Comparing North Carolina’s Local Public Health Agencies: The Legal Landscape, the Perspectives, and the Numbers
Comparing North Carolina’s Local Public Health Agencies

Support for this research project was provided by a grant from the Robert Wood Johnson Foundation.

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About the Project

In early 2011, UNC School of Government (SOG) faculty members Jill Moore and Aimee Wall began receiving an unusually large number of inquiries about North Carolina’s local public health agencies, prompted by several bills under consideration by the General Assembly. The proposed bills, if adopted, could lead to significant changes to local public health service delivery in North Carolina.

The inquiries included a mix of legal and practical questions. Those who sought the SOG’s assistance were interested in the changes the proposed legislation would make to the state’s public health laws, but they also wanted to know how the different types of agencies in operation across the state compared with one another on measures such as staffing, costs, public health service delivery, and health outcomes in the communities served by the agencies. The importance of these questions prompted Professors Moore and Wall to collaborate with their colleague Maureen Berner, a SOG faculty member with expertise in program evaluation, to submit a grant proposal to the Robert Wood Johnson Foundation to study local public health services in North Carolina. The proposal was funded and the grant period began in December 2011.

This report presents the key findings from this research, which has been conducted at an accelerated pace in order to be responsive to current legislative discussions. The report does not offer recommendations, best practices, or other endorsements related to the different types of agencies. Rather, the goal is to provide objective, methodologically sound research findings that will support state and local policymakers in their decision-making processes. For the remainder of the eighteen-month grant period, the research team will be communicating findings locally and nationally, and working directly with counties that may be considering shifting from one type of local public health agency to another.

Jill D. Moore, MPH, JD, and Maureen Berner, PhD, are the Principal Investigators for the project. Moore is coordinating the legal analysis and Berner is heading up the comparative evaluation. Moore’s team on the legal analysis includes Neil Dermody, JD, MPA; Chris Hoke, JD, with the N.C. Division of Public Health; Gene Matthews, JD, with the N.C. Institute for Public Health and the Network for Public Health Law; and Aimee Wall, JD, MPH. Berner’s team on the evaluation component includes Lydian Altman, MPA; Dayne Batten, MPA candidate 2013; Johanna Foster, MPA; Margaret Henderson, MPA; Milissa Markiewicz, MPH, MIA, from the N.C. Institute for Public Health and the Network for Public Health Law; and Tonya Walton, MPA.

All of the research findings and additional information are available online at www.ncphagencies.unc.edu.
Executive Summary

For many years, state and local policymakers, public health practitioners, and others have discussed the best way to organize North Carolina’s local public health system. In 2011, the conversation was reinitiated when several bills were introduced in the state legislature that, if enacted, would alter the legal and policy landscape for local public health agencies. However, comprehensive information about how the different agency types compare is lacking.

With funding support from the Robert Wood Johnson Foundation, the research team conducted a comprehensive analysis of public health laws in North Carolina, interviewed more than sixty state and local stakeholders (public health practitioners, county managers, county commissioners, state legislators, and others), and compared local public health agencies across a variety of financial, workforce, information technology, service delivery, and performance measures. The key findings of our research are presented below.

The Legal Landscape:

Local Public Health in North Carolina

Key Findings

- Each county must assure that public health services are available within the jurisdiction.
- Each county has options for its type of local public health agency. Any county may operate a county health department, join a multi-county district health department, or participate in a public health authority. Counties with populations exceeding 425,000 may form a consolidated human services agency. One county is subject to a unique law that allows it to provide public health services through a public hospital authority.
- The law defines core components of these agencies, such as the composition and role of the governing board; the qualifications, powers, and duties of the director; and the services the agency must provide.
- There are important differences between the types of agencies with respect to budget and finance, boards, appointment of directors, director qualifications, and personnel policies.
  - **Budget and finance.** District health departments and public health authorities have more independence from county government than county health departments and consolidated human services agencies.
Boards. The local agencies’ governing boards have different composition requirements, powers, and duties.

Appointment of directors. In a consolidated human services agency, the county manager appoints the agency director. In the other types of agencies, the governing board is primarily responsible for the appointment.

Director qualifications. Directors of county health departments, district health departments, and public health authorities must meet minimum education and experience requirements set forth in state laws. There are no similar requirements for a director of a consolidated human services agency.

Personnel policies. Employees of county and district health departments are covered by the State Personnel Act. Employees of a consolidated human services agency are exempt from the State Personnel Act and subject to county personnel ordinances and policies. Public health authorities are also exempt from the State Personnel Act and may establish their own salary plans and policies.

In practice, counties approach implementation of these agency types in different ways. For example, a county health department may adopt some characteristics of a consolidated human services agency or have a formal or informal agreement with a neighboring county that falls short of creating a district health department.

The Perspectives:

What Stakeholders Say

Key Findings

- Local stakeholders observed that all agency types have potential benefits and challenges and want to be able to choose the type of agency that best suits their community.
- Stakeholders stressed the importance of strong leadership in making any type of local public health agency succeed.
- Stakeholders emphasized that when public health practitioners, county administration, and local elected officials understand one another and work well together, the agency will be stronger regardless of agency type.
- Some county officials (managers, assistant managers, commissioners) voiced support for a system that provides a more active role for county administration in public health management and governance.
- All public health practitioners and many county officials voiced support for the role of an appointed board of health in public health governance.
While some stakeholders are concerned that if they join a district, the county’s sense of ownership of and funding for public health might diminish, others view joining a district as a way to save money.

Stakeholders use the term “consolidated human services agency” in different ways.

Stakeholders offered contrasting views on whether there is overlap in the work and clients of public health, social services, and mental health.

The Numbers:
Comparison of Agency Types

Key Findings

- Source of funding appears to be associated with agency type. County health departments and consolidated human services agencies tend to receive a larger percentage of their funding from county appropriations than districts and authorities, which receive a comparatively larger percentage of funding from other sources, such as fees for services.
- Regardless of agency type, as the size of the population served increases, both total expenditures per capita and FTEs per 1,000 population tend to decrease.
- While this research is focused on comparing the different types of agencies, it is important to note that the data indicate that there is as much variation within types of agencies as between types of agencies for most measures examined.
- Agency type does not appear to be associated with
  - use of mobile technology,
  - ability to supplement or replace state-provided software, or
  - number of public health services provided.
- Variation in local public health agency performance on selected service delivery outputs and community health outcomes cannot be explained by agency type.
Conclusion

One of our overarching goals was to determine whether the type of agency used to provide local public health services affects public health service delivery or health status outcomes within the county or counties served by the agency. We found that it does not. There was no statistically significant association between type of agency and health service delivery or health status outcomes.

Other information that we acquired, however, may be relevant to stakeholders as they consider state and local policy changes affecting agency type. First, the source of funding for local agencies varies by agency type. County health departments and consolidated human services agencies receive larger proportions of their total funding from county appropriations, while district health departments and public health authorities receive larger proportions of funding from other sources, such as fees for services. Second, most stakeholders at both the state and local level value local government’s role in public health and want to have a menu of options available for local officials to decide how best to manage public health services in their jurisdictions.

