years.

Gaps in available public health financing data affect the ability of public health practitioners, researchers, and policymakers to define effective and efficient decision-making processes for public health resource

[2] Honore, P. A., & Amy, B. W. (2007). Public Health Finance: Fundamental Theories, Concepts and Definitions. *Journal of Public Health Management and Practice*, 89-92.
[3] Committee on Strategies to Improve Public Health. (2012). *For the public's health: investing in a healthier future.* Washington, DC: The National Acadamies Press, Institute of Medicine. Retrieved April 13, 2013, from http://www.nap.edu/catalog.php?record_id=13268.
[4] Barry, M., & Bialek, R. (2004). Tracking our investments in public health: what have we learned? *Journal of Public Health Management and Practice, 10*(5), 383-392.

allocations. In addition, deficiencies in public health funding data hinder the identification of key roles public health plays in keeping our nation healthy and quantification of its economic impact. NORC at the University of Chicago (NORC) was contracted by the Office of the Assistant Secretary for Planning and Evaluation (ASPE) of the U.S. Department of Health and Human Services (HHS) to conduct a study to articulate the current challenges posed by the limited availability of public health financing data, and anticipate the impact of policy changes on the ways that public health is funded.

Methodology

For this project, NORC used a mixed-methods approach that included a comprehensive environmental scan, analysis of financing data collected from selected state health departments (SHDs) and local health departments (LHDs), interviews with expert consultants, and site visits to seven states (Alabama, Arkansas, California, Georgia, Massachusetts, North Dakota, and Oregon). To begin, the team contracted with the University of Kentucky to conduct a detailed environmental scan to help illustrate the public health financing landscape. The NORC team then conducted expert consultant interviews with representatives from national organizations to obtain a more complete picture of public health financing from a variety of perspectives. Based on the environmental scan, the expert consultant interviews, and consultation with ASPE, the seven states were chosen as case studies and one- to two-day site visits including semi-structured interviews were conducted with representatives from state and local health departments. Prior to each site visit, the NORC team asked state and local health departments to fill out templates to collect quantitative data about revenues and expenditures. The quantitative data analysis is presented in the first part of the report in a section titled “Public Health Financing in the Case Study States,” which includes state-specific data. These data are linked to specific states because they are publicly reported budgetary data. The qualitative data collected during interviews conducted as part of the site visits is presented in the second section titled “Key Site Visit Findings” and in order to maintain the confidentiality of our interviewees, does not refer to specific states or individuals by name. Each of the methods utilized for this study is described in further detail in the sections that follow.

The methodology and protocols used to complete this project were submitted to the NORC Institutional Review Board (IRB) (IRB00000967) and were approved on November 28, 2011 (IRB Protocol Number 111105 (6928).

Environmental Scan

The environmental scan was developed by the University of Kentucky National Coordinating Center for Public Health Services and Systems Research, in order to provide background information on the current

state of public health financing in the nation, including previous efforts undertaken to understand the various financing mechanisms that support the public health system. To develop the scan, the team searched commonly used databases, such as PubMed, for key words related to public health financing. Commonly used key word searches included terms such as "public health financing", "public health finance", "public health funding", and "public health expenditures and revenues", among others. To access materials outside of peer-reviewed literature, such as federal reports or white papers, the team used search engines such as Google and Scirus to review websites of relevant government agencies and foundations.

Expert Consultant Interviews

The NORC team conducted expert consultant interviews with public health professionals from national organizations in order to acquire input on the most effective means of gathering detailed information about public health financing in the U.S. The interviews also provided insight into current trends and topics in public health financing, and helped the NORC team identify potential case study states.

The NORC team sent advance letters via email to selected experts asking them to participate in a 45-60 minute telephone interview for the purpose of this project. The advance letter provided details about the project, such as who funded the study and who was conducting the research, and noted that participation was voluntary. The interviews used a structured discussion protocol, which differed depending on the person with whom we were speaking. . At the start of each interview, an NORC senior researcher obtained verbal consent to conduct the interview with a note-taker present, and for the interview to be recorded to ensure all comments were accurately captured. Between December 2011 and March 2012, the NORC team conducted a total of nine expert consultant interviews with individuals from the following organizations: the Office of the Assistant Secretary for Health (OASH); Centers for Disease Control and Prevention (CDC), National Center for Immunization and Respiratory Diseases (NCIRD); Association of State and Territorial Health Officials (ASTHO); National Association of County and City Health Officials (NACCHO); National Association of State Budget Officers (NASBO); Association of Public Health Laboratories (APHL); Public Health Foundation (PHF); American Public Health Association (APHA); and National Association of Medicaid Directors (NAMD).[5]

Case Studies

The NORC team conducted seven case studies between April 2012 and June 2012 to provide a detailed description of how federal, state, local, and nongovernmental resources are used to improve the public's

[5] One of the nine interviews we conducted included individuals from two different organizations.

health. These case studies provided an opportunity to obtain detailed information about public health revenue and expenditures in selected states, as well as to understand how national trends have affected state and local budgets. Selection of locations for these case studies was informed by criteria such as governance structure and region, the environmental scan, expert consultant interviews, and close consultation with ASPE. In identifying possible locations, the team sought to have a diverse set of states in terms of structure, geography, per capita funding, population, and state and public health budgets. The site selection criteria are included in Table 1, below. The final seven states selected were: Alabama, Arkansas, California, Georgia, Massachusetts, North Dakota, and Oregon.

Table 1. Site Selection Criteria

Criteria Name	Description
Governance Classification	Data comes from a classification study which NORC conducted for ASTHO in 2011. Classification schema is also used by ASTHO in their State Profiles, and includes the following options: Centralized, Largely Centralized, Shared, Largely Shared, Mixed, Decentralized, and Largely Decentralized.
Administrative Structure	Whether a department is a superagency/part of an umbrella agency, or operates as a free-standing/independent/standalone health department; terminology used in the ASTHO State Profiles.
Region	Based on terminology in the ASTHO State Profiles, which are based on the U.S. Department of Health and Human Services regions. These include: New England (HHS Regions 1 and 2), South (HHS Regions 4 and 6); Mid-Atlantic & Great Lakes (HHS Regions 3 and 5); Mountain/Midwest (HHS Regions 7 and 8); and West (HHS Regions 9 and 10).
Population Tertile	General population size, as defined in the ASTHO State Profiles; Options include small (states with a population of up to 2,750,000), medium (states with populations ranging from 2,750,001 to 6,250,000), or large (states with populations over 6,250,000 residents).
2009 Revenue – Federal[6]	Data from an ASTHO survey which NORC obtained through a Data Use Agreement.
2009 Revenue – Medicaid[7]	Data from an ASTHO survey which NORC obtained through a Data Use Agreement.
General Fund Spending Decline	Data from NASBO Survey "The Fiscal Survey of States: June 2009"
General Fund Spending Recovery	Data from NASBO Survey "The Fiscal Survey of States: Fall 2011."
State Per Capita Public Health Funding	Data from a report published by Trust for America's Health in 2011: "Investing in America's Health: A State-by-State Look at Public Health Funding and Key Health Facts."

[6] In the template, this category included the following specific instructions on what to include: Include all Federal grants, contracts, and cooperative agreements, including Women, Infants and Children (WIC) voucher dollars and Environmental Protection Agency (EPA) funding (only if administered by State health agency). Exclude State Medicare and Medicaid programs for all eligible applicants and providers, State Children's Health Insurance Program (SCHIP), Mental Health and Substance Abuse.

[7] The template did not specify whether states should include only state or federal Medicaid funding, and it is likely that both were included.

For each case study, NORC sent an advance letter via email to state health department deputies asking them to participate in an initial, informal phone conversation to discuss the purpose and objectives of the case study, as well as to identify possible dates for a 1-2 day site visit. The preliminary calls were also used to discuss potential concerns the states might have about the site visits, and to introduce the template for quantitative data collection. During the preliminary calls, we also began identifying individuals to meet with during our site visits.

For each 1-2 day site visit, the NORC team conducted semi-structured interviews with a variety of stakeholders and representatives of the state, as well as representatives of up to two LHDs to better understand public health funding within the state. We interviewed the following types of individuals: State Health Officials (SHOs), Chief Financial Officers (CFO), grants managers, division/department heads, legislative directors, and state budget officers. Through these discussions, we sought to better understand public health expenditures, sources of revenue, and the effects of federal and state funding decisions. Wherever possible, interviews were conducted in person during the site visits, although we interviewed some of the LHD personnel by phone or video conference. For each site visit, two NORC researchers conducted the interviews, with one leading and the other taking notes to ensure that data was captured accurately.

In addition to collecting qualitative information, we sought quantitative information on revenues and expenditures before each site visit by asking the CFO of each health department to fill out a template regarding their budget. To the extent possible, we pre-populated these templates with information about the jurisdiction using information from the ASTHO or NACCHO profiles. We asked each CFO to verify the pre-populated information and fill in any gaps in the data, and used the template data to inform the site visit conversations. For the purposes of this study and to allow for the most meaningful comparisons across a small sample of health departments, we focused our data collection on a small number of public health activities, including maternal and child health, immunization, and tobacco, as well as specific federal funding streams, such as the American Recovery and Reinvestment Act (ARRA) and the ACA.

Public Health Financing on a National Level

The IOM has had a longstanding focus on public health funding: its landmark 1988 study of U.S. public health emphasized the need to strengthen and support public health agencies at all levels of government and called for an increase in public health funding as well as the establishment of a systems-based

perspective on public health financing.[8] More recently, in their 2012 report on Public Health Strategies to Improve Health, the IOM characterized the current U.S. public health financing structure as "broken" and recommended "improvements in the tracking of revenues and expenditures in public health."[9] Key among these recommendations is the identification of a "minimum package of public health services" that should be available in all communities.[10] Having consistent activities and services that can be tracked from jurisdiction to jurisdiction could provide for meaningful comparisons between jurisdictions. Without a defined minimum package, it remains a challenge to determine which activities should be included in studies assessing public health budgets.

The challenge of determining inclusion and exclusion criteria for public health services within financial analyses is a recurring theme identified in the environmental scan. Public health financial data were once included in the ASTHO Reporting System, which produced extensive federally-funded annual reports.[11] In the mid-1990s, the program lost funding with the promise of new public health data systems intended to be implemented during Clinton-era health reform. New public health data systems were never implemented, however, and the ASTHO Reporting System was never reinstated. While the ASTHO Reporting System had limitations, perhaps its biggest strength was that it provided the only uniform and comprehensive source of state and local health department expenditure information.[12] Its elimination (and lack of a comparable replacement) has resulted in a lack of consistent collection of public health data since 1995, and the data we have now are less robust than they were prior to 1995.

The current federal source of public health financing data comes from the Centers for Medicare and Medicaid Services (CMS) through the National Health Expenditure Accounts (NHEA). Based on the NHEA data, it is clear that federal support for public health makes up a very small proportion of federal health-related funding, with approximately 15% of aggregate public health funding coming from federal sources, and approximately 85% coming from state or local sources.[13] The NHEA is an imperfect measure, however, as it misses a number of key public health program areas. The NHEA category for governmental public health expenditures is defined as "epidemiological surveillance, inoculations, immunization/ vaccination services, disease prevention programs, the operation of public health

[8] Institute of Medicine. Committee for the Study of the Future of Public Health. (1988). The future of public health. Washington, D.C.: National Academy Press.
[9] IOM, 2012, op cit.
[10] ibid.
[11] Barry and Bialek, 2004, op cit.
[12] ibid.
[13] CMS, 2011, op cit.

laboratories, and other such functions,"[14] and omits areas such as maternal and child health (MCH) and environmental health (both of which commonly fall under the purview of public health departments).

In the absence of the former ASTHO Reporting System and given the limitations of the NHEA, key national public health associations representing state and local public health have collected public health financing data through their periodic profiles of public health agencies – namely ASTHO on the state public health side and NACCHO on the local public health side. While the ASTHO profile tends to achieve higher response rates in its expenditures section (and is therefore generally considered to be the more reliable of the two), both data sources have limitations. For instance, a lack of well-defined program area inclusion and exclusion criteria and challenges resulting from variation in agency reporting cycles and fiscal periods both make comparisons difficult across states/localities. Further, the utility of the ASTHO and NACCHO profiles is limited by its respondent groups, with the ASTHO (state-level) respondents often unable to report public health funds from local sources (e.g., local tax levies, fees, fines) and the NACCHO (local-level) respondents often unable to distinguish between state funding and federal pass-through funding.

Given the limitations of current systems to track public health financing, Trust for America's Health (TFAH), a public health advocacy organization, has developed its own analysis of public health financing across states. TFAH reports federal health allocations, primarily through CDC and the Health Resources and Services Administration (HRSA), and combines this with state-level funding allocations for public health pulled from publicly available sources (primarily state government web sites). Although TFAH attempts to confirm state-level data in collaboration with ASTHO, TFAH experiences the same data challenges resulting from inconsistent reporting cycles and fiscal years, lack of consistent inclusion and exclusion criteria, and differences in state public health structure.

The general inconsistency in the accounting of public health financials has led to the exploration of alternative strategies and systems. For example, Dr. Peggy Honoré, Director of the Public Health System, Financing, and Quality Program in the Office of Healthcare Quality (located within the OASH within HHS), has led the development of a Public Health Uniform National Data System (PHUND$) for use by all public health agencies.[15] PHUND$ is a web-based data collection portal hosted by NACCHO that is designed to collect local public health financial data. It also provides a dashboard through which agencies

[14] Centers for Medicare and Medicaid Services. (2009). *National Health Expenditures Accounts: Definitions, Sources, and Methods.* Retrieved November 6, 2011, from http://www.cms.gov/NationalHealthExpendData/downloads/dsm-09.pdf.
[15] Public Health Finance & Management. (2012). *Overview of the PHUND$ System.* Retrieved November 6, 2012, from http://publichealthfinance.org/research-and-analysis/2292.

can obtain instant analysis of data, including comparisons with peer agencies, overall financial condition utilizing ratio or trend analyses, and much more. While the PHUND$ initiative holds promise for increasing the consistency with which financing data is reported, it remains in its early stages.

Despite a lack of a complete picture of public health financing in the United States, there is general agreement that public health faces significant challenges due to tightening budgets and unpredictable funding streams. Public health has suffered significant cuts in the wake of the recent financial downturn. For example, ASTHO reports significant cuts to both state and local public health workforce over the last several years, as a direct result of budget cuts at federal, state, and local levels.[16] The decrease in state and local tax revenues due to the current recession has translated to diminished state and local funding for governmental public health. Further, since state and local governments tend to recover from budget crises more slowly than other sectors, public health funding from state and local sources seem unlikely to quickly return to their pre-recession levels.

Federal support for public health often goes to situational or reactive revenue streams such as those that arise following natural or manmade disasters (e.g., Hurricane Katrina or the anthrax attacks following 9/11), rather than to ongoing key public health services such as immunization, maternal and child health, or tobacco control. This is seen in the most recent NHEA reports that appear to show increases in federal, state, and local funding between 2008 and 2009; these increases were almost entirely attributable to H1N1 preparedness funding to respond and recover from the H1N1 influenza pandemic. While this type of special-purpose funding increased public health funds overall, it came with restrictions preventing investment in broader public health infrastructure. Further, these types of funding infusions sometimes create a perception that public health is well-funded, even though prevention and other key public health activities may struggle because increased funds can only be used for categorical purposes and more general funding streams continue to be reduced. Compounding this challenge is the fact that public health has historically received a significant proportion of its funding from federal sources, as opposed to local and state tax bases. This funding structure has resulted in categorical, inflexible dollars, leaving many public health entities with limited capacity to address local health needs.

Analyses from TFAH estimate that an aggregate annual funding increase of approximately $12 billion is needed to make up for recent cuts and meet funding requirements for the provision of core public health

[16] Association of State and Territorial Health Officials. (2012). Budget cuts continue to affect the health of Americans: Update December 2012. Reviewed January 8, 2013 from http://www.astho.org/WorkArea/DownloadAsset.aspx?id=7862.

activities.[17] As health departments seek to address funding cuts, many are working to identify more novel and sustainable sources of funding, such as third-party reimbursement. Medicaid can play a large role with respect to funding public health services through reimbursement for outreach and enrollment services, as well as for coordination of care. However, the ability for health departments to bill Medicaid and other payers is contingent on a number of factors, including knowledge of available programs and resources, as well as health department structure.

Recent federal initiatives, the ACA and ARRA, have had more immediate effects on public health financing. For example, the ACA included a ten-year, $15 billion[18] allocation for the Prevention and Public Health Fund, which includes funding for specific public health initiatives such as Community Transformation Grants. ARRA allocated $650M "to carry out evidence-based clinical and community-based prevention and wellness strategies authorized by the Public Health Service Act that deliver specific, measurable health outcomes that address chronic disease rates."[19] Since 2009, ARRA funding has impacted public health both directly and indirectly – directly through funding provided to health departments, and indirectly by shoring up the budgets of other state programs, helping to mitigate potential cuts in state-level funding to public health.

Public Health Financing in the Case Study States

State health departments reported quantitative financial information using a data collection tool developed by the NORC team. Health departments only reported FY2008 and FY2009 revenues and expenditures for the public health agency, and not for public health activities administered by another state agency. All financial information was reported on an accrual basis, meaning they reported their actual revenue, plus revenue earned but not received, and expenses incurred but not paid.

The tool asked health departments to report on:

- Revenue by funding source;
- Expenditures by program area;
- Expenditures leaving the SHD by funding recipient;
- Maternal and Child Health specific expenditures;

[17] Trust for America's Health. (2008). Blueprint for a healthier America : modernizing the federal public health system to focus on prevention and preparedness. Washington, D.C.: Trust for America's Health.
[18] The initial allocation has since been cut to $10 billion.
[19] H.R. 1--111th Congress: American Recovery and Reinvestment Act of 2009. (2009). Retrieved November 6, 2012, from http://www.gpo.gov/fdsys/pkg/BILLS-111hr1enr/pdf/BILLS-111hr1enr.pdf

- Tobacco specific expenditures; and
- Revenue from ARRA and the ACA.

The first three revenue and expenditure sections were pre-populated using ASTHO data, obtained through a data use agreement, which state health departments verified. These sections also included follow-up questions seeking additional detail. The last three sections were developed by NORC staff and focused on MCH, tobacco, and ARRA and ACA. The MCH tab asked health departments to report on their MCH expenditures, including specific use of the HRSA MCH Block Grant, while the tobacco tab focused on tobacco-related expenditures and CDC tobacco funding. In the final section, health departments reported on the revenue they had received from ARRA and ACA funding sources.

The state health department template was modeled after the ASTHO State Profiles, while the local health department template was modeled after the NACCHO Profiles. The templates were modeled after existing profiles that health departments were already familiar with filling out to minimize the burden associated with providing this data, as health departments were already familiar with complete the Profiles. As illustrated in Table 2 below, although the state and local templates (and ASTHO and NACCHO Profiles) contain similar fields, they are not identical, resulting in the collection of slightly different types of data at the state and local levels for our seven case study states.

Table 2: Comparison of Fields in ASTHO and NACCHO Profiles

Revenue/ Expenditure	Category	ASTHO Field	NACCHO Field
Revenue	Federal	Federal Funds	Federal Direct Total
			Federal Flow-through Total
			PHER Total Revenue
			ARRA Total Revenue
	Fees and Fines	Fees and Fines	Patient Person Fees Total Revenue
			Non-clinical Fees and Fines Total Revenue
	Local	No field	City/township/town Total Revenues
			County Total Revenues
	Medicare and Medicaid	Medicare and Medicaid	Medicaid Total Revenue
			Medicare Total Revenue
	Other	Other	Other
			Private Foundations Total Revenues
			Private Health Insurance Total Revenue
			Tribal Sources Total Revenue
	State	State General Fund	State Total Revenue
		Other State	
	Total Revenue	Total FY Revenue	Total FY Revenue

Expenditures	Expenditure by Category	Administration	Total FY Expenditures
		All Hazards Preparedness and Response	
		Chronic Disease	
		Environmental Protection	
		Health Data	
		Improving Consumer Health	
		Infectious Disease	
		Injury Prevention	
		Lab	
		Other	
		Quality of Health Services	
		Vital Statistics	
		WIC	
		Total FY Expenditures	
	Expenditure by Recipient	Independent local health agencies	No Field
		Independent regional or district health offices	
		Nonprofit health organizations	
		State/territory-run local health agencies	
		State/territory-run regional or district health offices	
		Total FY Awards	

Because the most recent ASTHO data came from FY2008 and FY2009, we asked that states report their finances for those years. Unless otherwise specified, the data presented in this section represents FY2009 figures from the seven case studies. For a number of tables and figures, California provided us with data from FY2010 and FY2011. In cases where we reference this data rather than that from FY2009, we have noted it within the appropriate table, figure, or text. Finally, it is important to note that because ARRA only passed in 2009 and the ACA was signed into law in 2010, health departments reported their cumulative funding from these sources for all fiscal years.