We also found some evidence of a relationship between population size and both expenditures on public health and FTEs per 1,000 population. For the most part, local public health agencies that serve larger populations have lower total per capita expenditures and fewer FTEs per 1,000 population. These findings are consistent with other research in this field, but because agency type rather than population size was the focus of our research, we did not further explore the role of population size.
Part 1. Introduction

In North Carolina, there are multiple types of local public health agencies in operation across the state. Some counties stand alone, while some work regionally. Some counties have taken steps to have public health and social services co-locate or coordinate service delivery. Some have created independent authorities for public health. In one county, the board of county commissioners, rather than an appointed board of health, is serving as the governing board for the public health agency.

For many years, state and local policymakers, public health practitioners, and others have discussed the best way to organize North Carolina’s local public health system. In 2011, the conversation was rekindled when several bills were introduced in the state legislature that, if enacted, would alter the legal and policy landscape for local public health agencies. Thus far, the conversation has focused on issues such as (1) allowing more counties to have the option of pursuing changes to governance and agency organization that are currently available only to large counties, (2) requiring that local agencies serve a geographic area that meets a minimum population threshold, or (3) encouraging counties to establish district health departments or public health authorities.

These policy conversations have provoked a number of questions about how the different types of local public health agencies in North Carolina compare on measures such as costs, staffing, service delivery, and community health outcomes. The answers to the questions were not readily available. With funding from the Robert Wood Johnson Foundation, this research study attempts to address this lack of information and provide state and local decision makers with a detailed comparative analysis of the different agency types.

“Some realistic information on the different models [would be helpful] . . . What counties are using it? How are they benefitting? Pitfalls and so forth, because right now, we’re just talking in a vacuum.”

County Commissioner
We gathered information to compare the types of agencies across three broad categories:

- **The Legal Landscape.** In the first section of the report, we provide the background necessary to understand the legal and policy landscape for the delivery of public health services at the local level. We offer answers to questions about the laws that apply as well as some insight into how the agencies operate.

- **The Perspectives.** The second section explores local and state policymakers’ and public health leaders’ subjective impressions of the different types of agencies. These impressions are a large part of what fuels discussions surrounding change at the local level.

- **The Numbers.** In the final section, we analyze quantitative data to compare the different types of public health agencies in five key areas: financing, workforce, information technology, services delivered, and performance on selected service delivery outputs and community health outcomes.

In addition to the information included in this report, supplementary materials are available online. For example, our website includes detailed questions and answers about each of the different types of local public health agencies, the directors, and the governing boards. The website also includes a detailed compilation of the perspectives summarized in the report as well as the raw data used in the comparative quantitative analyses. This additional information can be found at [www.ncphagencies.unc.edu](http://www.ncphagencies.unc.edu).
Part 2. The Legal Landscape:
Local Public Health in North Carolina

Questions

- Background
  - What did we want to learn?
  - How did we gather information?
- The Public Health System
  - Why does North Carolina have a public health system and local public health agencies?
  - What types of services do local public health agencies provide?
  - Are local public health agencies required to have certain categories of staff or to organize their workforces in particular ways?
  - How are local public health services financed?
- Describing and Comparing Agency Types
  - What types of local public health agencies presently exist in North Carolina?
  - Do the legal definitions of the different agency types provide the complete picture of how local governments provide public health services?
  - May any county form or participate in any of the types of local public health agencies?
  - How are the different types of local public health agencies similar?
  - What are the key differences between the different types of local public health agencies?
  - What role do county commissioners play in the creation and operation of local public health agencies?
  - May county commissioners directly assume the duties of local boards of health? If so, what duties would they assume?
Key Findings

- Each county must assure that public health services are available within the jurisdiction.
- Each county has options for its type of local public health agency. Any county may operate a county health department, join a multi-county district health department, or participate in a public health authority. Counties with populations exceeding 425,000 may form a consolidated human services agency. One county is subject to a unique law that allows it to provide public health services through a public hospital authority.
- The law defines core components of these agencies, such as the composition and role of the governing board; the qualifications, powers, and duties of the director; and the services the agency must provide.
- There are important differences between the types of agencies with respect to budget and finance, boards, appointment of directors, director qualifications, and personnel policies.
  - **Budget and finance.** District health departments and public health authorities have more independence from county government than county health departments and consolidated human services agencies.
  - **Boards.** The local agencies’ governing boards have different composition requirements, powers, and duties.
  - **Appointment of directors.** In a consolidated human services agency, the county manager appoints the agency director. In the other types of agencies, the governing board is primarily responsible for the appointment.
  - **Director qualifications.** Directors of county health departments, district health departments, and public health authorities must meet minimum education and experience requirements set forth in state laws. There are no similar requirements for a director of a consolidated human services agency.
  - **Personnel policies.** Employees of county and district health departments are covered by the State Personnel Act. Employees of a consolidated human services agency are exempt from the State Personnel Act and subject to county personnel ordinances and policies. Public health authorities are also exempt from the State Personnel Act and may establish their own salary plans and policies.
- In practice, counties approach implementation of these agency types in different ways. For example, a county health department may adopt some characteristics of a consolidated human services agency or have a formal or informal agreement with a neighboring county that falls short of creating a district health department.
Background

What did we want to learn?
There are many different laws, regulations, policies, and practices that work together to help define the parameters of local public health agencies in North Carolina. For this component of the research, we wanted to collect all of the relevant laws, generate comparisons of the laws that govern the different types of agencies, and synthesize our findings. The information reflected in this section is based on state laws in effect in April 2012. The General Assembly is presently considering bills that, if enacted, could change the answers to some of the questions presented. Expanded versions of the answers to the questions below, as well as more detailed information about all of the agency types and key players in the public health system, are available online at www.ncphagencies.unc.edu.

How did we gather information?
Our legal analysis team consisted of experts in public health law, including several individuals with particular expertise in North Carolina’s laws. We drew on this expertise to create an initial list of North Carolina statutes and regulations addressing local public health services or agencies. We also identified other state laws that are potentially relevant to the understanding or management of different types of local agencies, such as laws that affect the operation of independent authorities. We prepared narratives describing these laws in question and answer format. Some of the background and practice-based information reflected in the narratives is drawn from other non-legal resources, including personal experiences and communications over the years.

The Public Health System

Why does North Carolina have a public health system and local public health agencies?
A North Carolina law describes the purpose and mission of the state’s public health system. The purpose is “to ensure that all citizens in the State have equal access to essential public health services,” and the mission is “to promote and contribute to the highest level of health possible for the people of North Carolina” by

- identifying and preventing or reducing community health risks;
- detecting, investigating, and preventing the spread of disease;
- promoting healthy lifestyles and a safe and healthful environment;
- promoting the accessibility and availability of quality health care services in the private sector; and
- providing health care services when they are not otherwise available.¹

¹ G.S. 130A-1.1.
This mission and purpose is consistent with the Institute of Medicine’s 1988 definition of public health as “what we, as a society, do collectively to ensure the conditions in which people can be healthy.” The emphasis this definition places on collective action and the conditions that promote good health reveals a distinction between public health and clinical health care: public health is concerned with the health of populations, not just the health status or condition of a particular individual.

Although the mission and purpose of the public health system is set by the state legislature and extends to all residents, most public health activities and services are carried out locally. Under North Carolina law, the legal responsibility for providing local public health services is given to counties. State law dictates that a county may satisfy this duty by operating a county health department, participating in a multi-county district health department, forming or joining a public health authority, establishing a consolidated human services agency (if the county is eligible to do so), or contracting with the state to provide public health services.

What types of services do local public health agencies provide?
Local public health agencies provide services at both the community and individual levels. While there is no single law describing the minimum services that a local agency must provide, there are three primary state laws that affect the scope and range of local service provision.

The first of these is a law that describes the public health services that the General Assembly has determined are essential to promoting and contributing to the highest levels of health and that should be available to everyone in the state. This law describes four categories of services: health support services, environmental health services, personal health services, and public health preparedness. Appendix A identifies the specific services in each category.

Another statute authorizes the N.C. Commission for Public Health to establish standards for the nature and scope of local public health services. The commission has adopted rules, known as the mandated services rules, which specify some of the public

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3. G.S. 130A-34; 130A-45. A state law that authorizes a hospital authority to provide local public health services appears to apply only to Cabarrus County. S.L. 1997-502, sec. 12 (“Any county which, on or prior to July 1, 1997, established a hospital authority board composed of no more than seven members under the provisions of Part B of Article 2 of Chapter 131E of the General Statutes may, by resolution adopted by its board of county commissioners and with the approval of the State Health Director, assign that authority board the powers, duties, and responsibilities to provide public health services as outlined in G.S. 130A-1.1. Thereafter, such authority board shall act as the local board of health for the county together with such additional powers, duties, and authority assigned to it by the board of county commissioners.”).

4. G.S. 130A-1.1. This is the same law that describes the purpose and mission of the state’s public health system. See note 1 and accompanying text.

health services that local public health agencies must guarantee. The mandated services rules address thirteen types of services that fall into one of two categories: (1) services that the local agency must provide under the direction of the local health director and supervision of the local board of health; or (2) services that a county may provide through the local agency, contract with another entity to provide, or not provide at all if the local agency can certify to the state’s satisfaction that the services are available in the county from other providers. Each of the mandated services has its own rule that identifies more specifically which services must be provided or assured. See Appendix A for more information about the mandated services.

Another law requires each local public health agency in the state to be accredited by the North Carolina Local Health Department Accreditation Board. To be accredited, a local agency must satisfy accreditation standards that address the agency’s capacity to provide the “ten essential public health services,” a nationally recognized set of services that was adopted in 1994 by a national committee charged with providing a framework for effective public health systems. The ten essential public health services fall into three categories: assessment of community health status and health problems; policy development to educate the community about health, solve community health problems, support individual and community health, and protect health and ensure safety; and assurance of quality public health and public and private health care services within the community. The state accreditation law incorporates the ten essential services, and the state accreditation standards specify the activities local agencies must engage in to ensure their capacity to provide those services. See Appendix A for more information about the requirements of the accreditation law and standards.

These laws provide a starting point for understanding local public health services, but they do not paint the complete picture. Local public health agencies also must provide some services or perform other activities to comply with other laws. For example, Title VI of the federal Civil Rights Act requires local public health agencies to provide language assistance to their limited-English proficient clients. In addition, local agencies may provide services that go beyond those specified in the laws described in this report.

The North Carolina Department of Health and Human Services (DHHS) conducts a biennial survey of services that are provided by local public health agencies in North Carolina, which provides additional insight into the range of local public health services that are provided by the state’s local agencies. The services that are typically included in the survey are listed in Appendix B.

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6. 10A NCAC 46 .0201–.0216.
8. G.S. 130A-34.1 (requiring local health departments to obtain and maintain accreditation); 10A NCAC Ch. 48 (establishing the benchmarks and standards an agency must satisfy to be accredited).
Are local public health agencies required to have certain categories of staff or to organize their workforces in particular ways?

A state regulation addresses minimum staffing requirements for local public health agencies. It provides that, in addition to meeting accreditation requirements, agencies must employ a health director, a public health nurse, an environmental health specialist, and a secretary. These staff members must be full-time employees, but there is an exception that allows an agency to share a health director with another agency. The accreditation rules include a provision directing an agency to employ or contract with one or more licensed physicians to serve as medical director; however, it is possible for an agency to be accredited without satisfying every provision.

These minimal legal standards likely do not fully answer the practical question of how many or what types of staff members an agency needs. Instead, it is likely that staffing for local public health agencies is primarily determined by the services that the agencies are required to provide. As described above, there are several different sources of law that apply—the essential public health services law, the mandated services rules, and the accreditation requirements. While these laws do not always address staffing needs, agency management must plan workforce development in such a way that all of the required services can be available in the county. For example, one of the mandated services regulations requires that local public health agencies conduct sanitation inspections of restaurants. Another law provides that the individuals who conduct these inspections be authorized by the state in that particular field of work. Therefore, all local public health agencies must ensure that their workforce includes capacity for these types of sanitation inspections.

Local public health agencies have significant discretion with respect to organizational structure. In the course of this research, we reviewed sixty-eight organizational charts from a mix of agency types. While there are some trends and common features

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10. 10A NCAC 46 .0301.
11. 10A NCAC 48B .0901(b)(3). The accreditation rules establish benchmarks and specify how many benchmarks must be met in each of three areas: agency core functions and essential services, facilities and administrative services, and board of health. 10A NCAC 48B .0103. The medical director provision falls under agency core functions and essential services. An agency could skip this provision and still be accredited if it met a sufficient number of the remaining provisions in that area. Portions of the accreditation rules refer to other categories of agency staff members or to particular types of expertise that the agency must possess or have access to, but they do not explicitly require the agency to have staff positions for those categories or expertise. See, e.g., 10A NCAC 41B .0203 (directing agency to assure staff have expertise in data management); 41B .0301 (requiring access to and consultation with an epidemiologist); 41B .0701 (referring to unit directors for communicable disease, nursing, and environmental health).
12. For further details about the services in each of these categories, see Appendix A. On April 10, 2012, the national Institute of Medicine released a report which, among other things, defines a minimum package of public health services. The minimum package is based on the ten essential public health services and is more specific about the foundational capabilities and basic programs that, according to the authors of the report, “no health department can be without.” Institute of Medicine, Committee on Public Health Strategies to Improve Health, For the Public’s Health: Investing in a Healthier Future (2012). Pre-publication PDF version available at www.iom.edu. Although the “minimum package” approach is not presently reflected in North Carolina law, it is likely to drive future policy discussions regarding local public health.
13. 10A NCAC 46 .0213.
14. 15A NCAC 01O .0101.
Comparing North Carolina’s Local Public Health Agencies

across agency types, there are also interesting variations. Some agencies organize staff by profession (for example, nursing, environmental health) and others organize staff by substantive area (for example, community health, clinical, home health). While county and most district health departments appear to be organized in similar ways, the less common agency types—consolidated human services agencies and authorities—tend to have organizational structures that are uniquely tailored to their services and agency. For more information about the organizational structures of the different types of agencies, see Appendix C.

How are local public health services financed?

Funds for local public health services come from various sources, but the exact mix of funding varies significantly from one local public health agency to the next. Local public health agencies receive funding from each of the following sources:

- County appropriations (the portion of local taxes dedicated to public health services from the county or counties participating in the local agency)
- Medicaid reimbursements (fees for services and a cost settlement distributed by the state)
- State and federal funds (general aid to counties, state funding to support environmental health, state grants, and federal grants)
- Other revenues

Agencies may also receive funding from other sources, such as grants from private foundations or contracts for services. See “Financing” in Part 4 for a more detailed discussion of the funding sources and an analysis of how the proportion of funding from each source varies by agency type.