State Public Health Expenditures[20]

States have varying organizational structures and processes in place for public health governance, coordination, and the provision of services.[21] The governance structures of state health agencies fall into four categories: centralized, decentralized, mixed, and shared. These categories describe the relationship between state and local public health agencies and are useful for describing the ways that state health agencies allocate funds to local public health agencies. In states with centralized governance, the state

[20] The expenditures included here are based on state self-reporting and numbers were not verified.
[21] Meit et al. (2012). "Governance Typology: A Consensus Classification of State-Local Health Department Relationships." J Public Health Management Practice, 2012, 18(6), 520-528.

retains authority over many budgetary decisions and the staff are employees of the state. In states with decentralized governance, LHDs are independently governed at the local level by county, or other local jurisdictions, and thus retain authority over budgetary decisions. In shared structures, local and state governments share governance authority, and LHDs may be led by state employees with local governments retaining some authority over budgetary decisions, or conversely, LHDs may be led by local employees with the state retaining at least some budgetary authority. Mixed governance states have some combination of centralized, decentralized and/or shared governance structures. As described in the Methodology section, governance classification was used as a criterion for selecting case study sites. In Table 3 below, we describe each of the case study sites selected for inclusion in the study by the selection criteria that are outlined in Table 1. We sought to select a diverse group of states with regard to governance type, location, and administrative structure, among other criteria.

Table 3: States by Case Study Selection Criteria

State	Governance	Admin. Structure	Region	Pop. Tertile	FY2009 Revenue - Federal	FY2009 Revenue – Medicaid	General Fund Spending Decline	General Fund Spending Recovery	State Per Capita Funding
California	Decentralized	Stand-alone	West	Large	62.6%	Not Reported	-15.3%	4.9%	$65.93
Georgia	Shared (state led)	Super-agency	South	Large	74.7%	1.3%	-17.8%	6.8%	$13.28
Mass.	Decentralized	Stand-alone	New England	Large	27.0%	11.3%	-6.6%	5.4%	$56.59
Alabama	Largely Centralized	Stand-alone	South	Medium	41.2%	29.5%	-14.6%	None since 2008	$68.04
Oregon	Decentralized	Super-agency	West	Medium	64.1%	16.8%	-18.5%	3.7%	$15.67
Arkansas	Centralized (no local PH units)	Stand-alone	South	Medium	63.8%	7.9%	-75.3%	3.6%	$35.98
North Dakota	Decentralized	Stand-alone	Mountain/ Midwest	Small	69.1%	3.0%	None	N/A	$20.24

We noted considerable variation in expenditure and revenue among SHDs, largely correlated with state population. Per capita expenditures vary by 200% across states, as illustrated in Table 4. The 2011 ASTHO profile indicates that variation in per capita expenditure may be correlated with the health

department's governance structure. Data reported for FY2009 show that the median per capita expenditure of centralized state health departments was $186, compared to $69 in decentralized states.[22]

The per capita expenditures, presented in Table 4, seem to support ASTHO's findings. The two states whose public health governance systems are classified as centralized according to the ASTHO/NORC scheme, Alabama and Arkansas, had per capita expenditures of $112 and $111 respectively, larger than all the other health departments with the exception of Massachusetts. One explanation for the higher per capita expenditures among centralized states is that the state retains primary responsibility for the delivery of local public health services, so that they are essentially reporting on both state-level and local-level public health activity, whereas local activity is likely to be funded more through local tax revenue in decentralized states. Centralized states tend to be clustered in the South, where public health has retained a stronger role in the delivery of clinical services.

Table 4: Total State Health Department Expenditures and Population

State	Governance Classification[23]	Total Expenditures	Population[24]	Per Capita Expenditures
Massachusetts	Decentralized	$741,584,609	6,587,536	$113
Alabama	Largely Centralized	$540,067,189	4,802,740	$112
Arkansas	Centralized	$325,926,535	2,937,979	$111
North Dakota	Decentralized	$71,676,997	683,932	$105
California	Decentralized	$2,997,294,923	37,691,912	$80
Georgia	Shared	$696,543,991	9,815,210	$71
Oregon	Decentralized	$206,682,619	3,871,859	$53

However, different governance structures do not explain all the variability in per capita expenditures, as Massachusetts and North Dakota also had high per capita expenditures.

An additional factor that likely influences reporting on per capita expenditures relates to the question of what services and functions fall within the purview of public health. Massachusetts, a decentralized state, had the highest per capita expenditures of the seven case study states. However, included within Massachusetts' expenditures is the operation of the state's five public hospitals, each of which has considerable administrative and workforce costs. Massachusetts' expenditures may also reflect a public health structure that is more centralized in function than in form. The governmental public health system

[22] ASTHO (2011). ASTHO Profile of State Public Health. Upper Marlboro, MD, Association of State and Territorial Health Officials.
[23] Ibid.
[24] Population: U.S. Census Bureau. "State and County QuickFacts." United States Census Bureau. http://quickfacts.census.gov/qfd/index.html, (accessed October 26, 2012).

in Massachusetts consists of the state health department and 351 autonomous local public health agencies. While some of these agencies, such as the Boston Public Health Commission, have a robust workforce and infrastructure, many operate on little or no funding, with a workforce often including few, if any, full-time staff. Therefore, rather than rely on the LHDs to deliver certain key public health services such as WIC, the Massachusetts Department of Public Health has chosen to contract with a myriad of organizations to provide these services.

Sources of Funding for State Public Health

All seven case study health departments have seen their budgets reduced in recent years, in large part due to the economy. While some of the most dramatic decreases came from diminished state revenue and reductions in support from the tobacco Master Settlement Agreement, federal funding has also decreased, including categorical funding and block grants. This funding reduction has resulted in program cuts and layoffs— of up to 17% of non-clinical staff, in the case of one health department. Staff from this health department remarked that they were "in a constant state of downsizing." Another health department described the experience as having been "cut to the bone." Staff from another health department stated simply, "We have no money."

While the recession has technically ended, health departments are expecting further funding cuts, in part due to slow state recovery. Alabama, for example, narrowly avoided severe budget cuts for the coming year. With their General Fund depleted, Alabama voters passed an initiative to transfer $145 million of a state trust fund to the General Fund by way of a special election held in September 2012.[25] The purpose of this transfer was specifically to fund Alabama's Medicaid program, an important funding source for state's public health departments. Had the referendum failed, health department staff estimated that they would have seen a 40% budget cut.

One reason for the slow recovery is the end of ARRA funding. Two health departments reported using ARRA funds to offset other revenue cuts, particularly on the state side. With the end of ARRA, those health departments are expecting further repercussions. Additionally, health departments reported that their states have obligations to fund pensions which consume any increased state revenue.

Beyond the recent recession, the extent to which states prioritize public health also has direct effects on public health financing. Even states reporting signs of economic recovery noted that funding for public health is still getting cut, as it is not seen as a priority by state legislators. Other states reported that the

[25] Associated Press. "September Referendum." Alabama Public Radio. http://apr.org/post/gov-bentley-succeeds-where-predecessors-failed (accessed October 30, 2012).

percentage of state funds allocated to public health is shrinking and that funding for public health is "always first to be cut." Reasons provided were that public health is not well understood and does not "compete well" against other priority areas such as education and law enforcement.

Revenue figures from federal sources, state sources, Medicare and Medicaid, fees and fines, and other sources are listed as percentages of total revenue in Table 5. Generally, state health departments received the largest percentage of revenue from federal sources, a smaller but significant percentage from state sources, and much smaller percentages from fees and fines and other sources, such as foundation funding.

Table 5: State Health Department Revenue by Source (FY2009)

State Health Department	Federal Funds	State Funding*	Medicare/ Medicaid	Public Health Fees/Fines	Other Sources	Total
Alabama	41.3%	14.1%	29.5%	6.8%	8.3%	100.0%
Arkansas	63.8%	16.7%	7.9%	6.8%	4.8%	100.0%
California	57.5%	31.0%	1.9%	9.6%	0.0%	100.0%
Georgia	74.7%	21.0%	1.3%	0.1%	3.0%	100.0%
Massachusetts	26.8%	51.6%	11.2%	3.2%	7.2%	100.0%
North Dakota	69.1%	18.4%	3.0%	4.8%	4.8%	100.0%
Oregon	60.2%	7.8%	18.7%	6.0%	7.3%	100.0%

*This category includes numbers reported as General Fund, as well as for the category "Other State Funding"

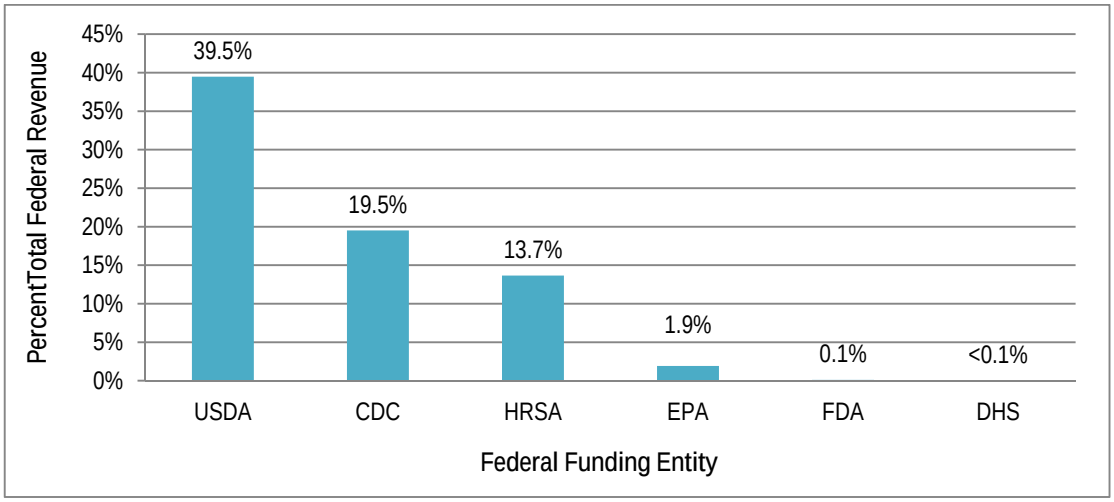
As state funding has diminished during the recession, federal funding has become a larger percentage of health departments' total revenue. For five of the case study health departments, the percentage of federal funding ranged from 57.5% to 74.7% of their total revenue. It is important to note that federal funding has not grown to make up for decreased state funding; in fact, federal funding has also decreased. However, federal funding has decreased at a slower rate than state funding and therefore has grown as a percentage of total public health revenue.

State revenue, which included General Fund and other sources, comprised between 7.8% and 31.0% in six of the seven state budgets, the exception being Massachusetts. Unlike the other six health departments, state revenue was not only the largest single revenue source but comprised the majority of the Massachusetts Department of Public Health's revenue at 51.6%. At the other end of the spectrum, Oregon received 7.8% of their revenue from state sources, which was not significantly greater than the revenue they received from fees and fines or other sources.

Federal Revenue Streams

As illustrated in Figure 1, case study state health departments on average received the largest percentage of their federal revenue from the U.S. Department of Agriculture (USDA), followed by the CDC, HRSA, EPA, the Food and Drug Administration (FDA), and the Department of Homeland Security (DHS).

Figure 1: Median Federal Funding Sources as Percentages of Total Federal Revenue*



* The federal funding sources reported here represent the aggregate of 2009 funding by the case study states, with two exceptions: Georgia did not report their federal revenue by funding stream and therefore their data is not included. Additionally, California reported their FY2011 figures, so we have utilized that data here, rather than their figures for FY2009.

The relative percentages of federal funding received from various sources for each health department are reported in Table 6. Funding from the USDA comprised at least 25% of federal revenue for all six health departments which reported on federal revenue by funding stream (as noted below the table, Georgia is excluded because they did not report this information). USDA funds the WIC program, a program which 48 states administer solely or in combination with local public health agencies or nonprofit organizations. As we discuss in later sections, every health department studied devoted a large percentage of their resources to their WIC programs.

Table 6: FY2009* Reported Federal Funding Sources as a Percentage of Total Federal Revenue

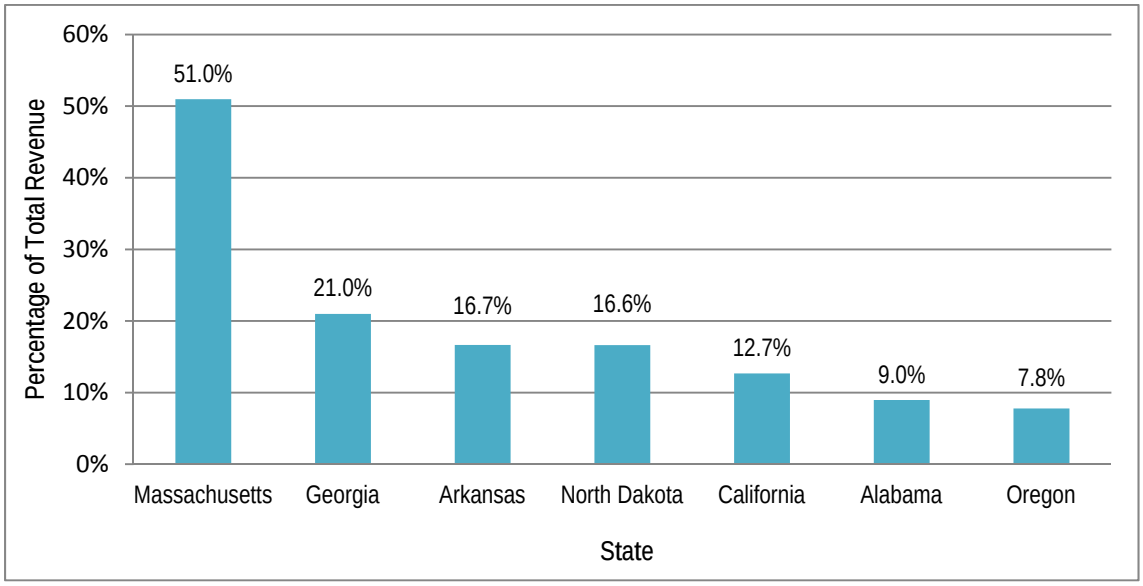
State	CDC	HRSA	FDA	EPA	USDA	Other	Total
Alabama	15.9%	15.3%	0.1%	0.3%	59.0%	9.5%	100.0%
Arkansas	23.1%	25.7%	0.3%	1.9%	38.6%	10.4%	100.0%
California	10.6%	10.0%	<0.1%	8.6%	63.8%	8.4%	100.0%
Massachusetts	33.8%	19.0%	0.2%	0.3%	40.4%	6.3%	100.0%
North Dakota	27.8%	10.2%	0.1%	26.1%	25.3%	10.2%	100.0%
Oregon	7.5%	6.4%	0.1%	2.0%	35.3%	48.5%	100.0%

* The federal funding sources reported here represent the aggregate of FY2009 funding by states, with two exceptions: Georgia did not report their federal revenue by funding stream and therefore their data is not included. Additionally, California reported their FY2011 figures, so we have utilized that data here, rather than their figures for.

State General Fund

State General Funds are an important source of revenue for state health departments, comprising the majority of their state funding. Of the four states that reported on non-General Fund monies, California reported the lowest percentage of General Funds compared to total state funding at 40%, while Massachusetts and North Dakota health departments reported General Funds comprising over 90% of their total state revenue. The State General Fund is typically a flexible source of funding which state health departments in this study used to finance important areas not covered by categorical funding streams such as infrastructure activities. For example, Arkansas and Massachusetts reported heavily using General Fund monies to cover administrative costs (as noted earlier, in Massachusetts this includes funding to support state hospitals). The General Fund was also used by states to backfill programs whose costs were higher than their dedicated revenues. Finally, health departments reported that General Fund monies were vital for federal funding that had match requirements, such as the HRSA Title V Block Grant. Figure 2 displays the General Fund revenue as a percentage of total revenue.

Figure 2: State Health Department General Fund Revenue as a Percentage of Total Revenue



As noted by NASBO, most state governments decreased their General Fund spending in the wake of the recent recession, a trend we noted with those case study states we visited as well. As highlighted in NASBO's 2012 Fiscal Survey of States, between 2008 and 2011, 46 states and the District of Columbia

cut their General Fund expenditures by an average (median) of 13.9%. As of 2011, these states were only able to increase their General Fund expenditures by an average (median) of 3.5%, with no recovery in 10 states.[26] This overall decline in General Fund spending has resulted in less General Fund revenue available to public health agencies. Four of the public health departments we studied experienced similar cuts to their General Fund revenue between FY2008 and FY2009.

It is possible that for the states we visited, the FY2009 figures do not represent the full extent to which General Fund revenue has decreased for public health departments. For example, during the interviews, Massachusetts and Oregon discussed General Fund cuts subsequent to FY2009 that were more severe than those reported in the data collection tool. Further, California, which reported revenues for FY2010 and FY2011 in addition to FY2008 and FY2009, showed a 50% decrease in General Fund revenue between FY2008 and FY2011 compared to a 4.5% decrease between FY2008 and FY2009. These findings are consistent with the NASBO observations that in FY2009, states were able to backfill their revenue losses with "rainy day" funds. However, it appears that many of those funds were significantly depleted between FY2008 and FY2010.[27]

Despite the economy gaining momentum, it is unlikely that General Fund revenues for public health will recover quickly. First, state revenues are not growing quickly.[28] Also, states have obligations to fund pensions which may consume increased state revenue. Finally, state health department staff and budget officers in this study believe that public health is not a high priority for their states. Therefore, public health would most likely not be the first entity to benefit from modest improvements in state revenues.

Medicare and Medicaid

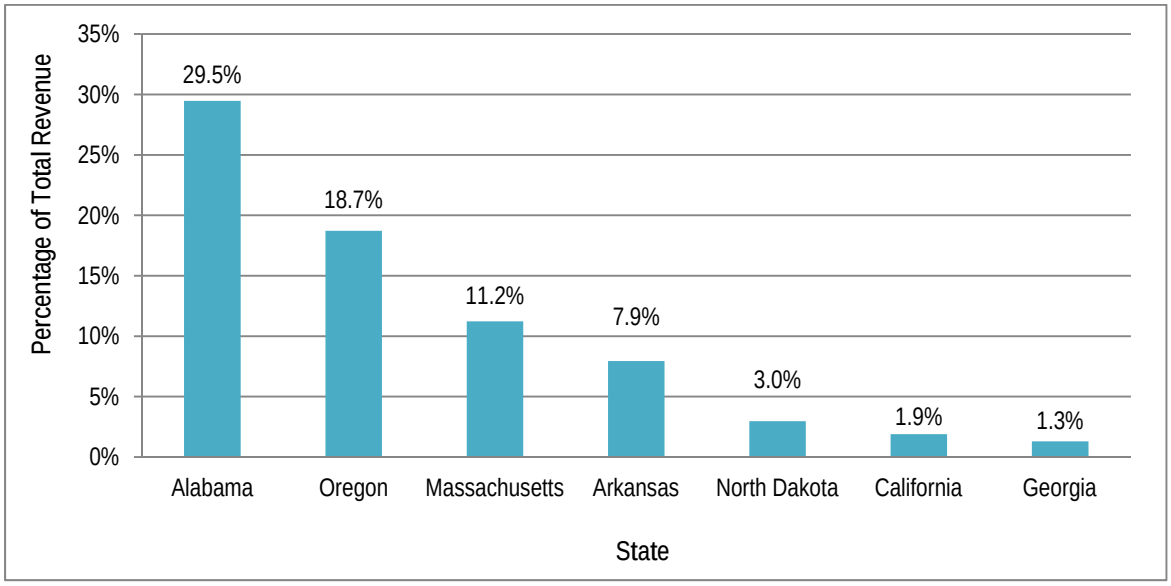
While Medicaid is jointly funded by states and CMS, it is important to note that, following the convention used in the ASTHO profile, states were not asked to clarify which Medicaid funds came from state versus federal sources, nor were they asked to comment on their capacity to make this distinction. States were also asked to report on Medicare revenues. Medicare revenues can be separated into two different funding streams – one for services provided (e.g., case management or the immunization of the elderly), and as part of contracts to conduct CMS Survey and Certification of hospitals, nursing homes and laboratories. Because these revenues can be separated into two distinct funding streams, it is difficult to make

[26] NASBO (2012). The Fiscal Survey of States, Spring 2012. Washington, DC, National Association of State Budget Officers; National Governors Association.
[27] Ibid.
[28] NASBO (2011). The Fiscal Survey of States, Spring 2011. Washington, DC, National Governor's Association, National Association of State Budget Officers.

comparisons across states unless they specify which funding streams were included in their reporting, and our case study states did not do so.

As illustrated in Figure 3, five health departments received between 1.3% and 11.2% of their revenue from Medicare and Medicaid. For all but Massachusetts, these percentages were similar to the percentages of revenue from fees or fines and other sources. However Medicare and Medicaid comprised the second highest revenue source – 29.5% and 18.7% – of total revenue for Alabama and Oregon, respectively. Some of this variation may reflect whether health departments have robust systems to bill Medicare and Medicaid for services. For example, Oregon, which has the second highest Medicare and Medicaid revenues relative to their total revenue, developed a robust third party billing system to finance their immunization program, a model which CDC has since worked to replicate in other states.

Figure 3: Medicare and Medicaid Revenues by State as Percentages of Total Revenue



Health departments received different amounts of funding from Medicaid, the Children's Health Insurance Program (CHIP), and Medicare, as reported in Table 7. With the exception of North Dakota (which likely included their CMS Survey and Certification funding as a Medicare revenue source), the case study states that reported their Medicare and Medicaid revenue sources received significantly more funding from Medicaid than Medicare. It is interesting to note that none of the health departments reported any revenue from CHIP, some reporting zero revenue while others simply left a null value. For example, Alabama's state health department, which administers the CHIP program for the state, reported zero revenue from the program. As such, it is likely that a large portion of Alabama's combined Medicaid revenue comes from Medicaid reimbursements for CHIP. Oregon also reported zero revenue from CHIP,

despite the fact that they bill Medicaid and other insurers for the childhood vaccinations provided by the health department. Georgia, Massachusetts, North Dakota, and California did not report on CHIP revenue at all and left these values blank. In some cases, these health departments may have used a null value to signify receiving $0, while others reported that they found it challenging to provide this information. For instance, in Massachusetts, the Executive Office of Health and Human Services bills on behalf of the Department of Health and CHIP revenue therefore does not appear as Department of Health revenue. In California, reporting on CHIP is also not straightforward. Medicare and Medicaid funding is not received directly by the California Department of Public Health, but is instead received as pass-through reimbursement of CMS funding, without indication of specific CHIP revenue.

Table 7: Medicare and Medicaid Revenue Sources as a Percentage of Medicare and Medicaid Total Funding

State	Medicaid	CHIP	Medicare	Total
Alabama	86.3%	0.0%	13.7%	100.0%
Arkansas	100.0%	0.0%	Not Reported	100.0%
Georgia	100.0%	Not Reported	Not Reported	100.0%
Massachusetts	94.9%	Not Reported	5.1%	100.0%
North Dakota	45.4%	Not Reported	54.6%	100.0%
Oregon	98.4%	0.0%	1.6%	100.0%

*California did not report their Medicare and Medicaid revenue sources and therefore is not included.

Fees and Fines

With state and federal funding streams having declined during the recession, fees and fines are becoming more important revenue sources for health departments. For example, one state has increased the percentage of fee revenue going to salaries in order to avoid further layoffs. Another state was able to save programs that would otherwise have been cut by raising program fees. However, health departments noted that fees often did not keep pace with rising program costs, and that raising fees and fines is currently challenging. Not only do some states require legislation to raise fees, but the current political climate is not amenable to increasing fees or taxes.

In FY2009, health departments received between 0.1% and 9.6% of their revenue through fees and fines, with a median of 4.8%. Major sources of fees and fines included laboratory fees, vital records, registration and licensing, environmental and building inspections and services, newborn screening, and Emergency Medical Services (EMS) fees. However, these figures may overestimate the amount of funding that health departments actually receive from fees and fines. In some states, fees and fines go to program areas, and in some states they go directly into the General Fund. Further, many health departments receive fees and fines that they cannot spend; rather, these funds are passed directly to the state General Fund. For states

that lack the authority to spend revenues obtained from fees, states reported that, when filling out the data collection template, they had not known whether to report all fees and fines collected, or only those which they had the authority to spend.

Recent Federal Initiatives

ARRA and the ACA both presented public health with new funding opportunities. As noted above, the ACA included a ten-year, $15 billion[29] allocation for the Prevention and Public Health Fund, which includes funding for specific public health initiatives such as Community Transformation Grants, while ARRA allocated $650M "to carry out evidence-based clinical and community-based prevention and wellness strategies authorized by the Public Health Service Act that deliver specific, measurable health outcomes that address chronic disease rates.[30] The amount of funding that states received through these two sources is summarized in Table 8. Three states did not report any ARRA or ACA figures and are not included in the table. Of the remaining four states, three reported receiving both ARRA and ACA funding, while North Dakota reported receiving ARRA funding but did not report on ACA funding. With the exception of Oregon,[31] ACA and ARRA funds contributed to less than three percent of our case study states' health department total revenues.

Table 8: ACA and ARRA Funding as a Percentage of Total Revenue

State	ACA	ARRA
Alabama	2.28%	0.84%
Massachusetts	0.55%	2.18%
North Dakota	Not Reported	0.01%
Oregon	0.03%	18.72%

*Arkansas, California, and Georgia did not report their ACA and ARRA funding and therefore are not included in this table.

As mentioned previously, the impact of ARRA on public health extended beyond the direct funding of health department activities. States reported that ARRA funding allowed the state governments to shore up agency budgets and stave off dramatic funding cuts (including cuts to public health) that they would otherwise have been forced to make.

[29] The initial allocation has since been cut to $10 billion.
[30] H.R. 1--111th Congress: American Recovery and Reinvestment Act of 2009. (2009). Retrieved November 6, 2012, from http://www.gpo.gov/fdsys/pkg/BILLS-111hr1enr/pdf/BILLS-111hr1enr.pdf
[31] Oregon was an outlier because they have been consistently aggressive in applying for grant funding, but also because only a very small proportion of their budget comes from state revenue. These two circumstances combined means that their ARRA/ACA funds show up as a large percentage of their revenue.

Allocating Funds to Public Health Programs and Services

There was considerable variation in the state health department expenditures for different program areas, as shown in Table 9. This variation was true even for program areas that are traditional key public health functions, such as infectious disease.

Table 9: State Health Department Expenditures by Program Area as Percentages of Total Expenditures

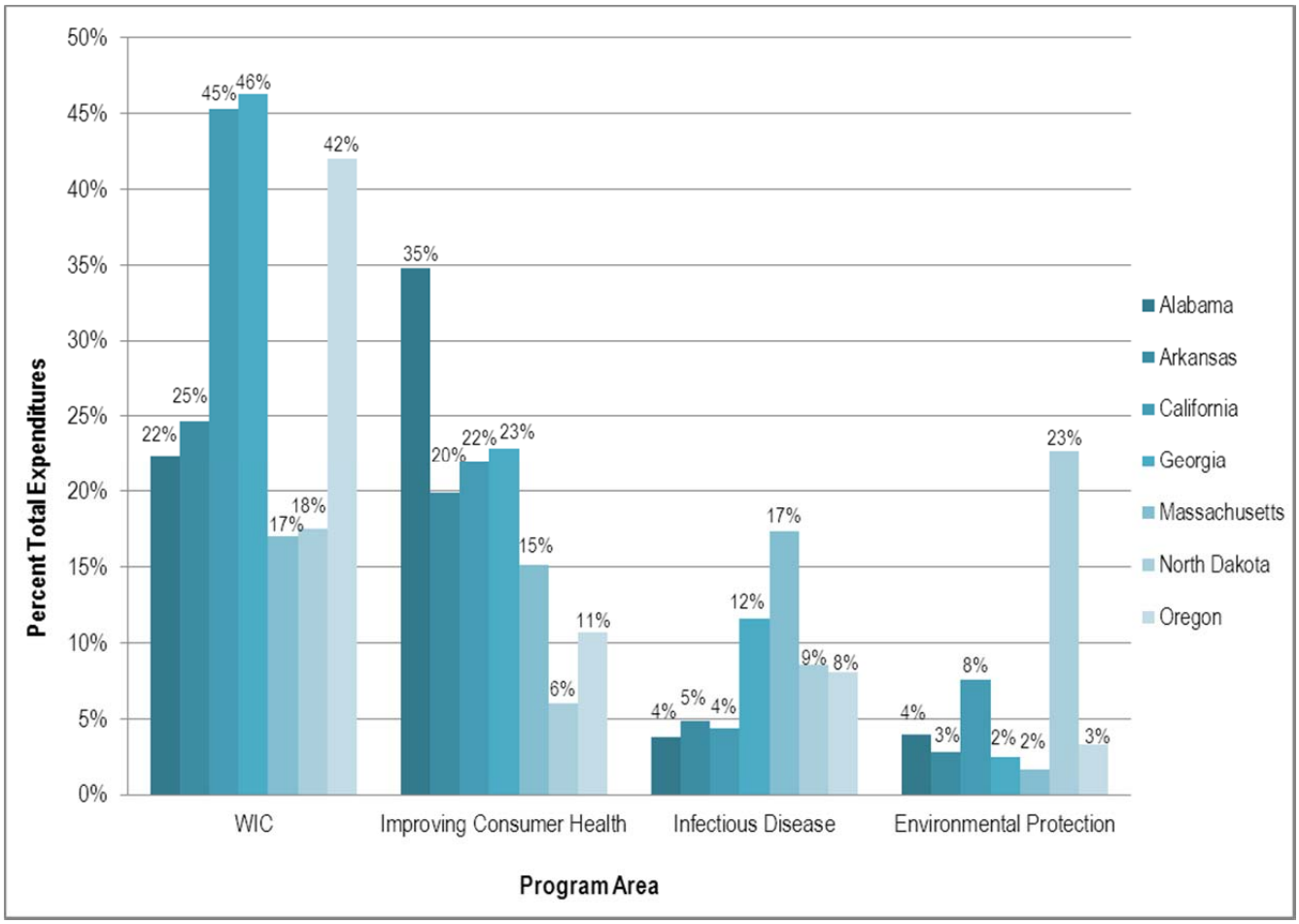
Program	Alabama	Arkansas	California	Georgia	Mass.	North Dakota	Oregon	Median
Administration	9.3%	5.7%	0.7%	2.0%	1.7%	2.3%	7.3%	2.3%
WIC	22.3%	24.7%	45.3%	46.3%	17.0%	17.5%	42.0%	24.7%
Improving Consumer Health	34.8%	19.9%	21.9%	22.8%	15.1%	6.0%	10.7%	19.9%
Infectious Disease	3.8%	4.8%	4.4%	11.6%	17.3%	8.5%	8.0%	8.0%
Chronic Disease	1.3%	3.3%	9.3%	4.0%	5.4%	12.3%	7.7%	5.4%
Quality of Health Services	3.1%	0.7%	5.0%	Not Reported	5.0%	4.6%	4.1%	4.4%
All Hazards Preparedness and Response	3.4%	2.7%	3.6%	6.7%	3.5%	12.0%	7.5%	3.6%
Environmental Protection	3.9%	2.8%	7.6%	2.5%	1.7%	22.7%	3.3%	3.3%
Health Laboratory	3.0%	3.9%	1.2%	2.0%	1.8%	6.0%	5.1%	3.0%
Health Data	0.3%	1.0%	Not Reported	1.3%	1.1%	0.7%	1.9%	1.0%
Vital Statistics	0.9%	0.5%	0.8%	0.7%	0.4%	0.9%	1.5%	0.8%
Injury Prevention	0.2%	<0.1%	0.2%	0.2%	2.7%	3.2%	0.8%	0.5%
Other Program Area	13.5%	30.0%	0.0%	Not Reported	27.2%	3.1%	Not Reported	13.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

Allocation for All Health Programs

Across all seven health department, WIC accounts for the highest source of reported expenditures. In particular, three health departments reported total expenditures for WIC as greater than 40% of total health department expenditures. Five health departments reported high expenditures for improving

consumer health, a category which includes clinical services.[32] Massachusetts also reported high expenditures in infectious disease, while North Dakota reported high expenditures in environmental health (likely because they house all EPA programs whereas other states may instead have a Department of Natural Resources). Expenditures in these four program areas across all seven health departments are illustrated in Figure 4. It is important to note that similar expenditure levels do not necessarily indicate that health departments are implementing similar programs within these areas. Also, these categories do not reflect whether a program area in a specific year has unusually high expenditures because it is responding to public health emergencies.

Figure 4: Percentage of Total Expenditure by State for WIC, Improving Consumer Health, Infectious Disease Expenditures, and Environmental Protection



[32] ASTHO (2011). ASTHO Profile of State Public Health. Upper Marlboro, MD, Association of State and Territorial Health Officials.

Maternal and Child Health

In addition to being a key public health program area, MCH is unique in that 59 states and political jurisdictions receive part of their funding from the same federal funding stream—the HRSA Title V Block Grant Program (commonly referred to as the MCH Block Grant) —although the block grant is not the sole source of MCH funding. Table 10 presents levels of MCH funding broken out by revenue streams. According to the self-reported figures, all seven case study health departments received at least 43% of their MCH funding from federal sources; four received over 87% from federal sources. Further, all seven case study state health departments reported receiving more MCH revenue from federal sources than any other funding source.

Table 10: MCH Revenue Source by State as a Percentage of Total MCH Revenue

State	Federal Funds	State General Funds	Other State Funds	Medicare/ Medicaid	Other Funding Source	Total
Alabama	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Arkansas	57.0%	43.0%	Not Reported	Not Reported	Not Reported	100.0%*
California	42.8%	16.5%	2.2%	38.5%	0.0%	100.0%
Georgia	87.2%	12.7%	Not Reported	Not Reported	<0.1%	100.0%*
Massachusetts	47.3%	38.5%	13.2%	0.0%	<0.1%	100.0%
North Dakota	92.4%	6.8%	Not Reported	Not Reported	<0.1%	100.0%
Oregon	90.2%	Not Reported	Not Reported	0.0%	9.8%	100.0%

* States did not report their total MCH funding. The NORC team determined the denominator by summing health departments' reported sources of MCH funding.

It is important to note that health departments expressed confusion about which programs fell under the MCH umbrella. Therefore, it is possible that the figures reported in this section are not completely comparable as we could not assess whether states had similar inclusion and exclusion criteria. In particular, states expressed confusion over whether to include only the activities and items funded by the MCH Block Grant or to use a broader inclusion criterion. For example, the majority of the reported federal funding came from HRSA, as illustrated in Table 11. Four of the seven health departments reported that they received at least 93% of their federal MCH funding from HRSA. Three health departments (Georgia, Massachusetts, and North Dakota) reported that they received the majority of their federal MCH funding from the USDA, while Oregon and Alabama reported no USDA revenue. This suggests that the former three states included WIC funding in their reported MCH revenue while the latter two states did not. Thus, it is likely that observed funding disparities reflect differences in reporting rather than true variation in funding for MCH activities.

Table 11: FY2009* Federal Revenue by Funding Source as a Percentage of Total Federal Funding

State	CDC	HRSA	USDA	Total
Alabama	0.0%	100.0%	0.0%	100.0%
Arkansas	Not Reported	100.0%	Not Reported	100.0%
California	Not Reported	98.1%	Not Reported	100.0%
Georgia	Not Reported	Not Reported	66.9%	66.9%**
Massachusetts	1.8%	11.6%	75.6%	100.0%
North Dakota	2.4%	10.6%	64.6%	100.0%
Oregon	6.6%	92.7%	0.0%	100.0%

* California figures represent FY2011 revenue.

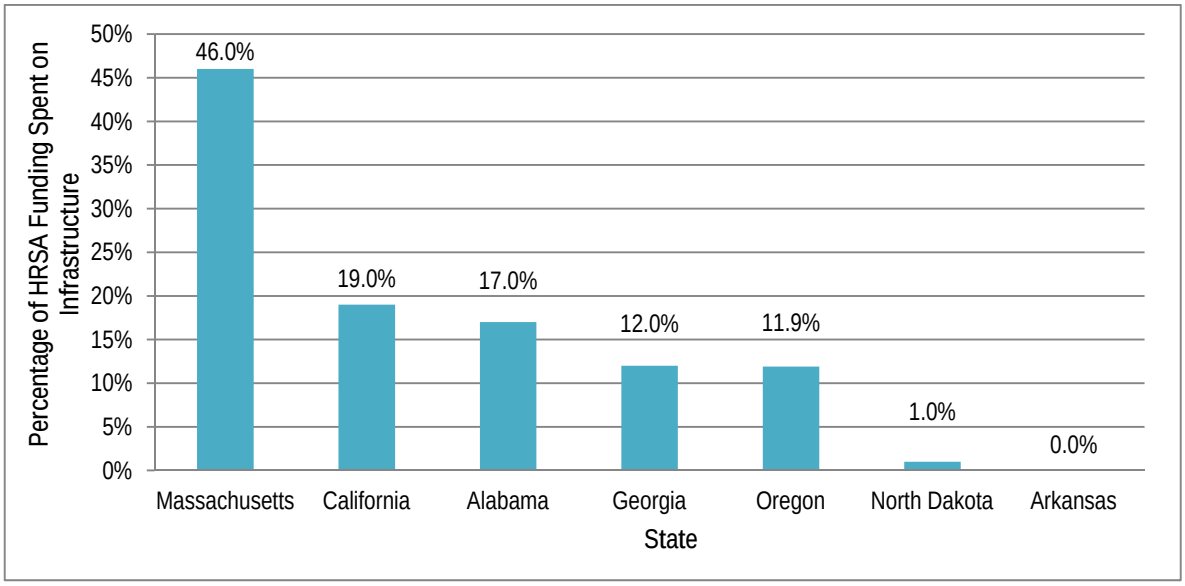
** Georgia did not explain the discrepancy between the sum of their federal funding sources and their reported total for MCH funding.

There were several other incongruities in the reported data. For example, the sum of California's revenues by federal funding stream for MCH exceeded the total federal revenue they reported. Similarly, Georgia reported that 66.9% of its federal revenue came from the USDA but did not report the source of the remainder. Also, states left many fields blank but did not specify whether those corresponded to actual zero figures, or whether the health department was unable to provide that information. Clearly, the request for MCH public health financial data must be precise in order to make meaningful comparisons.

States reported very different percentages of their HRSA funding used for infrastructure activity, ranging from 1% to 46%, as shown in Figure 5. Infrastructure was defined as expenses not associated with particular programs or services, such as human resources, accounting, building-related costs, and organization-wide performance management. Some of the variation may reflect difference in organizational structure. Georgia and Oregon, the only two health departments classified as part of a superagency (i.e., the health department falls under the purview of a larger health and human services agency), reported very similar and relatively lower expenditures at 12% and 11.9% respectively.[33] There does not appear to be a connection between the level of HRSA funding and the amount spent on infrastructure activities.

[33] Georgia's State Health Department is no longer part of a superagency. However, for the purposes of discussion, they are classified as such, as the data reported are from prior to their being established as an independent agency.

Figure 5: Percentage of HRSA Funding Spent on Infrastructure Activities



Finally, six of the state health departments allocated at least a portion of their MCH revenue to LHDs, as shown in Table 12. Once again, there was considerable variation in the allocations. Massachusetts reported allocating 1.3% of MCH funding to local public health agencies and nonprofit organizations, whereas California reported allocating 40.4% to local public health agencies and nonprofit organizations. Also of note is that Oregon allocated MCH revenue to nonprofit health organizations but none to LHDs. It is possible that there was some confusion related to this particular question. For example, Alabama reported passing 100% of its MCH funding to local public health agencies and nonprofit organizations. However, they also reported using 17.0% of their HRSA funding for infrastructure. Also, with states reporting revenue and expenditure figures for non-comparable program portfolios, it is difficult to know how these allocation figures compare.