No law specifies the level of funding that local governments must provide for local public health services. However, the laws that require local agencies to provide particular services or engage in specific activities may effectively amount to an obligation to ensure that funding levels from all sources are sufficient to permit the local agency to comply with those requirements.15

Describing and Comparing Agency Types

What types of local public health agencies presently exist in North Carolina?

As shown in Table 2.1, North Carolina law defines five types of local public health agencies.

15. There are two maintenance-of-effort statutes that prohibit counties from reducing local appropriations for particular public health programs when state money increases. G.S. 130A-4.1 is a maintenance-of-effort requirement for maternal and child health services, and G.S. 130A-4.2 is for health promotion programs. These laws do mean that a certain amount of local funding must be provided for these services, but they are not a large factor in local funding for health departments.
Although state law gives counties the option of contracting with the state to provide public health services rather than operating or participating in a local public health agency, no county does so.

The map in Figure 2.1 shows which counties operate which type of agency. While this map provides a general picture of local public health services in North Carolina, it is important to recognize that all of the agencies that fall into a particular category are not identical in operation. State laws establish the terms that are used to describe the agencies, establish governing boards for the agencies that vary somewhat in composition and in powers and duties, identify a lead administrator (local health director) for each type of agency, and set some minimum standards for the services each agency must provide or ensure. However, state laws do not address every aspect of administration and operation, and there is a considerable amount of variation among agencies as a result.
Do the legal definitions of agency types provide the complete picture of how local governments provide public health services?

While the laws may appear to draw clear lines distinguishing between the types of agencies, in practice there is more of a spectrum. Because there are aspects of operations that are within local officials’ discretion to manage, local leaders have adopted variations on the different agency types that can blur the distinctions between county health departments and other types of local public health agencies—especially consolidated human services agencies and district health departments. For example, a county health department may

- share administrative staff with a different county agency, such as the department of social services;
- consolidate administrative functions, such as finance or human resources, in a single office housed in county operations rather than in one of the departments;
- co-locate its public health and social services agencies and possibly share front desk and intake operations;
- have an agreement in place with a neighboring county for provision of one or more specific services; or
- have a direct contract in place with staff from a neighboring county for provision of services in off-hours.

May any county form or participate in any of the types of local public health agencies?

Any county may operate a county health department, participate in a district health department, or form a public health authority. Under present law, only counties with

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Creative Staffing Options

Greene County operates a county health department and currently does not have enough full-time staff to manage all of the county’s required environmental health work. In order to stretch its limited resources and fill gaps, the county has a three-part system in place:

- **County staff.** The county employs one full-time environmental health specialist, who is responsible for on-site wastewater permitting and some other programs.
- **Staffing agency.** The county contracts with a public health staffing agency, the North Carolina Alliance for Public Health Agencies, for a part-time environmental health specialist who is responsible for food and lodging inspections.
- **Direct contracting.** If there is a vacancy in the county position or another gap that needs to be filled, the county has an informal agreement in place with neighboring Wayne County. Greene County will enter into a direct contract with one or more of Wayne County’s environmental health specialists to do work in the evenings, on weekends, or on employees’ days off. Because of the strong, collaborative relationship between the counties, Wayne County’s health director has readily agreed to this arrangement in the past. In addition, Greene County worked with the state to ensure that the specialists have permission (referred to as “authorization”) to do environmental health work in a second county.

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a. See [www.ncapha.org](http://www.ncapha.org/).
Comparing North Carolina’s Local Public Health Agencies

How are the different types of local public health agencies similar?
Each local public health agency in North Carolina has a board, a director, and an agency with staff members who provide public health services at the local level. Each agency is required to be accredited by the North Carolina Local Health Department Accreditation Board.

- **Boards.** The boards governing the agencies serve as the policy-making, rule-making, and adjudicatory bodies for public health within the department’s jurisdiction. Each type of board may impose fees for public health services, subject to some conditions.
- **Directors.** Each local agency has a director whose role is defined in part by laws that specify the powers and duties of a local health director. The powers and

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17. See note 3.
18. The main statute setting forth the powers and duties of local health directors is G.S. 130A-41. See also G.S. 153A-77(e) (consolidated human services directors); 130A-45.5(c) (public health authority directors). However, other powers and duties appear in several other statutes in G.S. Chapter 130A. Some of these additional powers and duties are cross-referenced in G.S. 130A-41, but some are not.
duties do not vary much by agency type, but there are a few differences that apply to a director of a public health authority or a consolidated human services agency.

- **Services and activities.** Each agency must engage in activities and provide services necessary to satisfy accreditation requirements and other laws, such as the North Carolina mandated services rules.

**What are the key differences between the types of local public health agencies?**

There are important differences between the types of agencies in five general areas: budget and finance, boards, appointment of directors, director qualifications, and personnel policies.

- **Budget and finance.** County health departments and consolidated human services agencies are components of county government and are units of the county for many purposes, including finance and budgeting. The budget of a county health department or consolidated human services agency is established by the county it serves, and the county is held accountable for financial management under state law.19 In contrast, public health authorities and district health departments function as separate entities. They establish their own budgets, separate from the county, and are directly accountable for compliance with state financial management laws.20 They may submit budget requests to the county for funding to support their work, but the overall budget remains within their control.

- **Boards.** The boards of the different types of agencies differ, both in powers and duties and in membership. Public health authority boards have expanded powers and duties compared to county and district boards of health. Consolidated human services boards have all of the powers of county and district boards of health, except that a consolidated human services board may not appoint the agency director (who is appointed instead by the county manager). See Table 2.2 for a summary comparison of the boards’ powers and duties.

  The number of board members may be as few as seven for a public health authority board, or as many as twenty-five for a consolidated human services board. The composition of board membership also varies by type of board. See Table 2.3 for a summary comparison of the membership requirements.

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19. The applicable law is the North Carolina Local Government Budget and Fiscal Control Act, G.S. Ch. 159, Subchapter III, Art. 3.
20. G.S. 130A-36(a) (a district health department is a public authority as defined in the Local Government Budget and Fiscal Control Act and thus subject to that act); 130A-45.02(g) (a public health authority is a public authority as defined in the Local Government Budget and Fiscal Control Act and thus subject to that act).
Table 2.2. Comparison of Powers and Duties by Type of Board

<table>
<thead>
<tr>
<th></th>
<th>County Board of Health</th>
<th>District Board of Health</th>
<th>Public Health Authority Board</th>
<th>Consolidated Human Services Board</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adopt local public health rules</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Make policy for the local agency</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Adjudicate appeals related to local rules or fines imposed by the local health director</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Appoint local health director after consultation with board (or boards) of county commissioners</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>No, county manager appoints human services director with consent of the board</td>
</tr>
<tr>
<td>Impose fees for services</td>
<td>Yes, subject to approval of BOCC(^a)</td>
<td>Yes, subject to approval of all BOCCs(^a)</td>
<td>Yes</td>
<td>Yes, subject to approval of BOCC(^a)</td>
</tr>
<tr>
<td>Prepare and recommend the agency budget</td>
<td>Informal role(^b)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes(^c)</td>
</tr>
<tr>
<td>Approve local public health agency budget</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Enter contracts(^d)</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Set salaries of employees and professional reimbursement policies</td>
<td>No</td>
<td>Yes, with approval of Office of State Personnel(^e)</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Employ legal counsel and staff</td>
<td>No</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Construct or otherwise acquire property for use as public health facilities</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Sell surplus buildings, land, and equipment</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Establish and operate health care networks and contract for the provision of public health services</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

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- **Appointment of directors.** The appointment of the local health director is managed differently by the different types of agencies:
  - In county and district health departments, the director is appointed by the local board of health after consultation with all applicable boards of county commissioners.
  - In a public health authority, the authority board appoints the director after consultation with all applicable boards of county commissioners.
  - In a consolidated human services agency, the director is appointed by the county manager with the advice and consent of the consolidated human services board.
Comparing North Carolina’s Local Public Health Agencies

If the county commissioners have abolished the board of health, as permitted in counties with populations over 425,000, then the commissioners have all the powers and duties of the local board of health, including the power to appoint the local health director. This is the only circumstance in which the county commissioners may directly appoint the local health director.

- **Director qualifications.** The directors of county health departments, district health departments, and public health authorities must meet minimum education and experience requirements set forth in state laws, which generally require a background in medicine, public health, or public administration related to health services. The law creating the position of consolidated human services.

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services director does not require any specific education or experience, but North Carolina’s standards for local public health agency accreditation specify that the agency’s governing board must appoint a local health director who meets the requirements of the law that applies to county and district health directors. However, the accreditation program does not require local agencies to satisfy every provision in the standards—agencies may skip a small proportion of the standards and still be accredited. Therefore, it is possible that a consolidated agency could satisfy accreditation standards without meeting the specific standard that addresses the director’s qualifications.

- **Personnel policies.** The employees of county and district health departments are covered by the State Personnel Act. Public health authorities are exempt from the State Personnel Act and have specific statutory authority to establish salary plans for their employees. Employees of consolidated human services agencies are exempt from the State Personnel Act and are subject to county personnel ordinances and policies. The directors of all of the different types of local public health agencies may appoint employees, but appointments made by a director of a consolidated human services agency must be approved by the county manager. The directors of the other types of departments are not required to obtain the county manager’s approval before appointing employees.

What role do county commissioners play in the creation and operation of local public health agencies?

North Carolina law requires counties to provide public health services to their residents. County commissioners take several actions to ensure that this happens:

- **Selection of agency type.** Commissioners are key players in the selection of the type of local public health agency. In all counties, the commissioners may choose to operate a county health department or jointly resolve with the local board of health to join a district health department or form a public health authority. If the county meets a certain population threshold (currently 425,000), the commissioners may choose to operate a consolidated human services agency in which public health, mental health, and social services are provided by a single agency.

- **Appointment of board.** County commissioners make appointments to the local public health board. The board of county commissioners appoints all the members of a county board of health, a single-county public health authority

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22. See 10A NCAC 48B .1304; see also 10A NCAC 48B .0901(b)(1) (requiring the agency to have, or to be recruiting, a local health director who meets legal requirements for the position).
23. The accreditation rules establish benchmarks and specify how many benchmarks must be met in each of three areas: agency core functions and essential services, facilities and administrative services, and board of health. 10A NCAC 48B .0103. For example, a local public health agency must satisfy at least six of eight benchmarks pertaining to the board of health.
24. Such counties must also have a county–manager form of government pursuant to G.S. 153A-81. G.S. 153A-77(b). Tyrrell is the only North Carolina county that does not have a county–manager form of government pursuant to G.S. 153A-81. Personal communication, Professor Carl Stenberg, UNC School of Government (February 2012).
Comparing North Carolina’s Local Public Health Agencies

board, or a consolidated human services board. The boards of district health departments or multi-county public health authorities are appointed somewhat differently: the board of county commissioners of each participating county appoints one county commissioner to the health board, and then those commissioners appoint all the remaining members. Finally, in counties that meet a population threshold (presently 425,000), the county commissioners may serve as the local board of health.

- **Approval of budget or budget request.** County commissioners approve the budgets of local public health agencies that are county departments. If the county participates in a public health authority or district health department, the commissioners may be involved in approving budget requests or providing funding to the agency, but it is not required.

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**May county commissioners directly assume the duties of local boards of health? If so, what duties would they assume?**

Under present law, counties with populations exceeding 425,000 may abolish any or all of their local human services boards (including the board of health) and permit the board of county commissioners to exercise the powers and duties of the abolished boards. The law that permits this applies to boards that are either (1) appointed by the commissioners, or (2) acting under the commissioners’ authority. This clearly includes traditional county boards of health and county consolidated human services boards. It may also include a board in a single-county public health authority, as such boards are appointed by the commissioners.

A board of county commissioners in a county that meets the population threshold would not be able to abolish a district health department or a multi-county public health authority, because the commissioners appoint only a subset of those boards’ members, the agencies represent multiple counties, and the agencies operate pursuant to their own legal authority (rather than the county’s). The board of county commissioners could, however, withdraw its county from a multi-county arrangement.

If a board of county commissioners abolishes its local health board, the commissioners would acquire the following powers and duties related to public health and the operation of the local public health agency:

- **Role and charge.** A local board of health is responsible for protecting and promoting the public’s health within its jurisdiction. A board of county commissioners that assumes the board of health’s powers and duties acquires this responsibility.

- **Direct appointment of the local health director.** A local board of health appoints a local health director after consultation with the county commissioners. If the county commissioners abolish the board and assume

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27. G.S. 130A-40 (local health department); 130A-45.4 (public health authority). A consolidated human services agency has a director who is appointed by the county manager with the advice and consent of the board, G.S. 153A-77(e).
its duties, the commissioners will be responsible for appointing the local health
director. In most cases, the local health director must meet minimum education
and experience requirements.28

- **Policy-making authority for the department.** The board of county
  commissioners would become the policy-making body for the local public
  health agency.29

- **Rule-making authority for public health throughout the jurisdiction,
  including within municipalities.** Local boards of health have the authority
to adopt rules to protect and promote the public’s health within their
jurisdictions.30 The rule-making authority of a local board of health differs from
the ordinance-adopting authority of boards of commissioners in significant
ways, such as territorial jurisdiction, rule-making procedures, and enforcement
options. A board of county commissioners that has assumed the powers and
duties of a local board of health will therefore need to determine and document
when it is exercising its general ordinance-making authority versus its public
health rule-making authority, to ensure proper procedures are followed and any
limits to the authority are observed.

- **Adjudicatory body for public health.** The board of county commissioners
would acquire the power and duty to adjudicate disputes pertaining to the
local agency’s application of local board of health rules or the imposition of
administrative penalties by the local health director.31 For example, if the local
health director imposed a fine on a restaurant for failing to comply with the
state law governing smoking in public places and the restaurant appealed the
fine, the board of county commissioners would hear the appeal and issue a
decision.