Table 12: Percentage of Total MCH Revenue (FY2009*) Distributed to Local Public Health Agencies

State	State-run Health Agencies	Independent Health Agencies	Nonprofit Health Organizations
Alabama	70.0%	0.0%	30.0%
Arkansas	Not Reported	Not Reported	Not Reported
California	0.0%	28.3%	12.1%
Georgia**	Not Reported	1.6%***	Not Reported
Massachusetts	0.0%	0.1%	1.2%
North Dakota	Not Reported	5.7%	0.2%
Oregon	0.0%	0.0%	9.8%

* California figures may represent 2011 figures rather than 2009.
** Georgia did not provide total MCH revenues. The denominator is therefore derived from the sum of their reported sources of revenue.
*** Georgia defined all of the health departments as independent

Tobacco

Most state health departments in the U.S. receive at least part of their funding for tobacco programs from the CDC. Table 13 shows tobacco revenue sources as percentages of total tobacco funding. Federal funds were a significant source of revenue for Alabama, North Dakota, and Massachusetts only. Alabama, Georgia, Massachusetts, North Dakota, and Oregon received 100% of their federal revenue from the CDC. (California did not report their federal funding sources in detail for FY2009.) Other major sources included tobacco taxes and Tobacco Master Settlement monies. However, four health departments did not report on two or more sources of funding. While it is possible that these health departments intended null values to signify having received no funding from these sources, it is also possible that health departments were unable to determine the amount of funding, making it difficult to draw comparisons across agencies.

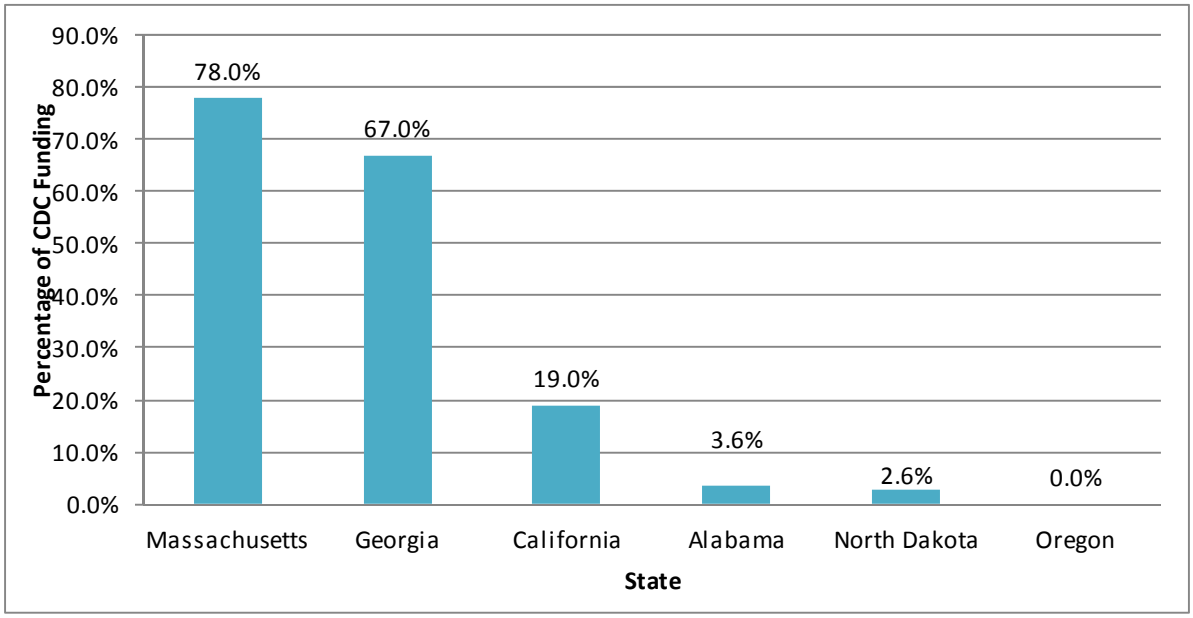
Table 13: Tobacco Revenue Sources as Percentages of Total Tobacco Revenue

State	Federal	State General Fund	Other State Funds	Medicare/ Medicaid	Fees and Fines	Other	Total
Alabama	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Arkansas	Not Reported	Not Reported	Not Reported	Not Reported	Not Reported	100.0%*	100.0%*
California	1.3%	0.0%	98.7%	0.0%	0.0%	0.0%	100.0%
Georgia	1.3%	Not Reported	Not Reported	Not Reported	Not Reported	98.7%	100.0%
Massachusetts	12.5%	87.5%	0.0%	0.0%	0.0%	0.0%	100.0%
North Dakota	26.7%	Not Reported	Not Reported	Not Reported	Not Reported	73.3%	100.0%
Oregon	2.2%	Not Reported	Not Reported	0.0%	0.0%	97.8%	100.0%

*Arkansas did not report a total tobacco expenditures value. This value was determined by summing the figures provided by Arkansas, in this case only "Other".

As with MCH, states were asked to report on the percentage of CDC tobacco funding used for infrastructure activities, where infrastructure was defined as expenses not associated with particular programs or services, such as HR, accounting, building-related costs, organization-wide performance management, etc. The relative amounts of CDC funding used for infrastructure is illustrated in Figure 6. However, it is unclear if states used similar exclusion and inclusion criteria for "infrastructure."

Figure 6: Percentage of CDC Funding Used for Infrastructure



Generally, it appears that states did not allocate as large a proportion of tobacco funds to local public health agencies and nonprofit organizations as MCH funds, though this may be related to challenges with data reporting or the template, rather than a true representation of states' allocation of funds. For instance, Arkansas and Georgia did not report the amount of tobacco funding allocated to local public health agencies and nonprofit organizations. Further, Oregon reported no tobacco funding allocated to these agencies and organizations, while Alabama reported allocating all of its tobacco funding to local sources. While it is possible that this is how their tobacco funds are allocated, both scenarios seem unlikely, and the discrepancy may point to challenges with data collection. The relative amounts that states allocated to various entities are reported as percentages of total tobacco revenue in Table 14.

Table 14: Tobacco Funds Distributed to Local Public Health Agencies and Nonprofit Organizations as Percentages of Total Tobacco Revenue

State	Governance Classification	State-run Local Public Health Agencies	Independent Local Public Health Agencies	Nonprofit Organizations
Alabama	Largely Centralized	70.0%	0.0%	30.0%
California	Decentralized	0.0%	35.8%	27.5%
Massachusetts	Decentralized	0.0%	Not Reported	0.0%
North Dakota	Decentralized	0.0%	8.3%	0.0%
Oregon	Decentralized	0.0%	0.0%	0.0%

Allocation to Local Public Health Agencies and Organizations

All health departments reported allocating a portion of their total budget to local public health and nonprofit health organizations. With the exception of Massachusetts, the majority of funding leaving the state health departments went to LHDs in both centralized and decentralized states. Discussions with representatives in Massachusetts indicated that expenditures to nonprofit health organizations come from the state health department contracting with nonprofit health organizations to provide public health services rather than funding local public health agencies to provide these services. The percentage of funding used by the state health department itself varied widely between case study states and is not correlated with the state's public health structure. Table 15 lists state health department allocations to external agencies.

Table 15: State Health Department Allocations to Local Public Health Agencies and Nonprofit Organizations as Percent Total Expenditures

State	State Run Local Public Health Agencies*	Locally Run Local Public Health Agencies*	Nonprofit health organizations	State Health Department**	Total
Alabama	36.2%	1.3%	Not Reported	62.6%	100.0%
Arkansas	19.0%	Not Reported***	Not Reported	81.0%	100.0%
California	1.1%	61.2%	3.2%	34.4%	100.0%
Georgia	0.0%	69.9%	Not Reported	30.1%	100.0%
Massachusetts	Not Reported****	2.3%	38.7%	59.0%	100.0%
North Dakota	Not Reported****	14.9%	Not Reported	85.1%	100.0%
Oregon	0.0%	19.2%	1.6%	79.2%	100.0%

* "Local" refers to any public health agency that serves a jurisdiction smaller than the state.
** Health Departments did not report this figure. The NORC team determined this number by subtracting the reported total amount allocated to external agencies from reported total expenditures.
*** Health Department did not define any local public health agencies as being independently run
**** Health Departments did not define any local public health agency as being state run

State Public Health Financing Template

As noted in the Methods section of this report, state health departments provided specific financing information using a data collection tool developed by the NORC team, referred to as the financing template. Although the template was designed using previously established ASTHO revenue and expenditure categories, all of the health departments found at least portions of the data collection process challenging, and four of the seven health departments considered the process generally difficult. For example, one state indicated that 50 to 60 hours of staff time had been required to provide the requested financial information.

The most important factor in how easily health departments were able to complete the template was whether their financial system tracked information the way the template asked that it be presented, for example, by recipient, program area, etc. Though every state noted misalignment in at least some areas, the more closely aligned a financial system was to the template, the more likely it was that fiscal information could be taken directly from reports and queries. For the elements that did not align, health department staff had to spend significant time speaking with colleagues in the relevant program areas to compile the data.

Another challenge in using the template was that many health departments were unclear about the definitions of terms used in the template – though many of them are also used in the ASTHO tool. For example, one state's staff explained that they do not use the term 'revenue' at the health department. The reason the term was confusing was because the health department receives funds they do not have the authority to spend, for example certain fees and fines that are passed to the state General Fund. They were therefore unsure what to include in the revenue section of the template. Similarly, other state staff wrestled with programs to include under the purview of MCH or other program areas. For example, some programs have a child component as part of their injury prevention program, so it was not clear whether a portion of that program's funds should be included in the MCH category. As noted above, some of the health departments may have included WIC under MCH while others did not.

Health departments in general struggled to report program-specific financial information. The response rates on the MCH and tobacco sections of the template were far lower than for the sections asking about overall revenues and expenditures. The data necessary to complete the financing tool were not always in a centralized place. For example, one health department had to draw the necessary information from multiple bureaus and contracts.

States also struggled to find and confirm old data; in some cases information had been archived, while in others the state health department had reorganized or restructured as an independent agency (rather than as part of a superagency). The more pressing issue, however, was that the state health departments' financial systems do not align with the ASTHO tool. Therefore, at least some of the questions on the ASTHO survey were subject to interpretation by the individual filling out the survey, which made replicating their answers difficult. Five of the health departments reported figures that varied from those reported in the ASTHO profile for the same year, in four of these states, some of the numbers diverged from the ASTHO figures by at least 10%.

Some of these difficulties are reflected in data inconsistencies. For example, California reported a total figure for the amount of MCH federal funding that was smaller than the sum of the MCH funding they reported receiving from a variety of federal streams. Also, the sum of Alabama's reported revenue sources only came to 96.8% of their reported total revenue figure. Although in most cases states reported on FY2009 data, for some questions states reported data from a more recent fiscal year. For these questions in particular, the conclusions we can draw are limited due to these inconsistencies. Unless we can draw comparisons across states during the same period, taking into consideration the political, social, and economic factors of the time, we cannot be sure that differences in funding are not the result of these environmental influences.

Financing Local Health Departments

As noted in the introduction, our case studies and site visits included conversations with a number of LHDs as we sought to better understand how public health is financed at the national, state, and local levels. The LHDs included in this study represent diverse populations, are of varying sizes, and serve both rural and urban settings. Like their state counterparts, LHDs reported quantitative data using a data collection tool that the NORC team developed using the same revenue and expenditure categories as the NACCHO profile tool. The NORC team pre-populated the revenue information with NACCHO data obtained through a data use agreement. Unlike the state agencies, LHDs were asked to report on the fiscal year which they had most recently reported to NACCHO, with the exception of ACA funding. LHDs were asked to report the total amount of ACA funding they had received since 2009. LHDs were also asked to report specific information regarding MCH and tobacco revenues and expenditures; however, due to low response rate, data from these sections are not included in the following discussion. Of the 11 LHDs studied, eight completed their funding templates and all quantitative data in this section comes from these eight health departments. Since we were only able to obtain financial information from eight LHDs out of 2,565 nationally,[34] it is important to note that quantitative findings from these health departments are not generalizable.

As with their state counterparts, LHDs have seen decreases in federal and state funding in recent years. Health departments thus find themselves challenged to provide public health services, or foresee difficulties providing these services in the future. One health department staff member noted, "A lot of cities and towns have closed up shop on their local health programs."

[34] NACCHO (2011). 2010 National Profile of Local Health Departments. Washington, DC, National Association of County & City Health Officials.

Generally, total revenues and expenditures, as illustrated in Table 16, were correlated with jurisdiction size; larger jurisdictions had higher expenditures.

Table 16: Local Health Department Total Expenditures

Local Health Department	Expenditures	Population Served**	Per capita
Boston (MA)	$158,891,532	625,087	$254
Acton County (MA)*	$2,360,000	21,924	$108
Jefferson County (AL)	$67,410,987	670,000	$101
Los Angeles (CA)	$731,747,000	9,889,056	$74
South Health District (GA)	$16,377,026	256,492	$64
Custer (ND)	$2,544,010	44,630	$57
Fargo Cass (ND)	$7,621,880	152,368	$50
Fulton Health District (GA)	$38,439,714	949,599	$40

* Acton County reported budgetary estimates for 2013 instead of actual revenues and expenditures.

** U.S. Census Bureau. "State and County QuickFacts." State and County QuickFacts. http://quickfacts.census.gov/qfd/index.html (accessed October 25, 2012).

Per capita expenditures for seven of the eight LHDs ranged from $40 to $108 with a median of $64. Per capita expenditures seemed to vary generally by state. The outlier was Boston, which had considerably higher per capita expenditures than the other health departments at $254 per capita. This might be due in part to Boston having a particularly robust public health infrastructure, portfolio, and workforce, including running Boston's EMS, which provides over 100,000 transports each year.

Sources of Funding for Local Public Health

Revenues from a number of sources are represented as a percentage of LHDs' total revenues in Table 17. As described in Table 3 at the beginning of the Public Health Financing in Case Study States section, the sources included in the template developed by NORC to collect local data were those included in the NACCHO Profiles. While many of the sources are the same as those asked about in the ASTHO Profiles, the LHDs were asked to report on some categories not included in the Profiles, such as revenue received from private health insurance. Generally, local funding was the largest revenue source for local health departments, followed by federal and then state funding. The average revenue by source for each LHD is presented in Figure 7, but merit an important consideration. Some health departments expressed difficulty differentiating between state funding and federal flow-through. Therefore, the reported state and federal percentages may be estimates and not exact figures. Also, the sums of the revenue sources reported by Jefferson County and Custer health departments came to more than 100% of their reported total revenue.

Table 17: Local Health Department‡ Revenue by Sources

Revenue Source	Acton County (MA)	Boston (MA)	Custer (ND)	Fargo Cass (ND)	Fulton Health District (GA)	Jefferson County (AL)	South Health District (GA)
Local	24.7%	42.5%	20.3%	45.8%	39.9%	51.1%	6.4%
State	8.2%	3.7%	11.6%	9.1%	20.0%	2.3%	33.6%
Federal Flow-Through[35]	3.4%	5.8%	45.3%	23.1%	20.8%	9.4%	32.8%
Federal Direct	Not Reported	13.0%	0.0%	0.0%	Not Reported	1.8%	2.5%
ARRA	Not Reported	2.5%	0.0%	0.0%	0.8%	12.1%	0.7%
Medicaid	Not Reported	2.5%	3.3%	5.3%	1.0%	17.9%	6.5%
Medicare	15.1%	4.3%	0.0%	0.2%	<0.1%	0.2%	0.5%
Private Foundations	1.7%	0.6%	1.4%	0.4%	Not Reported	0.0%	0.0%
Private Health Insurance[36]	8.2%	7.9%	6.3%	1.3%	<0.1%	1.5%	2.5%
Fees and Fines	Not Reported	3.0%	12.8%	14.7%	17.4%	9.5%	6.8%
Other	38.7%	14.0%	0.3%	0.1%	Not Reported	5.8%	7.6%
Total	100.0%	100.0%	101.4 %†	100.0%	100.0%	111.6%†	100.0%

† Health Departments did not report an explanation for the sum of their funding streams exceeding 100% of their total revenue.

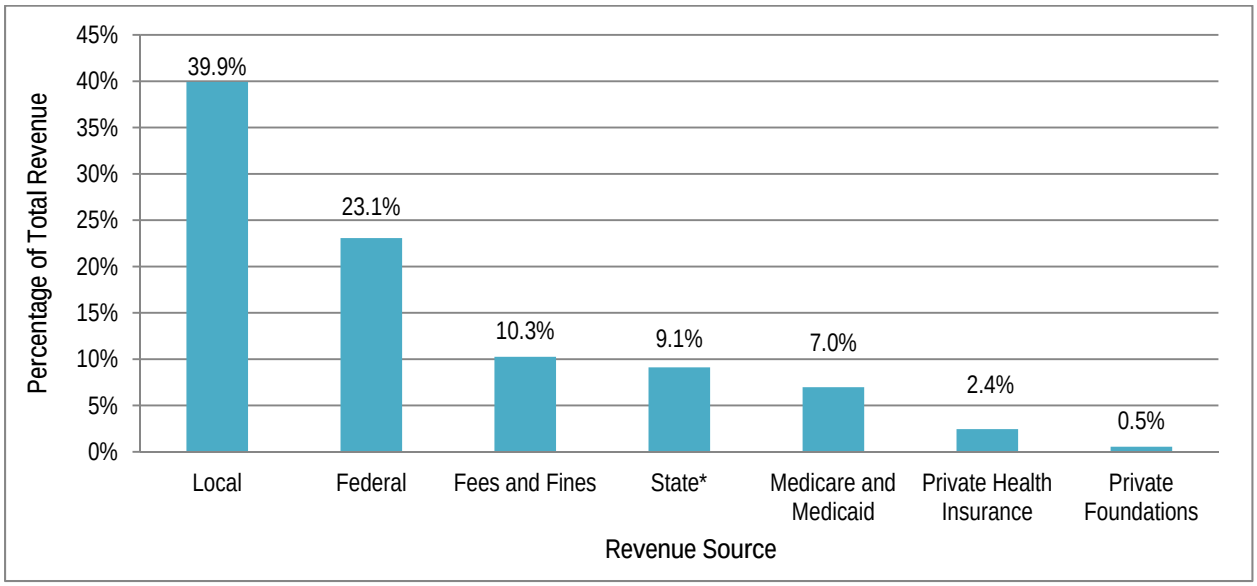
‡ Los Angeles Health Department did not report their revenue sources and therefore is excluded.

The NACCHO profile data collection tool asks health departments to report on specific revenue categories, including "Private Health Insurance." Health Departments reported considerable variation in the amount of revenue received from private health insurance. Acton County, Boston, and Custer health departments received 8.2%, 7.9%, and 6.3% of their funding from private insurance. In contrast, Fargo Cass, Fulton Health District, Jefferson County, South Health District received between 2.3% and less than 0.01% of their revenue from private health insurance.

[35] In this category, health departments were instructed to include all income from the federal government received through state department of health, excluding Medicaid/Medicare reimbursements, Public Health Emergency Response (PHER) funding, and ARRA funding. Examples of federal agencies allocating funds for public health services include CDC, DHHS, DHS, etc.

[36] In this category, health departments were instructed to include all income received from private health insurers.

Figure 7: Average (Median)** Revenue Received by Source as a Percentage of Total Revenue***



* Does not include federal funds allocated to local health departments by the state health department.
** Null values were excluded when determining the median.
*** Los Angeles did not report their revenue source and therefore were excluded from these calculations.

Local funding sources included local General Funds, local taxes, and millage levies. In addition to being a large portion of LHD funding, health departments reported that local revenue was one of the few sources of flexible funding. It was therefore mentioned frequently as important in infrastructure-related activities—including administration and overhead—as well as augmenting a wide range of program activities. It is interesting to note that even the centralized LHDs in Arkansas and the local public health agencies that are under state auspices in Alabama received financial support from local sources.