- **Imposing fees for public health services.** A local board of health has limited
authority to impose fees for services rendered by the local public health agency,
with the approval of the board of county commissioners.32 State law prohibits
fees for some services.33 Fees must be deposited into the local agency’s account
and expended for public health purposes.34 A board of county commissioners

28. G.S. 130A-40 (local health department); 130A-45.4 (public health authority). The law cre-
ating the position of consolidated human services director does not require any specific training,
education, or experience, but see the discussion of accreditation standards regarding the local health
director at notes 22 and 23 and accompanying text.

29. G.S. 130A-35(a).


31. The statutes that make the local board of health the adjudicatory body for these issues are
G.S. 130A-35(a) (county board of health); 130A-45.1 (public health authority board); and 153A-77(d)
(consolidated human services board). Actions that may be adjudicated and procedures for judica-
tions are in G.S. 130A-24.

32. G.S. 130A-39(g).

33. See, e.g., G.S. 130A-130 (testing or counseling for sickle cell disease); 130A-144(e) (diagnosis
or treatment of tuberculosis or sexually transmitted diseases); 130A-153(a) (childhood immuniza-
tions for families who meet income and other criteria); 10A NCAC 41A .0202(9) (testing and coun-
seling for HIV). Federal laws also prohibit or limit fees for some services. For example, local health
departments may not charge clients for language interpretation services. For some programs, fees
may be charged only in accordance with sliding scales set by federal regulations.

34. G.S. 130A-39(g).
acting as the board of health would have the authority to impose these fees, subject to any applicable limitations in state law.

- **Duties related to accreditation.** North Carolina law requires each local public health agency to obtain and maintain accreditation.\(^{35}\) As part of the accreditation process, the local board of health must satisfy at least six of eight benchmarks\(^ {36}\)—a duty the county commissioners would acquire. To satisfy a benchmark, the department must demonstrate satisfactory completion of a list of activities associated with the benchmark. The benchmarks for boards of health relate to issues such as ensuring training for board members, exercising rule-making authority, advocating in the community for public health, and promoting the development of public health partnerships.\(^ {37}\)

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35. G.S. 130A-34.1.
36. 10A NCAC 48B .0103(a)(3).
37. 10A NCAC 48 .1301–.1308.
Part 3. The Perspectives: What the Stakeholders Say

Questions

- Background
  - What did we want to learn?
  - How did we gather information?
- Benefits and Challenges
  - What do stakeholders perceive as the benefits and challenges of the agency types?
- Advice from Stakeholders
  - What advice do stakeholders have for counties that may be considering changing from one agency type to another?

Key Findings

- Local stakeholders observed that all agency types have potential benefits and challenges and want to be able to choose the type of agency that best suits their community.
- Stakeholders stressed the importance of strong leadership in making any type of local public health agency succeed.
- Stakeholders emphasized that when public health practitioners, county administration, and local elected officials understand one another and work well together, the agency will be stronger regardless of agency type.
- Some county officials (managers, assistant managers, commissioners) voiced support for a system that provides a more active role for county administration in public health management and governance.
- All public health practitioners and many county officials voiced support for the role of an appointed board of health in public health governance.
- While some stakeholders are concerned that if they join a district, the county’s sense of ownership of and funding for public health might diminish, others view joining a district as a way to save money.
- Stakeholders use the term “consolidated human services agency” in different ways.
- Stakeholders offered contrasting views on whether there is overlap in the work and clients of public health, social services, and mental health.
Background

What did we want to learn?
As discussed in the previous section, North Carolina allows counties to select one of several different agency types for delivering local public health services. Many counties have chosen to retain the traditional county health department model, several have joined with other counties to form district health departments, and a few counties have opted to provide public health services through authorities or consolidated human services agencies. One facet of this research project was to synthesize and compare local policymakers’ and public health leaders’ subjective impressions of the different types of local public health agencies. These impressions reflect the perspectives that fuel some of the discussions about change at the local level.

How did we gather information?
We convened four focus groups and conducted key informant interviews. A total of sixty-four individuals (stakeholders) participated in this component of the study:

- **Four focus groups.** Two groups involved randomly selected local health directors and the other two groups involved randomly selected county officials (commissioner members of boards of health, county managers, or their designees).

- **Interviews.** Key informant interview subjects included current and former local and state public health practitioners, county managers and assistant county managers, county commissioners, state legislators, representatives from the North Carolina Association of County Commissioners, and representatives from the UNC Gillings School of Global Public Health who work closely with local public health agencies.

This section provides a summary of the information gathered during focus groups and interviews. It highlights and discusses eight overarching key findings, summarizes stakeholders’ impressions of the four agency types, and offers some advice and insights from stakeholders who have been involved with changing from one agency type to another. More detailed findings from the focus groups and interviews are included in Appendix D.

Discussion of Key Findings
During the focus groups and interviews, several common themes and common messages emerged. We have identified them as “key findings” and offer a brief discussion of each below, along with some selected quotes from stakeholders.
Local stakeholders want to be able to choose the type of agency that best suits their community.

Stakeholders expressed a desire to choose an agency type that is right for their local community. County officials voiced concern about being required by the state to join a district, and public health practitioners voiced concern about being required by boards of county commissioners to form consolidated human services agencies.

Stakeholders stressed the importance of strong leadership in making any type of local public health agency succeed.

Various stakeholders discussed how an agency’s success depends on having a health director who is an effective leader. They also observed that different types of agencies might require different types of leadership. For example, stakeholders reported that district health departments and public health authorities might be best served by individuals who are entrepreneurial and have business management skills, whereas training and experience across disciplines (public health, social services, mental health, integrated service delivery) would likely be needed to successfully lead a consolidated human services agency.

Stakeholders emphasized that when public health practitioners, county administration, and local elected officials understand one another and work well together, the agency will be stronger regardless of agency type.

Stakeholders observed that the relationships among key local leaders are critical to the success of any type of local public health agency. They explained that it can be challenging to build these relationships because local leaders have different professional backgrounds, interests, and focus. Stakeholders emphasized, however, that if local leaders are able to understand one another and align their goals, the agency—regardless of type—has a much better opportunity to succeed.
Some county officials voiced support for a system that provides a more active role for county administration in public health management and governance.

Some county officials (managers, assistant managers, commissioners) reported that accountability and transparency could be increased if local public health agencies were more like other county departments, with similar lines of authority (health director reports to county manager, who reports to county commissioners; local agency employees are subject to county personnel policies). These stakeholders explained that an enhanced role in public health governance would not only increase accountability and transparency but would also provide county managers with more opportunity to use their expertise in public administration to help guide health department operations.

All public health practitioners and many county officials voiced support for the role of an appointed board of health in public health governance.

Many stakeholders expressed support for a system where public health decision making is a step removed from elected officials in order to avoid the politicization of health policies and rules. These stakeholders stated that, through an appointed board of health (comprising a commissioner, health professionals, and members of the public), health policies can be made on the basis of good science without political bias. These stakeholders expressed some reservations about boards of county commissioners serving as boards of health, stating that commissioners already have full and varied agendas, generally do not have technical expertise in public health, and might be subject to political pressures.

In contrast, a subset of county officials voiced support for a system where the board of county commissioners assumes the duties of the board of health, noting a potential for greater accountability and faster and more efficient decision making. Some of these stakeholders expressed support for preserving the technical expertise of the board of health in an advisory capacity through the formation of a special committee.