The LHDs also noted the importance of federal funding for their day-to-day operations. Three of the eight case study health departments receive the largest portion of their funding from federal sources, including Los Angeles County. In fact, Los Angeles County is one of nine LHDs that receive federal funds directly from CDC, as opposed to receiving federal funds that have first come into the state health department.[37]

Like their state counterparts, LHDs reported recent decreases in their state funding. Health departments also reported that uses of the funding they received from the state tended to be prescribed with little room for flexible spending. However, as was mentioned earlier, due to difficulties distinguishing between state

[37] Centers for Disease Control and Prevention. "National Public Health Improvement Initiative." Centers for Disease Control and Prevention. http://www.cdc.gov/stltpublichealth/nphii/index.html (accessed October 25, 2012).

funding and federal flow-through, it is possible that some of these funding restrictions may be attributable to federal funding requirements.

With the exception of Jefferson County, AL, revenue from Medicare and Medicaid, private health insurance, private foundations, and other sources were not significant contributors to health departments' total revenue. The Jefferson County health department is unique in that it is the only locally run LHD in Alabama. All of Alabama's other local public health agencies fall under state auspices.

Allocating Funds to Public Health Programs and Services

Expenditures for each program area are presented as percentages of health departments' total expenditures and are displayed in Table 18. For four of the six health departments that reported on their expenditures, the sums of the percentages are between 31% and 48% for everything but "Other Program Areas." Their templates did not indicate the nature of these additional expenditures.

Table 18: Local Health Department‡ Expenditures by Program Area as Percentages of Total Expenditures

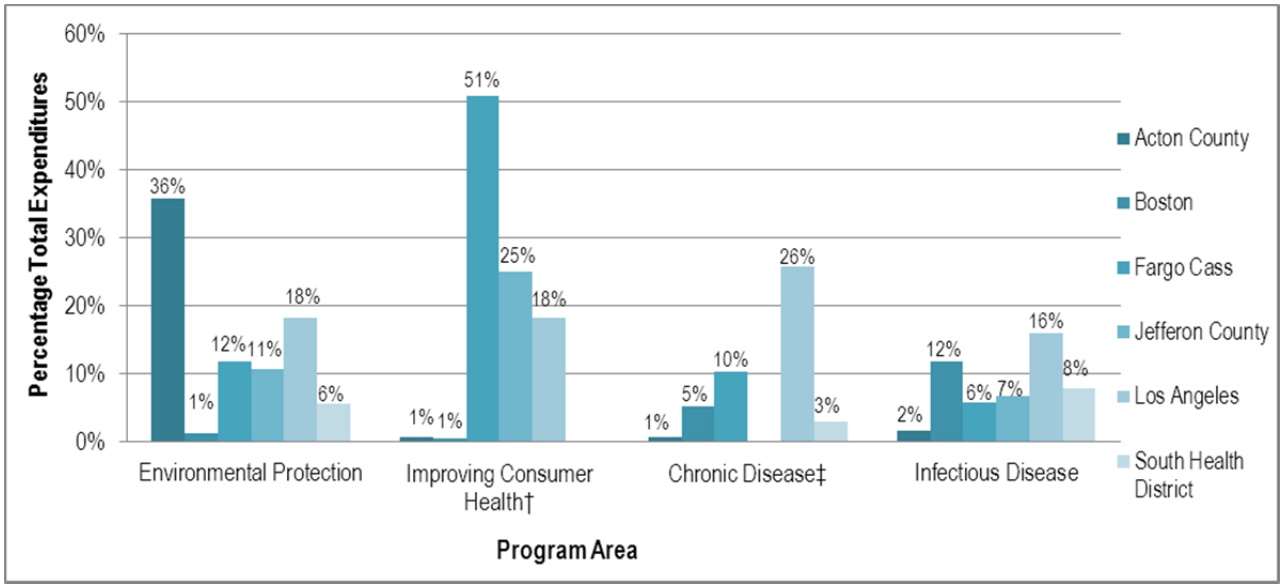
Program Area	Acton County (MA)	Boston (MA)	Fargo Cass (ND)	Jefferson County (AL)	Los Angeles (CA)	South Health District (GA)
Administration	Not Reported	7.5%	4.6%	52.3%	16.7%	6.2%
Chronic Disease	0.6%	5.1%	10.3%	Not Reported	25.8%	3.0%
Infectious Disease	1.7%	11.8%	5.8%	6.8%	16.0%	7.8%
Injury Prevention	0.2%	0.1%	Not Reported	Not Reported	0.2%	Not Reported
WIC	Not Reported	0.0%	5.9%	3.9%	0.0%	12.5%
Environmental Protection	35.7%	1.2%	11.7%	10.7%	18.3%	5.5%
Improving Consumer Health	0.6%	0.5%	51.0%	25.1%	18.3%	Not Reported
All Hazards Preparedness and Response	0.6%	2.0%	6.4%	0.7%	6.0%	4.9%
Quality of Health Services	0.4%	0.0%	Not Reported	Not Reported	0.8%	Not Reported
Health Data	0.4%	2.3%	Not Reported	Not Reported	0.7%	0.5%
Health Laboratory	0.2%	0.0%	Not Reported	Not Reported	1.9%	Not Reported
Vital Statistics	0.2%	0.3%	Not Reported	0.6%	0.5%	Not Reported
Other Program Area	59.2%	69.2%	4.2%	0.0%	N/A	59.7%
Total	100.0%	100.0%	100.0%	100.0%	105.1%	100.0%

Los Angeles did not provide an explanation why the sum of their program area expenditures exceeded 100% of their total expenditures.

‡ Custer health department did not report their expenditures and therefore is not included.

LHDs varied in the nature of their expenditures, but each reported spending at least 10% of their total expenditures in at least one program area. The most commonly reported areas were environmental protection, improving consumer health, chronic disease, and infectious disease. However, even in these "popular" areas, there was significant variation as illustrated in Figure 8.

Figure 8: Environmental Protection, Improving Consumer Health, Chronic Disease, and Infectious Disease Expenditures as Percentages of Total Expenditures*



*Custer did not provide expenditure information and therefore is not included in this figure.

†South Health District did not report their expenditures for this program area and is therefore not included in this grouping.

‡Jefferson County did not report their expenditures for this program area and is therefore not included in this grouping.

Key Site Visit Findings

This section details findings from our site visits across the seven case study states and provides additional information about how public health is funded. Below, we describe information regarding processes and strategies for allocating funds, sources of funding, the impact of federal initiatives, strategies for maximizing available resources, and other successful approaches related to financing.

Allocating Funds to Public Health Programs and Services

Health departments are financed through a mix of federal, state, and local funds. Federal funds tend to be allocated through categorical or block grant mechanisms, as described earlier, while state and local funds are mostly comprised of state and local General Fund allocations, designated tax levies, and fees and fines. While most of these funding sources, with the exception of General Fund allocations, are designated for specific public health purposes, SHDs can often exercise discretion in determining who provides the service (LHDs versus other community based organizations), and allocation processes and amounts for local jurisdictions. General Fund allocations are further complicated by the need for state and local agencies to "compete" for resources, with public health vying for resources against other governmental agencies such as education, corrections, and law enforcement. Once funds are designated for public health purposes, SHDs then use processes and funding formulas that often differ depending on the specific program or by the type of state governance structure for public health (centralized, decentralized, shared, or mixed). Below we describe the state-level processes for allocating funds to local public health.

Implications of Governance

Governance describes the relationship between state and local public health agencies within a state, and is determined based on criteria such as whether employees of local public health units are employees of the state or local government, whether the local units (through their local governments) have authority to impose taxes, fees or fines to support public health, and whether the local units (through their local governments) can independently institute public health policies such as tobacco ordinances. Governance has significant public health financing implications in that it helps to determine how funds are allocated, whether the state or local government has authority to make specific funding decisions, and whether revenues are retained at the state or local level. Below we describe the commonly agreed upon categories of state-local public health governance, and their implications for public health financing.

Decentralized governance. In states with decentralized governance, LHDs are independently governed by the local jurisdiction and retain authority over budgetary decisions. Four of the seven case study states are decentralized, yet each respondent described different processes for allocating funds from the state to the local level. One participant explained that statute dictates the authority of LHDs, their ability to organize as districts, and the processes by which LHDs may allocate funds from the state. However, after funds are passed down by the state, LHDs have the flexibility to tailor budgets within the confines of the grant. One interviewee explained it as "pretty flexible…we identify major policy objectives [at the state] and then tailor it to the local community." In this state, there is a statutorily created entity that represents the LHDs

and advises and consults with the state to determine funding formulas, distributions, and allocations to locals. In a different decentralized state, funds are distributed to LHDs via some 3,000 individual contracts between the state and local health departments. The state health department also offers competitive funding opportunities to LHDs and nonprofit organizations.

Centralized governance. Two of the case study states are centralized, which means that the state retains authority over many budgetary decisions and that staff are employees of the state. One centralized state health department passes approximately one-third of the funds it receives from the state General Fund back to LHDs, where it is predominantly used for operational support. Other state-level money is used to fund LHD staff. LHDs collect insurance reimbursements for services, which go to the state's central office and are subsequently passed back down to LHDs. Local taxes go directly to the LHDs and are used locally for infrastructure/administration and other related costs. One case study participant with a largely centralized governance structure (meaning that there are also independent LHDs that serve no more than 25% of the state's population) said that it would be beneficial if LHDs had increased flexibility for using funds at the local level, as it might help them "stretch" the limited funds that they receive.

Shared governance. One case study participant had shared governance, where LHDs are led by state employees but local governments retain at least some authority over budgetary decisions, or conversely, where LHDs are led by local employees but the state retains at least some budgetary authority. In this shared governance state, there are 159 county health departments organized into 18 regional health districts. Health district staff are a mix of state employees and district employees, and county health department staff are local employees. The state allocates funds to each district as part of a master agreement, and respondents report that they are told "to the dime" how to spend funds received from the state. While state funding for public health is strictly accounted for, a standard accounting system is not used by all LHDs in the state. Because the district is not a legal entity, funds and contracts are administered through the lead county—typically the largest county—in each district. Health districts are permitted to apply independently for federal and foundation grants, but LHDs are not. The counties are required to provide a grant-in-aid payment[38] to the district health departments, the money for which

[38] Grant-in-aid payments are defined by Merriam Webster Dictionary as "a grant or subsidy for public funds paid by a central to a local government in aid of a public undertaking." (http://www.merriam-webster.com/dictionary/grant-in-aid). In this case, the central government making the payment is the county, and the local governments are the districts receiving the funds.

comes from county General Funds, rather than public health-specific taxes. Local grant-in-aid funds can be used at the discretion of the director (e.g., for hiring, raises, or other actions).[39]

Funding Formulas

While governance structure often dictates the process by which funds are passed from state health department to LHDs, funding formulas are also used to allocate resources to LHDs for public health activities. In many instances, the disbursement of funds from state to local health departments is program-specific; the formula, or the process for developing and modifying the formula, differs by program area. Funding formulas may be dictated in statute (e.g., emergency preparedness), determined by the size of the population served by the LHD, or based on need factors within LHDs' jurisdictions (e.g., high-risk populations, poverty, socioeconomic status). One case study participant noted that their state health department also allocates funding to tribes.

To develop or modify funding formulas, a number of case study participants said that state agency officials consult with LHDs and other stakeholders. For example, one decentralized state health department established a committee consisting of LHD representatives and other local stakeholders to determine how to revise the state's MCH Block Grant funding allocations to LHDs. The committee researched options for revising the funding formula and identified a mutually agreeable solution to replace the original formula (which relied on maternal and child health indicator data) with a new formula that was based on population size. Conversely, in one centralized case study state, state program staff determine funding distributions at the regional level by reviewing regional data (e.g., number of clinical encounters, immunizations, etc.). In turn, regional staff determine how those resources will be allocated to each county health department within the region.

Competitive bidding. Some funding formulas call for the competitive bidding of programmatic funds for LHDs. For example, in one decentralized state, half of the funding available for maternal and child health is allocated to LHDs, but the other half is bid competitively by the state to LHDs and other nonprofit organizations. LHDs are not eligible to bid on all competitive funds offered by the state. For example, in this same state, statute dictates that 25% of tobacco funds go directly to LHDs, while another 25% go to competitive grants that can only be bid on by nonprofit organizations or educational institutions. The remaining funds are split between media and evaluation activities. Another state has a statutory mandate that LHDs have the right of first refusal in conducting public health activities; thus, federal funds are

[39] In this state, there is one health district that has an independent public health authority. This independent district operates differently and has different funding mechanisms than other county health departments and regional health districts within the state.

usually competitively bid or allocated directly to LHDs. However, this state has a strong precedent of collaboration between LHDs and nonprofit organizations, so locals may choose to partner with nonprofits on competitive funding bids. State health departments recognize that not all LHDs have the same capacity to pursue competitive funding, and one case study participant said that their state takes this into account when making some funding decisions.

Setting funding priorities. Three case study participants commented on the clear need for prioritization and strategic planning for funding lines. The MCH Block Grant, for example, requires state health departments to determine up to 10 priority areas for funds. One participant explained that their state health department has taken measures to ensure that the MCH Block Grant priority areas align with state-mandated activities (e.g. newborn screening). Other state health departments allocate funding to local jurisdictions based on need. For example, one environmental health program ensures that lead poisoning prevention funding flows to those jurisdictions known to have older homes. The state also allocates HIV funding to jurisdictions where the HIV epidemic is most severe. However, one case study participant commented that sometimes the state health department does not have the "real-time data necessary" to make funding determinations based on factors within jurisdictions. States may also need to consider political factors for funding prioritization, including executive branch support and legislative mandates.

Other considerations. Case study participants commented on the disparity in funding across jurisdictions when formulas distribute funds based on statute, population size, need, volume, or other factors. For example, jurisdictions that are more rural or that have higher poverty rates are also likely to have smaller populations and lower service volume; thus, these jurisdictions may receive fewer funds. One case study participant said that when their state revised a funding formula to allocate funds based on population, some districts with rapidly growing populations received more funds, while the more rural districts saw funding cuts. In this state, funding disparities can be problematic for LHDs, and once funds are allocated to locals, there is no ability to cross-subsidize LHDs within the same district.

Infrastructure Funding

Funding for infrastructure differs across the case study states. Public health infrastructure may include expenses not associated with particular programs or services, such as HR, accounting, building-related costs, and organization-wide performance management, among other elements. Many states allocate infrastructure costs to specific public health programs, where possible, and cover remaining costs using an indirect rate. Most of the case study

> "We're very progressive in our systems approach compared to what we might find in other agencies. [We are] fortunate in what we've invested in infrastructure. I think that's been [a] key to our success."
>
> - *State health department representative*

participants use this method, but the indirect rate covers different costs and functions in different states. For example, in one state with shared governance a portion of infrastructure costs (e.g., building costs) is billed directly to public health programs, while administrative functions (e.g., finance staff) are funded through indirect rates. In one decentralized state, the indirect rate is used to cover the cost of department-wide human resources, such as the public information officer, the state health officer, the deputy health officer, and the internal audit team. The costs associated with IT, however, are absorbed by specific programs. In a different decentralized state, the indirect rate covers administrative services and/or building space for some LHDs but not others, as some counties provide building space for LHDs and others do not. As such, the indirect rate in this state differs by LHD.

In some states, the state General Fund provides more flexibility to cover infrastructure costs. For example, one state health department uses state general revenue to cover central administrative costs such as human resources and non-program-specific IT, but uses local tax revenue for LHD maintenance and operations. A different state uses the state's General Fund to pay for overhead costs such as electricity, heating costs, and other utilities, while leases and rent are funded at the state budget level. One centralized case study participant emphasized that the state health department's investment in public health infrastructure has been critical to its successful operation. The state health department leases building space, pays rent, and funds other administrative costs through a cost system that allocates costs to programs based on employee salaries. One interviewee explained that the cost allocation system "allows us to respond better to a downturn. We can do some projection/analysis really quickly."

Other Sources of Funding for Public Health

In addition to federal and state funding, some public health programs generate earned income. In particular, health departments generate revenue through fees and by billing for clinical or public health services. Among the case study participants, state MCH programs are a substantial contributor to earned income, often the result of reimbursements received for childhood immunizations. Earned income is an important contributor to health departments' budgets, but participants said it adds little cushion to their budgets. Below, we describe how fees for public health services are collected and used by public health departments, how public health receives reimbursements and bills for clinical services, and how fees and reimbursements are playing a changing role in public health financing.

Fees

Case study participants may collect fees for public health services, including registration, licensing (e.g., food and lodging licenses), and inspections (e.g., environmental health and other programs). One case

study participant said that their state health department collects approximately $25 million in fees and fines primarily from registration and licensing, which then can be used to offset program costs or support more administrative or infrastructure costs. A participant from a different case study state reported that their state collects approximately $8 million in revenue from a medical marijuana certification fee. Revenue from this fee supports overhead costs, the state's drinking water program, EMS, trauma, and hospital licensure. While this type of fee is less common in public health, it points to the unique sources of revenue that health departments may seek.

The authority to set fees for services varies with the state's public health governance. In centralized states, fee-setting authority rests with the state health department, while in decentralized states LHDs also have the authority to set fees. Some fees are set in statute, which limits the ability of health departments to increase fees. Two case study states said that legislation is required to increase fees for inspections, for example. In one state, this has resulted in much lower fees overall, as compared to neighboring states, that barely cover programmatic costs. If dollar amounts for fees are not set in statute, it may be easier for SHDs and LHDs to increase fees. For example, LHDs in one case study state only require Board of Health approval to increase fees.

Regardless of their authority, one case study participant said that the ability to increase fees is constrained by state government. As a result, the state health department is often unable to charge fees that provide adequate support for their services. In particular, environmental health programs have become increasingly reliant on fees to support their services. This reliance on fee revenue is problematic because it is unclear whom the health department may charge in some instances (e.g., rabies, complaint investigations). One participant said that there is an attitude in some jurisdictions that "if you can't generate a fee for it, we're not going to do it." This attitude has led to some localities only providing services mandated by the state or those that can be paid for by fees. For example, some LHDs have stopped collecting water samples and no longer conduct mosquito or rodent control. In a different state, the cost-to-revenue ratio for most environmental fees is between 4:1 and 3:1. Other case study participants echoed the concern that revenue for environmental health is not sufficient to cover program costs, but that states and localities are either reluctant or unable to increase fees. In another case study state, state-level fees are maintained in the state General Fund and local fees are maintained by LHDs. One interviewee noted that maintaining the fees collected by the LHDs at the state level might result in reduced appropriations for local public health from the state legislature. A different interviewee in this state explained that when the LHDs' revenue exceeds the annual estimate, the counties reduce contributions in an amount equal to the excess revenue.

Billing and Reimbursement

The majority of case study participants have established billing systems to facilitate third-party reimbursement for services provided by state and local health departments, though this may not be typical of all health departments. Case study participants discussed a mix of billing opportunities including Medicaid, private insurance, and other entities. While most discussed billing in the context of health insurance (i.e., Medicaid and private insurance), there were also examples where health departments directly billed individuals, other community based organizations, and other governmental organizations through contractual arrangements. For example, one LHD can bill their county's Federally Qualified Health Center (FQHC), a different case study participant can bill individuals for immunizations, and another can receive reimbursement for the state's worksite wellness program. Billing systems are most widely used, however, to bill Medicaid and private insurance companies for vaccines and immunizations.

The billing process often differs depending on the public health governance structure in the state. For example, some decentralized and shared state case study participants said that billing is mostly the responsibility of LHDs. Because the state health department in these states may not have the leverage to require all LHDs to bill for services, LHDs may implement different processes for billing, bill for different services, and have different rates of reimbursement. LHDs negotiate separate contracts with insurance companies and in one state there are "individual contracts with about 60 different insurance companies," an obvious barrier to broader implementation. One interviewee commented that a state-wide approach to negotiating rates would be useful to LHDs, especially for the bigger insurance companies in the states, stating: "There are about 10 big insurers in [the state] and if the contracts could be negotiated with those 10, it would be a huge savings [to the LHDs]." Billing and reimbursement may be facilitated in centralized states where one contract may be required for all health departments in the state. For example, one centralized case study participant explained that the majority of billing is done at the central office of the state health department, which limits local involvement in billing.

In some states, the ability to bill for public health services has allowed state health departments to absorb some reductions in funding at the state or federal level. One case study participant said that revenue generated through their state's genetic disease and newborn screening program enables that program to be self-supporting. However, case study participants noted that billing systems do not always enable health departments to cover the costs associated with providing related services and programs. For example, this state determined that it was not worthwhile to establish a billing system for public health laboratory services as the majority of their laboratory services are low-volume, reference work. An interviewee explained: "The reference [laboratory] work we do with the counties is not profitable. It's low volume… One of the reasons we do [reference testing] is because no one else wants to do it, or we have a public

health reason to do it." By contrast, the public health laboratory in a different state conducts a wider array of laboratory services, making a billing system more viable and creating significant revenue from third party reimbursements as a result.

Case Example: One State's Success with Immunization Billing

In Oregon, the health department has capitalized on federal funding opportunities through ARRA and the ACA to build one of the more advanced immunization registries in the county. Each LHD in the state has the capacity to bill for immunization services through this state-wide registry, which has increased LHDs' revenues for the vaccines they deliver. The state plans to expand the billing system to include family services and HIV services, among others. Oregon's program was used by the CDC as the basis of their Billables Project.

Case study participants discussed concerns regarding Medicaid reimbursement, an important source of revenue for state and local health departments. Medicaid reimbursements have historically been used to supplement multiple programs; thus, any reduction in Medicaid funding has wide-reaching impact. One case study participant said that their state has had difficulties with Medicaid billing due to managed care organizations (MCOs) taking over the administration of Medicaid. While MCO reimbursement guidelines should be consistent throughout the state, some are choosing to not accept bills for particular services. For example, one MCO is not reimbursing health departments for case management services for children with developmental delays. As a result of this shift in Medicaid administration, MCOs are drawing clients away from health departments, although if clients seek those services from health departments, they are provided without reimbursement. Despite these limitations, the case study participant reports that the state is considering a complete shift to MCOs for Medicaid, which may prove detrimental to public health.

Through the CDC Billables Project—an effort to expand health department capacity to bill insurance companies for vaccines and immunizations—two case study participants received funds that have been used by their states for new or expanded billing systems. As a result of this project, both states have improved billing infrastructure and one state also plans to implement an electronic health record (EHR) with an integrated practice management component.[40] These case study participants explained that they are expanding their billing capabilities to include other public health services. For example, a single LHD in one state now includes services for family planning and communicable diseases (e.g., tuberculosis case management) in their billing system, and the state health department is considering an expansion to include HIV services.

[40] Practice management systems are electronic systems which handle billing, scheduling, and other "business" aspects of medicine. (Source: http://www.ama-assn.org/ama/pub/physician-resources/health-information-technology/health-it-basics/practice-management-systems.page). An EHR with an integrated practice management system would have the patients electronic health record and scheduling/billing/etc. components linked together.

While the federal government is actively involved, through multiple initiatives, in the purchase of vaccines for children, some states must identify strategies to ensure that they obtain enough vaccine to cover all children. In particular, states that provide universal vaccine coverage for children must identify ways to obtain and distribute vaccine to pediatricians. In one universal vaccine state, this has meant that the state must also purchase vaccine. A different universal vaccine state, in light of a reduction in Section 317 funding,[41] attempted to work with insurers to develop an assessment on insurance that they would use to buy vaccine off the federal 317 funding schedule, thereby reducing cost. (The case study participant noted that this initiative failed for political reasons.) In another example, one case study participant, who is not from a universal vaccine state, was able to provide a significant number of immunizations through a combination of strategies, including Medicaid reimbursement and billing private insurers. The health department has also worked with school health programs to provide vaccines in schools.

There are inherent challenges associated with the implementation of billing systems for public health departments. For example, when one state first started considering billing for immunizations in the mid-1990s, the main obstacle was having enough financing in place to purchase a stock of private vaccine. Another case study participant discussed their LHD's efforts to establish a contract with a private insurer. The insurer, being uncertain about the extent of claims they might receive, put negotiations on hold to develop their nationwide policy about public health billing. The interviewee commented that exceptions will likely be written for public health clinics that do not have a physician on the premises, much like the exception that exists in the state's Medicaid contract. These exceptions will be important because without them, public health clinics would not qualify for Medicaid reimbursement. The interviewee also said that insurers are aware that health departments rarely decline services to people who lack insurance coverage, reducing their incentive to pay for these services.

Finally, inquiring about a patient's insurance status is a philosophical shift for health department personnel. Public health practitioners often resist considering insurance status when treating individuals as it conflicts with the philosophy that "public health is here to provide services regardless of ability to pay," as one case study participant stated. This transition may be made easier by the expansion of benefits and coverage through the ACA, including the "coverage of preventive services as first dollar coverage," which may help ease practitioners' apprehensions about billing and asking for insurance status, according to one case study participant. Opportunities to bill for services will be limited, however, as many key public health activities (e.g., investigations for outbreaks) will never be covered through insurance.

[41] Section 317 of the Public Health Service Act authorizes the federal purchase of vaccines, which have traditionally been used to provide immunizations for priority populations, including the uninsured. For more information, see the CDC FAQ about Section 317 Funds: http://www.cdc.gov/vaccines/spec-grps/prog-mgrs/317-QandA.htm.

The Implications of Federal Initiatives for Public Health

Federal support is essential for state and local public health, and federal initiatives have tremendous impact on state and local health departments. The case study participants discussed opportunities and challenges related to two recent federal initiatives, ARRA and the ACA.

American Reinvestment and Recovery Act of 2009

ARRA dedicated approximately $11.2 billion for health to various agencies within the HHS including HRSA, CDC, and the Substance Abuse and Mental Health Services Administration (SAMHSA), among others, and some of these funds were passed down to state and local public health via contracts, grants, and loans. At least three case study participants said that ARRA funds were beneficial in their states because they helped to "prop-up" the state health department's budget, buffer funding cuts to public health, and offset some recent loss of revenue that were primarily due to the economic recession. States that received ARRA funding for use by public health were able to "free-up" state General Funds for other purposes. For example, one case study participant said that their state health department received nearly $2 million in ARRA funds for use by their state's tobacco control program. This contribution, coupled with approximately $5.5 million in funding from the ACA, allowed for state General Funds to be used for other purposes. Likewise, the use of ARRA funds in other agencies (such as education or law enforcement) meant that state funds for public health did not need to be diverted to these areas. However, one respondent said that although counties in their state received some ARRA funding, there was not a huge impact on their budget because of their lack of ability to cost shift. The respondent explained: "There may have been benefit at the state level. In our county level, there wasn't the ability to do that cost shifting." States that were able to shift funds anticipate upcoming challenges because of reductions in both ARRA and ACA funding. One case study participant, for example, was forced to close the only clinic in one district health department, as ARRA funding is "running out."

Given the inherent challenges of ARRA being a temporary funding stream, most case study participants explained that they have used the money on one-time investments such as infrastructure or addressing public health preparedness (e.g., H1N1). Most of the case study participants did not use ARRA funds to hire program staff. One state that did use ARRA to fund employee salaries explained that staff were required to sign a waiver acknowledging that their position is federally funded and therefore temporary. This waiver requirement resulted in staff attrition to permanent positions prior to the end of the grant period, and one interviewee said that it has been challenging to hire replacement staff that are willing to serve for the remainder of the grant. In a different case study state, one LHD used ARRA funds to hire over 70 new staff. They are now cutting many of those jobs, but are striving to sustain the activities that

have been implemented as a result of the funding. Another concern is that Meaningful Use[42] requires significant investment in building information technology (IT) systems.

The case study states described other uses for ARRA funds. Two states expanded their state immunization programs, one using ARRA funds to buffer the costs of regular vaccine funding and the other to fully implement a state immunization registry. Another state used ARRA funding to create a billing system to support a public health program that serves infants and toddlers with developmental delays or disabilities. Some case study participants have used ARRA funds to help health departments prepare for national accreditation.

Patient Protection and Affordable Care Act of 2010

The ACA provides another unique opportunity for public health in that specific provisions expand access to affordable health insurance and increase access to preventive services. In addition to these provisions, which aim to improve health at the population level, the ACA establishes funding streams that target improvements to the public health system. One such funding stream that invests money in prevention and public health activities is the Prevention and Public Health Fund (PPHF). Case study participants discussed the ACA-related opportunities and challenges for public health financing.

Opportunity for public health to cover preventive services if more people are insured. Many health departments provide services to special populations (e.g., uninsured or underinsured) with little or no opportunity for reimbursement. Because the ACA aims to increase the number of individuals who are insured, it may provide the opportunity for public health to provide additional services or expand the breadth of preventive services provided. For example, one case study participant explained that the ACA will likely increase the number of adult males who are insured and eligible to receive certain preventive services (e.g., STD testing), which may increase the demand for those services at the health department. According to one interviewee, the expansion of the insured population will "have a huge impact, particularly in rural areas." Should the health department's patient base shift to include more insured individuals, it may provide an opportunity for public health departments to begin billing for these services, thus increasing revenue. This may be particularly beneficial in states with established billing and

[42] Meaningful Use refers to CMS' Medicare and Medicaid EHR Incentive Program, through which eligible providers and hospitals can qualify for incentive payments for adopting, implementing, upgrading or demonstrating meaningful use of certified electronic health record (EHR) technology. To qualify for the EHR Incentive Programs, an eligible providers must meet a number of criteria surrounding their professional training (e.g., whether they are a doctor, nurse, practitioner, etc.) among others. Although they are often the health professionals who deliver services for health departments, community health workers and nurses (among other health care providers) are not currently considered eligible professionals, making it difficult for many health departments to even qualify as eligible for the EHR Incentive Programs.

reimbursement systems. Another case study participant said that they have benefitted from the implementation of the pre-existing condition insurance pool in that some HIV patients that had received their drugs through the health department are now covered by that insurance pool. However, the ACA may also result in other shifts to reimbursement policies. For example, one interviewee said that beginning Fiscal Year 2013, they will be unable to use funds from the CDC's Section 317 Immunization Grant Program to provide services to fully insured individuals. From another state's perspective, one participant said that the ACA "is one of the rationalizations for reducing 317 [Immunization funding], [even through ACA provisions] haven't happened yet. Cutting preemptively leaves a hole."

Potential loss of clients to private health care providers. Clients of public health departments, given their new insurance coverage as a result of the ACA, may begin seeing private health care providers for preventive services. One case study participant said that LHDs in their state expect to see a decrease in the number of patients served, as a result of them being newly insured, although a different interviewee noted that their patient base may increase due to a likely shortage of private providers. The impact of this shift will depend on the extent of clinical services that are already being provided by the health department. For example, two case study participants said that if clinical preventive services (e.g., breast cancer screening) could be provided in the private sector, it would decrease the burden on public health to provide those services. This could allow health departments to refocus their efforts on "public health-centric activities" and to "get back to their core mission," which includes outreach, surveillance, assessment, and other non-clinical public health services.

Case study participants explained that some clinical preventive services are low-burden, low-cost, and more efficient for public health to provide—thus, "just because the private sector could be providing services does not mean that they will or that it makes economic sense for them to do it," according to an interviewee from one case study state. The interviewee expressed concern that if there are more individuals who are privately insured, private providers in the state may stop seeing patients covered by Medicaid because of its lower reimbursement rate. The state recently experienced this shift when the state health department ceased to provide Medicaid services for Early Periodic Screening, Diagnosis, and Treatment (EPSDT) due to a shift in the state's Medicaid model that enabled private providers to provide these services. (The rate of children receiving these services declined because EPSDT screening services are low-revenue-generating for private providers.) If patients have fewer options for private providers, it may result in the health department becoming the default Medicaid provider in the state.

Potential for public health to expand into other roles. The case study participants described specific program areas where public health has the potential to expand into new roles as a result of the ACA. For

example, if funding for breast cancer shifts to focus more on patient education and patient navigation, rather than screening and treatment, it may impact the activities of the health department. Similarly, immunization funding may shift focus to private sector issues such as provider education, monitoring adherence to vaccine schedules, and storage and handling of vaccines. A few case study participants said that state Medicaid is exploring how accountable care organizations (ACOs) can be established, which would shift payment and care delivery models and, potentially, the role of public health. One state's ACO model includes a heavy focus on public health, which will likely impact the state health departments' revenue and expenditure sources. The state health department is hopeful that their ACOs will partner with them to create programs that target local public health and prevention needs. One interviewee explained: "The [ACO] is created locally and they have to consult with the public health department and their providers and health systems. They have to create their own coordinating care organization at the community level." In a different case study state, the discussion around ACOs revolves around the state health department as a safety net provider, and thus may not follow the same reimbursement structure as other Medicaid providers. Another case study participant said that the state health department is exploring how they may assist nonprofit hospitals with their new requirements to conduct community health assessments, although hospitals have expressed little interest to date. One interviewee suggested that it might be beneficial if the federal government endorse the partnership of hospitals and state and local health departments for conducting community health assessments. Yet another potential role for public health, being explored by one case study participant, is partnering with other health care providers (e.g., community health clinics, provider providers, Area Health Education Centers (AHECs), etc.) in order to close gaps in access to care that may result from expanded health insurance coverage.

Potential to expand or reduce clinical services provision. Case study participants shared their thoughts on whether health departments will expand or reduce clinical services as a result of the ACA. Because of increased revenue from clients who now have the ability to pay for services through insurance, states may consider expanding service provision beyond the special populations that they traditionally serve (e.g., underinsured and uninsured). For example, one case study participant currently provides obesity screening to WIC patients only but is considering creating a "package" of preventive services for any health department client that might include, for example, cholesterol screening, blood pressure screening, and obesity counseling. Another case study participant expressed concern that providing more primary care services may impact their focus on the core function of public health.

A few case study participants believe they will move away from providing clinical services as a result of the ACA. One expressed concern that this may result in less direct income from third-party reimbursements and therefore reduced revenues. Another case study participant said that the role of their LHD would instead shift more towards policy, systems, and environmental change. However, with limited funding for these activities, it is unclear how health departments can delve too deeply into policy, systems, and environmental change efforts. One exception is the Community Transformation Grants, a competitive funding opportunity that has allowed many states and municipalities to engage in policy, systems, and environmental change related to healthy eating, active living, and the built environment. Interviewees noted that it is difficult to make the case for increased funding in this arena because the challenges being addressed are complicated and their outcomes often intangible or only noted in the long term.

Case Example: Implications of State Health Reform

Health reform efforts in one state mandate minimum health insurance coverage and provide free coverage for residents below 150% of the federal poverty level (FPL). This has resulted near-universal health care coverage of the state's residents. However, the state health department is facing funding challenges because of assumptions that public health will no longer need to administer certain programs once universal health care coverage is in place. For example, legislature eliminated $52 million for immunization from the state health department in the first year of health care reform. As a result, the state health department was initially unable to purchase vaccine for distribution to pediatricians, which caused a financial burden on those providers and limited them to only provide vaccine to insured patients, and temporarily preventing them from being a universal vaccine state. The state health department worked to restore funding for immunization, and is also continuing to work to counteract such state-level assumptions. One case study participant explained that although health care reform is likely to lead to a significantly higher portion of services being administered by the private sector, health departments will likely still play a significant role in providing services to safety-net populations.

The extent to which health departments may provide additional (or fewer) services may differ by region (e.g., rural or urban). One state explained that Medicaid patients might have difficulty finding providers who are willing to see them, which could result in them seeking primary care services from public health. This could be problematic in some states where workforce, especially in rural areas, is limited because there may not be adequate staff to fill gaps in access and to expand service provision by public health. Simultaneously, rural areas typically have a limited number of private health care providers. In addition to workforce concerns, one case study participant said that the current lack of IT capacity in LHDs (e.g., no EHRs) is problematic for the provision of primary care.

Finally, two of the decentralized case study participants noted that clinical services are not provided at the state level—LHDs are responsible for the provision of clinical services. As a result, the availability of services in the private sector may impact LHDs in their state, but will have less of an impact on the state health department itself. An interviewee from one state explained: "We don't do service delivery at the

state level. We do surveillance, technical assistance, and quality assurance. We do send out teams that do training and education…to the local public health departments." State officials report, however, that due to budget constraints, some counties have begun discussions about relinquishing local public health services to the state, which they are not prepared to provide due to the state's own budget limitations. This health department has worked hard to encourage counties to retain these public health functions.

Policymakers may not realize the continuing need for public health. Case study participants expressed concern that policymakers may not realize the continuing need for public health services given the changes that may result from the ACA, especially those that result from the potential decrease in the number of uninsured. Specifically, participants voiced concerns that funding streams (e.g., MCH block grant or Title X Family Planning program funding) may be hastily eliminated or reduced on the basis of universal coverage due to the ACA, which would significantly hinder the ability of health departments to continue to provide those services. The case study participants explained that even after the ACA provisions go into effect, there will continue to be populations that are not covered by insurance, for example undocumented workers and immigrants, legal immigrants subject to the five-year Medicaid waiting period, and other populations, as well as a continued need for services not covered by insurance (e.g., outbreaks and other investigations). The health department's role may shift to focus on outreach and education for these hard-to-reach populations, which may not be supported under current funding mechanisms. Indeed, some funding streams have already been reduced and are at risk for further reductions. One case study participant said that that if funds were to diminish, from the MCH Block Grant for example, "it would be catastrophic to the services they are able to provide through their health department system, such as well-woman and well-baby check-ups."

Case study participants also emphasized the lack of understanding of policymakers at all levels about the importance of public health and prevention, which impedes the ability of LHDs to implement programs and ensure that funding streams remain secure. One interviewee said that the "general attitude of pulling yourself up by your bootstraps" is pervasive and has resulted in "reductions in core public health" across the board. For example, the interviewee said that the CDC's funding formula for HIV prevention money is based on HIV prevalence. This has resulted in a decrease in funding to their LHD because they are a low-prevalence area, but they have had an active HIV prevention group for two and half decades. The interviewee said, "Part of me feels like we're getting penalized for being successful." The lack of understanding about the necessity of prevention in public health has also made it difficult for the health department to explain the need for federal, state, and local dollars to do work related to policy, systems, and environmental change.

Additional considerations. The overall financial impact of the ACA has been mixed, according to the case study states. In one state, the PPHF has been an important source of funding and the Community Transformation Grant program, specifically, has helped the state health department invest in infrastructure and engage in broad-reaching activities. In a different state, however, the legislature will not allow state agencies to accept funding associated with the ACA, unless those grants are for the continuation of existing programs, and requires health departments to inform the state if they plan to seek those grants. One interviewee explained that "There is a belief that public health is aligned with 'ObamaCare' because there is a lot of prevention in [the ACA]." The interviewee said it would be beneficial if the CDC did not link public health activities to the ACA, since it might have negative connotations in states that have filed suit against it. Without funding streams that are dedicated to building the infrastructure to receive clinical data and surveillance information, the state health department is unable to provide assistance to hospitals and providers who are looking to be certified as meeting Meaningful Use standards. In addition, it is often more difficult for public health to benefit from the incentives than it is for more traditional clinical providers.

As another example, a different case study state has used ACA funds distributed through the CDC's National Public Health Improvement Initiative (NPHII) to create an Office for Performance Management and to redistribute and dedicate staff time to performance improvement activities. While the funding has been beneficial for these activities, the award has been a challenge as they have sought to bridge the gap between meeting their department's performance improvement needs and addressing CDC's vision of performance management.

The ACA offers continued investment in public health, which will be important for the provision of clinical and public health services to the local level. Case study participants emphasized that PPHF funds must remain in the public health system, as opposed to allocating resources to physicians and clinical providers, especially as many categorically funded public health programs are now receiving the majority of their funds through the PPHF. Because of this, some of these programs may be at risk if cuts are made to the PPHF. An interviewee from one case study state summarized the importance of the ACA for public health: "The way I see the ACA is that it has really helped us drive closer to some of our priorities towards prevention. It has helped us focus our efforts on a few issues—tobacco, obesity, suicide prevention, violence prevention, community resilience, and injury prevention. It helps health departments do their job."