“The county manager should have the authority, for lack of a better word, to insert him or herself into the operation if he or she sees something that is not serving the community well . . . We don’t really have an effective tool to make the changes that we think drive the right efficiencies in the organization, that build the right organizational structure, that put the focus on the right things.”

Assistant County Manager

“I think this whole thing comes down to a difference in philosophy. Should people who are spending our government money providing government services, should they be directly answerable to the public?”

State Policymaker

“[Boards of health] have operated traditionally, predominantly, if not totally, on the basis of good science . . . and have resisted any kind of political interference in their work, in their decisions, in their rule-making.”

Former State Public Health Practitioner

“We like the governance structure, the fact that there are certain mandated positions, so having the doctor and dentist and so forth gives a good representative base of expertise. And I think the other thing too that works for us is that there’s a high level of accountability because we’ve got folks that live in the community that serve on the public health board.”

County Commissioner

“I think that there should be a place for a group of professional health officials to serve as an advisor to a county commission. I think that’s a critical role . . . but in the end I think those policy choices ought to be chosen by the county commissioner[s].”

Assistant County Manager
While some stakeholders are concerned that if they join a district, the county’s sense of ownership of and funding for public health might diminish, others view joining a district as a way to save money. Many stakeholders noted that both district health departments and authorities seem to receive a lower percentage of their funding from county appropriations than traditional, single-county health departments. These stakeholders observed that districts and authorities, largely because they have more flexible management systems, appear to be able to bring in additional revenue by providing services (for example, home health, hospice) that is then used to supplement the cost of public health service delivery. While a number of stakeholders viewed this as a strength of those agency types (because the county could save on or control public health costs), others argued that counties in these arrangements might not be paying their fair share.

**Stakeholders use the term “consolidated human services agency” in different ways.**

Stakeholders interpreted and used the term “consolidated human services agency” differently depending on the level of integration they envisioned. Figure 3.1 illustrates the various ways that stakeholders describe consolidated human services agencies.

At one end of the consolidation spectrum, the agency would have a health director who reports to the county manager and employees who are subject to county personnel policies rather than the State Personnel Act. In the middle of the spectrum, there is more consolidation as administrative functions may be combined and staff may be cross-trained. At the other end of the spectrum, appropriate services are coordinated, boards are consolidated, and a human services director may be hired.

When discussing the benefits and challenges of the consolidated human services agency, most public health practitioners seemed to be describing an agency that belonged to the right end of the spectrum. On the other hand, most county officials seemed to describe an agency that fell more along the left or middle portion of the spectrum.
Stakeholders offered contrasting views on whether there is overlap in the work and clients of public health, social services, and mental health agencies.

Most county officials reported that the clients of local human services agencies, particularly public health and social services, are largely the same. These stakeholders stated that consolidation of human services agencies could therefore reduce duplication of services and save costs. Further, by co-locating agencies and coordinating service delivery, counties could make services more accessible to clients, who are already in difficult life situations.

By contrast, nearly all public health practitioners reported that there is limited overlap among the clients of the three agencies. They observed that where there is overlap, it generally occurs around clinical services. They noted that not all local public health agencies offer clinical services and that those that do may be shifting away from these types of services. Practitioners also emphasized that public health agencies serve the entire population, whereas social services and mental health agencies serve subpopulations. Practitioners further highlighted the different orientations of public health (for example, prevention) and social services and mental health (for example, crisis intervention).

“[Social services are] primarily providing assistance to individuals and families who are in crisis . . . . [Public health is about policy, it’s about prevention, it’s about] assurance.”

Former Local Public Health Practitioner

“Prevention, the total population perspective is something that didn’t quite fit with mental health [and] social services’ mission. They have a very specific mission, very specific population. So when you try to put them all three together it’s a tough fit because the missions do not align. And, in fact, they’re almost polar opposites with what we’re trying to do in terms of preventing problems and engaging the whole population and looking at the quality of life of the entire community versus services for very special populations.”

Former State Public Health Practitioner

### Figure 3.1. Ways That Stakeholders Describe Consolidated Human Services Agencies

- Health director reports to county manager
- Employees exempt from State Personnel Act
- Administrative functions are consolidated
- Staff are cross-trained
- Limited co-location
- Health director reports to county manager
- Employees exempt from State Personnel Act
- Services are coordinated
- Consolidated board is created
- Human services director is hired; reports to county manager
- Administrative functions are consolidated
- Staff are cross-trained
- Significant co-location
- Health director reports to human services director
- Employees exempt from State Personnel Act
- Services are coordinated
- Consolidated board is created
- Human services director is hired; reports to county manager
- Administrative functions are consolidated
- Staff are cross-trained
- Significant co-location
- Health director reports to human services director
- Employees exempt from State Personnel Act
Benefits and Challenges

What do stakeholders perceive as the benefits and challenges of the agency types?

Stakeholders identified benefits and challenges associated with all of the different types of local public health agencies. This section includes five tables that summarize stakeholders’ perceptions of the various agency types. We grouped the perceptions into four general categories: finance, workforce, service delivery, and management and governance. The high level summary in Table 3.1 spans across all four types and allows direct comparison of agency types. Tables 3.2 through 3.5 offer a more detailed look at the stakeholders’ perceptions of each agency type. Appendix D provides an even more detailed summary of stakeholders’ perceptions.

While some stakeholders perceived a feature of a particular agency type as beneficial, others perceived the same feature as a challenge or cause for concern. In many areas, perceptions were closely associated with stakeholders’ professional backgrounds. For example, many public health practitioners appeared to be in agreement on some issues, and county officials appeared to be in agreement on others. This was not always the case, however. On several issues, quite a few stakeholders from all professional backgrounds shared perceptions and opinions that were similar.

The stakeholder discussions related to public health authorities (see Table 3.4) were more limited in scope than those related to the other types of agencies. This is primarily because many stakeholders lacked familiarity with public health authorities and some were unclear on how the state’s two types of authorities (public health and hospital) differed. Some admitted to having no direct knowledge about these types of agencies and offered no views, while others offered views based on their knowledge of public authorities in other sectors (for example, water and sewer).