Maximizing Available Resources for Public Health

Case study participants discussed recent challenges related to public health financing. At the state level, budget constraints have led to a decrease in the availability of funds for public health and public health workforce concerns. Coupled with uncertainty about federal funding, these challenges have had a substantial impact on state and local health departments. In addition to state and federal funding shifts, case study participants expressed concern regarding federal strategies for public health financing that include categorical funding, reporting requirements for grants, and guidelines that restrict the use of federal funds. These challenges are discussed in greater detail below, along with the opportunities and strategies that case study participants identified for maximizing their limited public health resources.

State Budget Constraints

Decreases in revenue. All of the case study participants report being affected by state-level budget constraints, with some health departments being affected more considerably than others depending on the proportion of state funds that are contributed to public health in the state. For example, one state health department has historically had low contributions from the state General Fund for public health. As such, the health department has not had to adjust to severe cuts in state-level funding. (In the past, state General Funds accounted for approximately 10% of the health department's budget, which has been reduced to approximately 7%.) By contrast, a different state has seen a 20% decrease in state-level funding for public health since 2008. In most states, the economic recession has resulted in a decrease in revenue from taxes and fees (either state or local). In addition, state- and federal-level cuts cause the local budget to contract, which can diminish the funding available for LHDs. LHD representatives from one case study state also said that their ability to do work largely depends on local government support; for example, in this jurisdiction, the board of county commissioners serves as the local board of health. State and local health departments must identify unique strategies to address financial shifts and the nearly universal decrease in availability of state funds for public health.

Increases in costs and expenditures. In addition to decreases in revenue, some case study states face increases in various costs and expenditures. For example, one case study participant whose state health department provides home health services had to make up the shortfall when home health expenditures increased but revenue remained flat. Another participant said that his state is facing the obligations of growing health care costs associated with state-level health care reform. This cost, coupled with the growing cost of pensions and education, are crowding out funding for public health. Even as this state is working its way out of the recession, these added pressures make it increasingly difficult to get the public health budget back to its pre-recession days. One interviewee explained: "It's not that everyone is being

cut equally, but things like pensions have crowded out other areas. That's something we're struggling with even as we grow out of our recession." In addition, some case study participants report that health department budgets, like other state department budgets, have been negatively impacted by states' obligations to fund state workers' pensions.

State-level funding cuts to public health. Case study participants said that funding for public health is often the first state-level budget cut. One interviewee explained that health departments in their state have tried to "make the argument that public health direct services make money in the long run," but the state often decides that short-term needs trump long-term benefits. As a result, a number of case study participants have seen funding cuts across the board for public health, which leaves health departments to determine how those cuts will impact their state's public health system—for example, if reductions should be made across all public health programs or to specific programs. Some states have made this decision by prioritizing public health programs. Other case study participants said that the state has made cuts to specific programs, citing infectious disease laboratories and immunization programs as examples. Often, program-specific cuts are made at the state level, passed on to the state health department and, subsequently, onto LHDs. However, multiple case study participants report that they attempt to not pass along budget cuts to LHDs. One decentralized case study participant said that instead, the state health department makes cuts from the operational side by streamlining operations, rather than eliminating services at the local level. The participant noted that this approach may result in drastic state personnel reductions, however, which may impact the quality of public health programs. A participant from another case study state health department explained: "We [the state health department] try to tighten our purse strings as much as we can, but that's really difficult to a certain degree after a while….You want [the money] out to communities so they can do their work, but you also need infrastructure at the state." In one case study state, the state health department has had to prioritize work and consider potential programs to eliminate.

Approaches for addressing state-level budget constraints. One case study participant discussed how deficit spending has been addressed in their state via legislation—the Revenue Stabilization Act. The Act implements procedures that allow the state to make fiscally conservative projections and budgets and "requires the agencies to adequately plan through [the] budget process." A different state explained a budgeting process that identifies current expenses, financial targets, and strategies to address gaps. This "1-2-3 budget process" consists of the following steps: 1) produce a "quick and dirty" solutions budget based on trends in personnel and payroll; 2) reconcile the budget to ensure understanding of trends and to identify the variance that needs to be addressed; and 3) set targets at 10%, 15%, and 20% for all programs to address that variance. To address variance and balance budgets for public health, the health department

has focused on reducing expenses, redirecting revenue, and identifying other funding streams, which has enabled the health department, to date, to largely absorb state-level reductions. As another example, a different case study participant also has a statewide budget system to track expenditures and build budgets. The state is currently moving towards program-based budgeting and is considering what budgets would look like if they were defined by program area instead of line item. While legislation and state-level procedures have been helpful in these instances, they may not always be beneficial for balancing constrained budgets. One case study participant said that a political leader in their state has pledged that no new taxes will be implemented, which has limited the policy options of the state health department and will negatively impact their Medicaid and General Fund dollars. For example, the health department will be unable to introduce a tobacco tax that would offset financial losses to the tobacco program.

Balancing the Impact of Changes to Medicaid Funding

Case study participants indicated that Medicaid is a "big driver" of budget decisions. Case study participants described changes for public health related to Medicaid policies at the federal and state level, which have presented both opportunities and challenges for financing and reimbursement. The changes identified by case study participants are described below.

Changes to Federal Medical Assistance Percentages and Medicaid Federal Poverty Level . Although it is important to not interpret beyond what states directly reported, a number of case study participants indicated that changes in Federal Medical Assistance Percentages (FMAP) have had a positive impact on their state's financing for public health. One interviewee explained: "Increasing the FMAP rate by 10 percent helped with the displacement of $4 billion in General Funds. This money was used to help other programs and it kept us from the chopping block." Another participant reported that increases in FMAP have been helpful for both the state health department and LHDs throughout the state. By contrast, a participant from the state budget office in a different state said, "state governing is an exercise in Medicaid cost containment." Resulting from a 'loss' of ARRA funds and a decrease in FMAP, the state expects a shortage of $250-400 million in Medicaid by 2014-2015. A different case study participant explained that they are not allowed to adjust their Medicaid Federal Poverty Level (FPL) thresholds post-ACA because of state requirements to keep the provisions that were in place prior to the enactment of the ACA. With these restrictions, the state is concerned about that they will be unable to generate more revenue through increased copays and premiums to close the $45 million budget gap in their budget.

Changes resulting from the ACA. One of the case study participants, a state health department that is located within a superagency, explained that they are required to share resources with the state Medicaid agency and that as a result of ACA-related changes, the health department has had to compete with

Medicaid for funding. A number of case study participants expressed concern about the effect of the ACA on their state's Medicaid program. Similar to the concern about state-level funding for prevention, participants explained that it is difficult to explain how prevention results in cost savings for Medicaid and other insurance programs. One interviewee said it would be helpful if federal agencies could help quantify those potential savings. There is also concern that the additional Medicaid costs —especially in 2015 and later as the enhanced federal match through the ACA is eliminated[43] — will crowd out state funding for other programs.

Exploring opportunities for reimbursement. Increased revenue from reimbursement has become increasingly important for some health departments, particularly as public health begins to address changes that may result from the ACA. For example, one case study participant has adjusted copays and premiums to generate more revenue through their Medicaid program to account for inflexibility in FPL thresholds, described above. One decentralized state health department has successfully leveraged changes in FMAP for Medicaid match funds,[44] as well as reimbursements from select private insurance, to generate additional revenue. LHDs in this state have also received third-party reimbursement directly through the state Medicaid agency. The presence of a centralized billing system has facilitated third-party reimbursement in this state. A different case study participant plans to explore the Medicaid 90/10 match[45] as a potential approach for increasing reimbursements. In addition, the participant plans to explore whether public health will be considered eligible providers, making the departments eligible for increased Medicaid vaccine administration fee reimbursement rates ($14 per vaccination, up from $8) in the next calendar year. If the health department is able to make changes to their electronic billing system

[43] With Medicaid expansion under the Affordable Care Act, changes were made to the FMAP in order to help finance coverage for those newly covered individuals. Under these changes, "states will receive 100% federal funding for 2014 through 2016, 95% federal financing in 2017, 94% federal financing in 2018, 93% federal financing in 2019, and 90% federal financing for 2020 and subsequent years." For more information, see http://www.kff.org/healthreform/upload/8061.pdf. Further, the CHIP Program also currently includes an "enhanced federal matching rate…that is generally about 15 percentage points higher than the Medicaid rate." Under the Affordable Care Act, CHIP matching has been both extended and increased; the current rates have been extended through October 1, 2015, after which and through September 30, 2019, the rates will increase by 23%. For more information, see: http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Financing-and-Reimbursement/Childrens-Health-Insurance-Program-Financing.html

[44] Medicaid match funds are determined in each state by the FMAP. The FMAP determines the federal percentage of Medicaid services covered in each state and is based on state per capita income.

[45] The Health Information Technology for Economic and Clinical Health (HITECH) Act authorized the use of Medicaid enhanced FMAP at 90/10 matching to support health IT initiatives. In states that secure this funding, CMS will pay 90% of the cost for various administrative activities related to health IT, with the state responsible for the remaining 10%.

such that they may be able to submit reimbursements by both administrative code and CPT code, they would then qualify for additional federal reimbursement for their CHIP and Medicaid programs.[46]

Changes to Federal Funding Streams

The extent that public health relies on federal funding differs among the case study participants, both across state health departments and between state and local health departments in the same state. Case study participants are concerned about federal funding for public health and how changes in funding levels may impact state and local public health systems.

Impact on key public health programs. Case study participants discussed their concern that reductions in federal funding would negatively impact key public health programs. In particular, case study participants expressed concern about the future of funding for WIC. WIC is an essential component of the budgets in the case study states, and all of the case study participants said that funding impacts every local community. One case study participant explained that because the WIC program is so large in their state, if the budget for WIC is reduced by a small percentage, it would have a huge impact on the people who benefit from the program. In another case study state, WIC is a significant contributor to the state health department's budget: at $120 million, it accounts for approximately 20% of the state health department's expenditures. As another example, one case study participant said that a reduction in Section 317 grant funds has impacted their ability to provide immunizations, a key public health activity. To accommodate the reduction in funding, the state has discontinued some vaccine programs (e.g., employee vaccine clinics) and shifted revenue to ensure that other programs remain intact, such as rural vaccine programs. The participant said that this strategy may be used for other public health programs, as appropriate. A different state said that changes in requirements to Section 317 funding restrict the vaccines to only be administered to uninsured children. As a result, the public health clinics will have to turn away insured children unless the clinics are recognized as providers and are also able to bill for their services. One interviewee explained: "As federal funding goes away the [assumption] is [that the] program goes away. But we don't always have the luxury to do that in public health. We can't stop [providing] tuberculosis [services]." Case study participants in one state said that their laboratories only receive federal pass-through funding. As there is no state funding available for laboratories, federal cuts in this area pose a

[46] This state is operates CHIP as an expansion of Medicaid, and therefore may qualify for Federal Financial Participation (FFP) at enhanced FMAP. As described by Medicaid.gov, "administrative costs associated with CHIP programs operated as an expansion of a state Medicaid program may also be included on the forms CMS-21 if the state opts to claim Federal Financial Participation (FFP) at the enhanced Federal Medical Assistance Percentage." For more information, see http://www.medicaid.gov/Medicaid-CHIP-Program-Information/By-Topics/Financing-and-Reimbursement/Childrens-Health-Insurance-Program-Financing.html

significant risk. Other programs of concern that were mentioned by case study participants include emergency preparedness and the Ryan White HIV/AIDS Program.

In addition, one interviewee noted that federal cuts do not necessarily follow the data. For example, the CDC recently released a report about the continuing danger of lead poisoning and developed more stringent guidelines about dangerous levels of lead exposure. At the same time, Congress reduced funding for prevention in this area. The interviewee said that he sees a "disconnect between what CDC data are showing and decision making. We are being more constrained. I understand everyone's budgets are down, but we need to fund [public health's] core mission." Case study participants noted that due to state-level budget constraints and other factors, not all states have the funds to "backfill" federal reductions in funding.

Addressing ebbs and flows in federal funding. Ebbs and flows in federal funding for public health have been handled differently in each state. Some of the case study participants said that they make sure to use one-time federal funds for "one-time expenditures" (e.g., roads, capital projects, computer systems) rather than on investments that require ongoing revenues, such as staffing. For example, one state used emergency preparedness funding to buy equipment and systems, rather than staff support. If health departments choose to use temporary funds to hire staff, the individual is made aware that their position will go away if funding ends, according to two case study participants. A different case study participant explained this as a policy to "not build something that we couldn't sustain." However, because of limited funding, some states lack the opportunity to identify strategies to address budget challenges and are therefore forced to shut down programs if they lose federal funding.

Enhancing health departments' grant-writing capacity. One case study participant said in order to remain competitive for federal grants, the state health department has built up their grant writing capacity. A different case study participant described a strong revenue management unit at their state health department, which boasts a 90% win rate for the grants they submit and has been beneficial in identifying ways to maximize federal revenues.

> "State funds have significantly fallen off for public health. So any cuts to federal dollars directly impacts public health services; there is no other way to provide these services. There is no opportunity for states to shift funding or come up with other funding sources."
>
> - *Case study participant*

Restructuring to account for federal funding changes. As another approach, a different case study participant said that because of uncertainty about federal funding, they are exploring how state programs can be reorganized. For example, the state merged nutrition and physical activity into their chronic disease branch. While this shift has

increased coordination, in the short term, the participant is concerned that they may need to "un-do" this reorganization, depending on future changes in federal funding. One concern for states as they begin to reorganize their programs in response to health reform, or for any other reason, is that the new structures may not fit within existing categorical funding streams. A different case study participant explained that their state will be unable to backfill for federal cuts, nor restructure to account for funding changes: "State funds have significantly fallen off for public health. So any cuts to federal dollars directly impacts public health services; there is no other way to provide these services. There is no opportunity for states to shift funding or come up with other funding sources."

Categorical Funding Streams

Case study participants voiced concern about the manner by which federal funds are dedicated to the state and local public health system. Federal funds for public health originate from different agencies and are dedicated for specific public health programs and activities. These categorical funding mechanisms have resulted in funding siloes and some funding opportunities have stringent guidelines and administrative requirements that restrict the flexible use of funding.

Impact of categorical funding. The prescriptive nature of federal funding streams has led many health departments to develop and implement programs based on what is funded, rather than need. An interviewee from one state health department explained: "We follow very carefully the activities required by the grants, so that they are driving the policies here in the state." This may also reduce the flexibility of the public health workforce. For example, staff funded by WIC are only permitted to do WIC-related work which reduces the flexibility of health departments to allocate those staff to support other programs. This reduces efficiencies and may be particularly problematic for small health departments that, for example, fund just one nurse at 0.5 full time equivalent (FTE). This lack of flexibility is becoming a bigger challenge as states are increasingly reliant on federal funds. Categorical funding is beneficial, according to one case study participant, if the health department has "a clear health outcome for something you have to achieve" because then the funding is tied to that particular outcome. But because federal funds are designated for specific public health activities and programs, it prevents health departments from using funds to "fill the holes."

Block grants for public health. Block grants, such as the Preventive Health and Health Services Block Grant and the MCH Block Grant, offer greater flexibility for state and local public health departments. One case study participant explained, "What the [MCH] block grant has done is respond to the state needs and [it] can address holes where it doesn't fit anywhere else. It is the only thing in my office that I can fill holes with." However, because block grant funding streams are less clearly tied to a particular health

problem it may be more difficult to defend block grants in the face of budget constraints. One interviewee said: "I think the challenge around the block grant is that the categorical funding has a clear advocate. If you are talking about WIC, you have extensive support services. The largest disadvantage is the advocacy piece and [the block grant] is difficult to defend." It is difficult for health departments to track each dollar from block grants, which is a concern moving forward given the increased emphasis on federal tracking and reporting. An interviewee from a different case study state suggested developing more concrete goals for block grants, which might allow governments to demonstrate the value of block grant funding.

Federal Guidelines and Reporting Requirements

Reporting requirements. The administrative requirements attached to federal grants present a challenge for many health departments. One case study participant explained: "I have [the] Vaccines for Children Program (VFC) and [the CDC Section] 317 [Immunization Grant Program] funding that come in one grant application. They are all tracked separately. I have ACA or PPHF funding, VFC funding, and the Immunization Program (IP) funding; each of them have separate components. I am trying to track all of this for small amounts of money but for worthy projects. All of those come with increased administration and at some point; you figure is the juice worth the squeeze?" Many case study participants said that it would be useful if funding to specific programs, and likewise, their associated reporting requirements, could be streamlined. While participants said that they can appreciate the need to report time and spending allocations, these requirements are burdensome and require substantial staff time to track and report. One example of this burden is that financial reporting requirements may call for total budget expenditures and others for expenditures by line item. Other requirements are duplicative in nature; as one participant explained, they must implement separate state plans for cancer, heart, and oral health. There are also concerns that some federal grants will require more robust reporting. In response, one interviewee said, "What am I supposed to do with all of these requirements, when the budget is shrinking?"

Considerations and strategies. In light of federal funding being predominantly categorical, one case study participant from a state health department stressed the importance of flexible local funding streams to support broader work, including infrastructure development. The Communities Putting Prevention to Work program does put funds directly into communities, but one interviewee said that this approach runs a risk that efforts will be poorly coordinated. Other case study participants emphasized the need to streamline and consolidate planning processes, especially at the federal level, to avoid duplication of requirements and to avoid further overburdening state and LHDs. To facilitate this, one potential strategy is for federal project officers to have state-level experience (for example, through a six-month rotation), as it may help them to understand what may or may not be administratively feasible at the state level. A different case study participant commented that when federal programs send auditors to states, they

should be sure to visit LHDs to see how programs operate, rather than spending their time at the central office.

Public Health Workforce Issues

Shifts in state and federal funding for public health have led to staffing challenges in the case study states. Salaries for public health are generally not competitive, as compared to other industries, which has led to difficulty hiring and retaining qualified staff in many case study states. Even when health departments are able to recruit staff, it creates a problem for retention because staff frequently leave for other fields that are higher paying. Case study participants cited environmental health, health IT, and nursing as areas particularly prone to staff leaving public health for higher salaries in the private sector. Some states are able to leverage partnerships with community organizations to help sustain programs with limited staffing; however, one case study participant explained that they lose institutional knowledge by working with local partners rather than in-house staff. By outsourcing staff for certain public health activities health departments may also face sustainability issues for those programs because there are no associated FTEs.

> "With pensions and the whole [negative] national focus on government workers, it's hard to recruit some of the best and brightest coming out of public health school."
>
> - *State health official*

The challenges of hiring and retention across public health programs are further exacerbated by state-level budget reductions, which often results in downsizing and freezes to hiring and pay. One SHO explained that they "are in a constant mode of downsizing but not being able to backfill to keep up with increasing demands across bureaus and programs." In addition, there are efforts to contain pension costs in one state. Two pension reforms have been rolled out in the past five years in response to state budget constraints. This is problematic because pensions have historically attracted people to public service, rather than higher salaries in the private sector. These issues have led to further challenges competing with the private sector. One case study participant explained that over the last three years, the Bureau of Community Health and Prevention lost approximately 40% of their budget and 30 to 40 staff. Such budget reductions have led to low morale among public health staff in more than one state.

State-specific budget issues and administrative rules sometimes limit the hiring ability of health departments. For example, one state can no longer afford to support many of the staff positions at the state level, which has resulted in a heavy reliance on federal funding for workforce development. This is concerning because reductions in federal funding will result in layoffs. One interviewee explained, "Logistically, when we have to go to large scale layoffs, we're part of a larger agency, the skills aren't transferable, and the purpose is different. Because we are more than 60% federally funded, this is never

going to fund a whole position." Other states may experience workforce issues because of policies in place that limit hiring ability. One case study participant explained that state regulations mandate that functions that can be performed by state employees must be performed by state employees, which inhibits the state health department's ability to contract out work to nonprofits or other agencies. One state has the ability to work around authorization requirements because if they lose a person due to attrition, they can save that position and use it for another program.

As a result of these workforce issues, many health departments believe that they are understaffed. Some health departments believe that as a result they are unable to effectively pursue competitive federal grant opportunities. Representatives from both state and local public health departments in one case study state explained that in order to pursue grants, they must pull staff from other public health programs, which then presents staffing issues for those programs. At the state level, the health department sometimes does contract staff to pursue competitive federal grants. However, this strategy can be challenging given that some funding announcements have very short turnaround times—it is difficult to develop an approach to the response, get the proper approvals for contracting staff, and draft a response in a timely manner. This case study participant suggested that federal agencies require the submission of a brief proposal before requesting a full proposal. This would save health departments the investment of finances, time, and staff required for a full proposal. Another concern voiced by the case study participant is that without sufficient staff, they may not be able to adequately prepare for the changes that may result from the ACA.

Future Considerations for Public Health Financing

In addition to the strategies discussed above, the case study states are exploring or have implemented other successful strategies related to public health financing. These strategies are outlined below.

Exploring alternative funding mechanisms. Given the existing budget constraints in public health, case study participants expressed interest in pursuing alternate sources of funding. Some case study states are exploring funding opportunities from nonprofit organizations and foundations. However, case study states articulated concerns about grants from foundations, as "They are so specific [for a particular] purpose and short term. You can't think about them for anything sustainable." Another interviewee noted that pursuing grants requires additional staff, which can be a challenge given state restrictions on FTEs. Multiple case study participants said that LHDs – as opposed to state health departments – are more successful in seeking foundation funds. A unique funding approach that staff from one LHD had taken is to develop an EHR program for public health that they are hoping to sell to other health departments throughout the state. (The LHD has experience developing and selling other software applications.)

Strategies for obtaining reimbursements. As noted earlier, a number of the case study states have implemented systems to bill third parties, including private insurers, Medicaid, and others, for a range of clinical services. Rather than implementing a new billing system, one state is using their immunization registry to bill for services. The registry was developed by a major private insurer in the state, who was able to add fields to the registry for insurance information. This structure has facilitated billing, although there have been challenges with negotiating reimbursement rates. Case study participants are also seeking reimbursement for public health services beyond immunization and laboratory work. For example, one state health department recently began collecting reimbursements through Medicaid for their tobacco quit line. The health department capitalized on a change in CMS reimbursement policies by collaborating with the state Medicaid office to set up the reimbursement process. Now, the quit line operator asks for the enrollee's Medicaid number to verify Medicaid status. A different state worked to expand the professional scope of various public health practitioners to allow for reimbursement of activities that occur outside of a physician office. This change has provided an additional funding stream for the state health department because it allows oral hygienists to bill for sealants they provide in the community, and for their nurse practitioners to have more independence with respect to prescribing. The state health department is confident that this strategy will be successful, but they have had to invest significant time and effort working with dentists and dental groups to achieve this shift.

Identifying and engaging constituents. Constituents and public health champions may be the key to successful negotiations regarding funding allocations for public health, according to one case study participant. An interviewee explained, "We spend a lot of time communicating with our partners and they are the ones our legislature listens to. If we were to do it on our own, I don't think we'd be getting this funding. We keep them informed and educated and let them do what they need to do." The interviewee noted, however, that some public health issues have limited resources. For example, the state has had difficulty identifying active constituent groups and other information related to obesity efforts.

"We spend a lot of time communicating with our partners and they are the ones our legislature listens to. If we were to do it on our own, I don't think we'd be getting this funding. We keep them informed and educated and let them do what they need to do."
- *Case study participant*

Engaging partner organizations. To expand the reach of and encourage support for public health, health departments engage partner organizations with similar missions, including community groups, nonprofits, clinical service providers, academia, teaching hospitals, and other entities. Partner organizations are important for supplementing the work of the health department, and for contributing funding to public health programs and initiatives. To engage community partners in one case study state, the health department has pieced out small projects that are part of a four-year gubernatorial

initiative to reduce childhood obesity. The project has successfully engaged community partners, businesses, and other state agencies (e.g., transportation, agriculture, and education). In another state, the health department has begun convening "Hometown Health Coalitions" to identify and address local public health concerns. Health department staff assist the counties with convening groups but do not provide financial support. The Coalitions may pursue grants from foundations, the federal government, and other entities, which may help ease the administrative burden of grant writing.

Techniques to "manage" state budget constraints. The case study states have identified various approaches for dealing with state-level budget constraints. For example, some have made process adjustments to save on travel costs—state and local public health departments say they are more often using video conferencing and web conferencing. One state reports that they lowered their mileage reimbursement rates. In addition, to help health departments avoid losing staff, some health departments are furloughing some staff to save money. Other approaches include streamlining the contracts process for grants in order to reduce administrative costs, and cross-training staff to fill gaps due to programmatic cuts (e.g., training chemical hazards specialists to do lead assessments).

Communicating the value of public health. The case study participants also discussed the importance of communicating the value of public health to the public and to decision-makers. In particular, strong leadership was identified by study participants as important for garnering state-level support for public health. In one case study state, for example, participants noted their SHO's tenure, leadership, and vision as key to the successes of the state health department. This state has fared well despite challenging budget issues because of the SHO's knowledge, competency, and credibility. (SHOs in this state are not political appointees; rather, they are appointed by the State Board of Health's Committee of Public Health.) As many of these seasoned public health leaders are approaching retirement, the key informants highlighted that new health department leadership will need to articulate the value of public health and cultivate relationships with policymakers. They noted that this is particularly important in states where public health is not made a priority by state government. Similarly, LHDs must be able to communicate the value of public health at the community level. By identifying community leaders, LHDs may be able to better leverage support for public health, encourage the involvement of the community, and engage community organizations in health department initiatives. One case study participant explained that "No matter what your community is, you need to figure out who the leaders are in the community, what their needs are, and how to align your needs with theirs to fill those needs."

Discussion

This report describes how public health is financed at the national level and analyzes public health financing in seven case study states, including how public health departments address funding allocation, spending, revenues, budget constraints, and shifting demands and expectations, among other topics. There is limited data on public health financing in the United States; thus, this paper provides a more nuanced understanding of funding for public health in the case study states. Below, we provide a brief discussion of our quantitative and qualitative research findings as they relate to the key research questions that were used to guide this study. The research questions are grouped by topic area, as identified in the Introduction to this report, including: Public Health Expenditures, Source of Funding for Public Health, Allocating Funds to Public Health Programs and Services, Maximizing Available Resources for Public Health, and Future Considerations for Public Health Financing.

Public Health Expenditures

Federal expenditures for public health make up a very small proportion of federal health-related funding. In fact, annual federal public health expenditures average 1.5 percent of federal health-related expenditures. The largest proportion of federal health expenditures supports payment and provision of health care services. The health departments studied in this project reported on their expenditures for a variety of program areas, including: administration, WIC, improving consumer health, infectious disease, chronic disease, quality of health services, all hazards preparedness and response, environmental protection, health laboratories, health data, vital statistics, and injury prevention. We also asked health departments to report detailed financing information on their MCH and tobacco programs. When it comes to spending and public health, health departments are facing increasing challenges due to tightening budgets and unpredictable funding streams to support these programs, as well as others. Trends in federal expenditures show that funds for public health often ebb and flow. Further, in the wake of the economic recession and recent financial downturn, public health has suffered significant budget cuts at the federal, state, and local levels. As universal health care coverage and preventive care come to the forefront of health because of the ACA, gaps in funding for key public health activities are becoming increasingly prevalent. Further, the of lack a clear definition about what is public health (both in terms of how the public and policy makers perceive it, as well as in terms of defining it in a meaningful way across health departments) and what the core functions truly entail makes it difficult to define funding needs and track public health expenditures across jurisdictions.

Source of Funding for Public Health

Public health has traditionally received the majority of its funding from federal sources, with the largest percent generally coming from USDA (which funds WIC), followed by CDC, HRSA, EPA, FDA, and the DHS. As state funding has diminished as a result of the recession, federal funding has become a larger percentage of health departments' total revenue. The seven case study participants reported that the percentage of federal funding that supports their health department ranged from 26.8% to 74.7% of their total revenue, with five of the seven case study participants reporting more than 50% of their total revenue coming from federal funding. It is important to note that federal funding has not grown to make up for decreased state funding; in fact, federal funding has also decreased. However, federal funding has decreased at a slower rate than state funding and therefore has grown as a percentage of total public health revenue.

Generally, a smaller but significant percentage of health department funding comes from state sources, and much smaller percentages come from fees and fines and other sources. State General Fund monies typically serve as a flexible source of funding for state health departments, allowing them to finance areas not covered by categorical funding streams (such as infrastructure activities or administrative costs). General Fund money was also used by states in our study to backfill programs whose costs were higher than their dedicated revenues. All seven case study participants that we visited have experienced a reduction in their budgets for public health in recent years, in large part due to the economy. Some of the most dramatic decreases came from diminished state revenue and reductions in tobacco master settlement monies, although federal funding (in the form of categorical funds and block grants, particularly) has also decreased. Tightening budgets have resulted in program reductions, program cuts, and layoffs.

Allocating Funds to Public Health Programs and Services

As noted above, this study examined a variety of public health programs and services, including public health administration, WIC, improving consumer health, infectious disease, chronic disease, quality of health services, all hazards preparedness and response, environmental protection, health laboratory, health data, vital statistics, and injury prevention. Across the case study states, we found considerable variation in health department expenditures for different program areas, even for program areas that are usually considered key public health activities, such as infectious disease. We also found that the programs and services offered by state and local health departments vary across jurisdictions, differences which can impact expenditures. For instance, unlike most other states, the Alabama Department of Public Health is the administrator for Medicaid and CHIP and therefore pays for the clinical care received by children covered under that program.

The programs and services offered by a health department can also depend on other factors, such as workforce. For instance, the governmental public health system in Massachusetts consists of the state health department and 351 city- and town- level autonomous local public health agencies. While some of these agencies, such as the Boston Public Health Commission, have a robust workforce and infrastructure, many operate on minimal or no funding, with a workforce often consisting of one or a few full-time individuals. Therefore, rather than relying on the LHDs to deliver certain core public health services, such as WIC, the Massachusetts Department of Public Health has chosen to contract with a myriad health organizations to provide these services.

Maximizing Available Resources for Public Health

As health departments seek to maximize the limited resources available for funding public health activities and sources, creative strategies for funding are coming into play. Fees and fines, as well as billing and reimbursement, are becoming increasingly important funding streams to make up for shortfalls in federal and state budgets for public health. For instance, Medicaid can play a large role with respect to funding public health services through reimbursement for outreach and enrollment services, as well as for coordination of care, though some health departments are able to leverage Medicaid reimbursement better than others. Health departments are also learning to bill for services to cover their cost; for example, many health departments bill private insurers for the cost of a childhood vaccination. States have also utilized funding streams such as ARRA to shore up the budgets of other state programs, therefore helping mitigate potential cuts in state level funding to public health. Strategies such as these are particularly important for diversifying public health funding, as a heavy reliance on categorical funding limits health department ability to create synergies and programmatic efficiencies.

The governance structures of state public health systems can play a significant role in local funding levels for public health. For instance, one case study participant said that their centralized governance structure may help maintain local funding levels for public health because all of the counties provide funding to the state health department, although there is no obligation to do so. However, some local governments occasionally threaten to stop providing the money. For example, one county was considering eliminating the maintenance and operations money to support the local public health unit. The state was able to demonstrate that with just a "modest investment on their part" ($150,000 in local funds), the county received a lot of state support ($6 million in staffing) and was "bringing in a lot of valuable services and jobs into the county." The representative from the state indicated that the local government "likely would have shrunk the budget of the local public health unit more if it had been under their discretion." These sorts of demonstrations may help health departments maximize the limited resources they have.

Future Considerations for Public Health Financing Data Collection

As noted throughout this report, there are a number of important issues to consider with respect to collecting public health financial data. For instance, a lack of consistent terminology and clearly defined categories for data collection pose significant challenges to collecting public health data that can be easily compared across jurisdictions. Until we can consistently track public health financing in a way that is comparable across all state and local public health systems, we will not fully understand nor be able to effectively address any shortfalls. This concern may be particularly salient as the Affordable Care Act brings with it an expansion of benefits and health insurance coverage, including for clinical preventive services, such as vaccinations and screenings which are often provided by public health. If policymakers do not realize the continuing need for public health services, despite the decreased number of uninsured, and eliminate funding streams such as the MCH Block Grant or Title X Family Planning program funding, it would significantly hinder the ability of health departments to provide necessary services. A number of other key considerations are outlined below.

Developing consistent accounting systems. Public health financing lacks a comprehensive and easily understandable accounting system, which challenges policymakers and public health practitioners to effectively allocate resources for public health. While state and local public health financial data are captured annually through the NHEA by CMS, national data do not provide an adequate account of public health funding as a whole, as key program areas are missing. Further, state financial systems often do not align with the ASTHO tool that is used to collect financing information in the ASTHO state profiles, creating limitations for this data set. Five of the seven case study participants reported different figures for their state health departments for this study than they did on their ASTHO state profiles, despite researchers' efforts to capture the same data.[47] The PHUND$ initiative may be one way to counteract the inconsistencies in how public health financial data is captured, particularly at the local level. PHUND$ provides a web-based data collection portal and dashboard through which agencies can obtain instant analysis of data, including comparisons with peer agencies, overall financial condition utilizing ratio or trend analyses, and more. The system is in use by several states, and may provide a consistent method for assessing financial data across differing accounting systems used from jurisdiction to jurisdiction, as more states begin to use it. PHUND$ may be particularly useful in capturing local financing data to determine how it "rolls up" into reported state funding amounts. This could allow for an assessment of the extent to which missing local data accounts for observed differences in per capita spending amounts between centralized and decentralized states.

[47] The research team modeled their data collection instrument off of the ASTHO tool for collecting financing information for the ASTHO state profiles.

Ensuring data accurately capture the extent of public health funding. Due in large part to a lack of clear definitions, analyses of federal data may underestimate or overestimate public health funding. For instance, federal HHS funding data tends to fail to account for environmental health services. These services do not fall under the purview of public health at the federal level, but do tend to fall under public health at the state and local levels. As a result, federal funding analyses often fail to account for the full extent of federal governmental support for public health. To the extent that these non-HHS funding sources, such as EPA and USDA, provide core support that helps to sustain state and local public health infrastructure and capacities in addition to specific public health programs, an analysis only of HHS funding provides an incomplete picture. Funding for public health can also be overestimated, particularly when surges in funding associated with disasters or disease outbreaks provide a skewed perspective on the amount of money allocated to prevention and other essential public health services. To fully understand public health financing, it is critical to address these shortfalls to ensure complete and accurate data collection efforts.

Defining expenditure categories for public health components. The components of public health, including services, infrastructure, information systems, workforce, and other components, vary in the way they are funded. These differences exist at the federal, state, and local levels, which present a challenge when attempting to fully understand how states are funding their public health activities. For instance, when examining reports of expenditures for public health infrastructure activities, such as workforce, health information systems, organizational capability, and others, although most states appear to build infrastructure costs into their indirect rates, some states may account for only some components of infrastructure in their indirect costs and build the remaining costs into their program budgets. An added challenge is that differences are sometimes seen in budgets and allocations between the LHDs in just one state. This is especially true in states with decentralized governance, where LHDs are independently governed and retain local budgetary authority. It is important when capturing financial data on infrastructure costs, for example, that descriptive data also are obtained to precisely account for which infrastructure functions are included in those numbers. Obtaining and accounting for these data may help with avoiding false comparisons of costs and expenditures for public health functions and activities, such as infrastructure.

Acknowledging differences in funding formulas. Differences in funding formulas also play a role in public health data collection. For instance, some states direct funds to LHDs through formulas based on jurisdiction population or health indicator data, such as HIV rates. In these states, the state may allocate more funding to jurisdictions with higher disease rates or larger populations as compared to jurisdictions with lower diseases rates or smaller jurisdictions. This emphasizes the importance of collecting accurate

data on health indicators and disease rates, as it is often used to inform funding allocations. Sometimes funding formulas for LHDs are set in statute, while other times LHDs must competitively bid for funds. If LHDs are unable to effectively illustrate disease rates in their jurisdiction, they may be unlikely to create a compelling argument in a competitive bid. It is important that these differences are identified and acknowledged.

Defining a set of consistent, trackable set of public health activities and services. The 2012 IOM report recommends identifying a "minimum package of public health services" that should be available in all communities and can be consistently tracked across jurisdictions. By having a defined set of activities that can be tracked in an "apples to apples" manner across jurisdictions, we can begin to better understand differences in funding allocations across states, and determine optimal funding amounts for key public health activities. The Public Health Accreditation Board (PHAB) may be able to play an important role in defining public health activities, services, and functions as part of their national public health accreditation program. Many public health departments are already pursuing PHAB accreditation. As the PHAB accreditation program and Standards and Measures evolve, PHAB may be able to provide specific definitions for the various public health functions, as well as standardize the way public health financial data are reported.

Minimizing reporting burden. As policymakers, public health practitioners, and advocates seek to better define and capture public health financing data, it is important to identify strategies such as the PHUND$ initiative that may help minimize the reporting burden, especially for health departments that are operating with increasingly tight resources. The data collection tool used to obtain quantitative data from participants in this study was modeled on the ASTHO and NACCHO profiles. To minimize reporting burden, we chose to utilize existing questions and, wherever possible, asked health departments to verify the information from the most recent profile, rather than provide new numbers. Despite our efforts to minimize reporting burden even in this small scale study, we received feedback that it often took significant time to verify or fill in the numbers. The more closely-aligned that a financial system was with the template, in terms of presenting information by recipient, program area, etc., the easier it was for a health department to complete the template. For elements that did not align closely, health department staff had to spend significant time tracking down the necessary information. This was a particularly significant challenge when it came to collecting local information from centralized states, as few study site states' financial systems align with the NACCHO data collection tool.

Including definitions for program categories. Confusion about terminology included in the tool was also noted by a number of states. For instance, respondents in one state reported that they receive money

which they do not have authority to spend, and as a result, were unsure what to include in the revenue section of the template. Further, even for categories such as maternal and child health, where every state receives funding from the HRSA MCH block grant, health departments had different interpretations for what qualified as "maternal and child health programs;" for example, some included WIC as a maternal and child health program while others did not. As a result, differences in definitional interpretations from state to state limit our ability to compare findings. While ASTHO works to address this issue by including definitions in their state profile, it may be helpful for future data collection efforts to critically assess how definitions are interpreted in order to ensure that tools are collecting comparable data.

Recognizing gaps in data. Collecting data from LHDs can be particularly challenging. While the ASTHO and NACCHO data sets are well aligned, particularly in states where there are high response rates for the NACCHO profile, NACCHO representatives noted that the section of the NACCHO profile that asks about financing has considerably more missing information compared to other sections of the profile. Similarly, obtaining financing data from LHDs proved to be a significant challenge for this study, with lower response rates from the LHDs and more gaps in the data that were provided. Collecting detailed program-specific data proved particularly challenging for both state and local health departments. The MCH and tobacco sections of the state financing template contained significantly more null values than the sections reporting on overall revenue and expenditures, as most of the LHDs left these entire sections blank.

Acknowledging the impact of staffing differences. Another challenge in the collection of local public health data is that while most states health departments have Chief Financial Officers, the comparable position does not always exist or is less well defined in LHDs. As a result, whereas a state is likely to have a single staff member who can provide details on revenue and expenditures across the full department, the LHD might need to obtain that information from a variety of individuals, bureaus, and contracts, if they are able to provide it at all. It will be important to consider these challenges in future work towards improving public health data collection efforts.

Acknowledging different fiscal years among state health departments. Finally, differences in fiscal years can also present challenges for data collection and analysis. For instance, not all states operate on the same fiscal year calendar, which makes it challenging to compare spending and revenue across states, especially given the variable levels of funding for such categories as surge capacity or disease outbreaks. Further, different jurisdictions within states sometimes operate on different fiscal years calendars, once again complicating local data collection and making it difficult to draw conclusions across jurisdictions.

Lastly, some states use bi-annual budgets while others develop annual budgets, which also makes it difficult to draw accurate comparisons and conclusions.

This study sought to examine how public health services are financed in the United States. Through an environmental scan, expert consultant interviews, and seven case studies, the NORC team sought to gain a baseline understanding of public health data collection and begin to identify gaps in the current systems for collecting public health financial data. Having reliable and accurate information about public health finance is critical to understanding the way public health services are delivered in this country. The baseline data and gaps identified through this study help identify future considerations and articulate strategies moving forward. Although many questions remain, it is clear that the current system for collecting public health financing data in the United States has significant room for improvement. Public health practitioners, researchers, policy makers and advocates must work together to make changes and ensure the continued health of our nation.