38. For information about the differences between a public health authority and a public hospital authority, see www.ncphagencies.unc.edu (Legal Landscape, Q&A).
<table>
<thead>
<tr>
<th>Country Health Department (CHD)</th>
<th>District Health Department (DHD)</th>
<th>Public Health Authority (PHA)</th>
<th>Consolidated Human Services Agency (CHSA)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Finance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potential for greater county investment in public health</td>
<td>Ability to lower county appropriation by bringing in multiple revenue streams that subsidize public health</td>
<td>Ability to lower county appropriation by bringing in multiple revenue streams that subsidize public health</td>
<td>May be able to save money by combining administrative functions</td>
</tr>
<tr>
<td>Financial investment varies by county; small (low population) counties may struggle to provide adequate resources</td>
<td>Dependent on revenue generation</td>
<td>Dependent on revenue generation</td>
<td>No hard evidence of cost savings</td>
</tr>
<tr>
<td><strong>Workforce</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staff are dedicated to public health</td>
<td>Able to retain quality staff, including specialized staff</td>
<td>Increased flexibility in hiring</td>
<td>Can cross-train staff and leadership can work together to prioritize use of resources</td>
</tr>
<tr>
<td>Can be challenging for small counties to recruit and retain staff</td>
<td>Requires a health director that is entrepreneurial and has business management skills</td>
<td>Requires a health director that is entrepreneurial and has business management skills</td>
<td>Requires a leader with training in multiple disciplines</td>
</tr>
<tr>
<td><strong>Service Delivery</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Responsive to local needs; visible to community</td>
<td>Effective way for small counties to provide quality services</td>
<td>Increased flexibility in providing services and ability to provide services to clients from outside the county</td>
<td>Opportunity to coordinate services and eliminate duplication of services</td>
</tr>
<tr>
<td>Quantity and quality of services varies from CHD to CHD</td>
<td>Might be challenging to be responsive to local needs</td>
<td>Might raise some fees in ways that hurt customers</td>
<td>Challenge to coordinate services because of differences in clients, mission, and funding</td>
</tr>
<tr>
<td><strong>Mgmt &amp; Governance</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BOH provides expertise that helps inform and depoliticize decision making; insulates county commissioners and health department from politically sensitive decisions</td>
<td>More flexibility with hiring, contracting, and procurement because of greater autonomy</td>
<td>More flexibility with hiring, contracting, and procurement because of greater autonomy</td>
<td>Has lines of authority that are similar to other county departments</td>
</tr>
<tr>
<td>BOH is not directly accountable to the public and can be challenging for county manager to become involved in management of health department when a problem is perceived</td>
<td>District board has similar benefits to county BOH, but can be more action-oriented because district board also has financial decision-making authority</td>
<td>Concern that local control/input is reduced; governance is separated from elected officials</td>
<td>Protection against political hiring (provided by State Personnel Act) is lost in CHSA model</td>
</tr>
<tr>
<td></td>
<td>Concern that county ownership is reduced and that district could dissolve if counties become unhappy</td>
<td>Challenging to launch an authority; might meet resistance from BOC, who don’t want to give up control, and from employees, who fear leaving the state personnel system</td>
<td>Concern about ability of consolidated board (or BOC) to make effective decisions given the need to know the rules and regulations of public health, social services, and mental health</td>
</tr>
</tbody>
</table>

BOCC: board of county commissioners; BOH: board of health; CHD: county health department; CHSA: consolidated human services agency; DHD: district health department; PHA: public health authority
Table 3.2. Stakeholders’ Perceptions of County Health Departments

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Challenges/Concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Finance</strong></td>
<td>■ Potential for greater county financial investment in public health</td>
</tr>
<tr>
<td></td>
<td>■ Can be a struggle for small counties to provide adequate resources</td>
</tr>
<tr>
<td></td>
<td>■ County appropriation can be dependent on county officials’ commitment to public health; variable from county to county and can vary in a single county over time</td>
</tr>
<tr>
<td><strong>Workforce</strong></td>
<td>■ Staff are dedicated to public health; have a single mission</td>
</tr>
<tr>
<td></td>
<td>■ Can be a challenge for small (low population) counties to attract and retain qualified staff</td>
</tr>
<tr>
<td><strong>Service Delivery</strong></td>
<td>■ Can be responsive to community needs</td>
</tr>
<tr>
<td></td>
<td>■ Public health is “visible” to the community</td>
</tr>
<tr>
<td></td>
<td>■ Can be effective for emergency preparedness; can readily partner with other county level responders</td>
</tr>
<tr>
<td></td>
<td>■ Quality and quantity of services can vary from county to county based on resources, leadership, and local support for public health</td>
</tr>
<tr>
<td><strong>Mgmt &amp; Governance</strong></td>
<td>■ Oversight shared by health director, county manager, BOH, and BOCC</td>
</tr>
<tr>
<td></td>
<td>■ Potential for greater collaboration with other county departments and schools; county manager can work with department heads to create a “county vision of services”</td>
</tr>
<tr>
<td></td>
<td>■ Professional expertise on BOH enables more effective public health policy</td>
</tr>
<tr>
<td></td>
<td>■ Appointed BOH can depoliticize public health decision making</td>
</tr>
<tr>
<td></td>
<td>■ BOH can insulate health director, department employees, and county administration from politically sensitive decisions and policies</td>
</tr>
<tr>
<td></td>
<td>■ Concern that BOH is not directly accountable to the public</td>
</tr>
<tr>
<td></td>
<td>■ Can be difficult to find health professionals to serve on BOH in small counties</td>
</tr>
<tr>
<td></td>
<td>■ Can be challenging for county manager to become involved in management of health department when a problem is perceived</td>
</tr>
<tr>
<td></td>
<td>■ Can be challenging for county manager to have health department employees under a different personnel system than most other county employees</td>
</tr>
</tbody>
</table>

BOCC: board of county commissioners; BOH: board of health
## Table 3.3. Stakeholders’ Perceptions of District Health Departments

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Challenges/Concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Finance</strong></td>
<td>With lower county appropriation, concern that counties might not have “enough skin in the game”</td>
</tr>
</tbody>
</table>
| ■■ County can save money (lower county appropriation)  
■■ Can achieve economies of scale by spreading administrative costs over a larger operation  
■■ Can bring in multiple revenue streams that can subsidize public health |  
■■ With lower county appropriation, concern that counties might not have “enough skin in the game”  
■■ Dependent on revenue generation; financial viability might be challenged in a location where alternative revenue streams are scarce  
■■ Unequal appropriations from different counties could result in dissolution of district |
| **Workforce** | Requires a health director that is entrepreneurial and has business management skills |
| ■■ Able to attract and retain qualified staff; can pay higher salaries  
■■ Able to afford and fully utilize specialized staff |  
■■ Requires a health director that is entrepreneurial and has business management skills  
■■ Challenge for health director to foster an environment where employees view themselves as part of an integrated district |
| **Service Delivery** | Can be challenging to be responsive to local needs, especially if dissimilar counties (based on resources, demographics, and culture) are mandated into districts |
| ■■ Effective way for small counties to provide quality services  
■■ Can be responsive to differences in local needs by providing specialized services in some counties and core services in all counties |  
■■ Can be challenging to be responsive to local needs, especially if dissimilar counties (based on resources, demographics, and culture) are mandated into districts  
■■ Might be challenging to provide adequate services in an emergency if multiple counties in district are affected |
| **Mgmt & Governance** | Can be challenging for health director to manage multiple sets of relationships (county managers, BOCCs, and others in each county) |
| ■■ More flexibility with hiring, contracting, and procurement because of greater autonomy from county  
■■ Because of this flexibility, DHD can be a more attractive partner to private and non-profit organizations  
■■ District board has same benefits as traditional county BOH; in addition, can be more action-oriented because district board also has financial decision-making authority |  
■■ More flexibility with hiring, contracting, and procurement because of greater autonomy from county  
■■ Because of this flexibility, DHD can be a more attractive partner to private and non-profit organizations  
■■ District board has same benefits as traditional county BOH; in addition, can be more action-oriented because district board also has financial decision-making authority  
■■ Can be challenging for health director to manage multiple sets of relationships (county managers, BOCCs, and others in each county)  
■■ Concern that county ownership of public health is reduced  
■■ Concern that district BOH might be too large |

BOCC: board of county commissioners; BOH: board of health; DHD: district health department
<table>
<thead>
<tr>
<th>Stakeholders’ Perceptions of Public Health Authorities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Benefits</strong></td>
</tr>
<tr>
<td><strong>Finance</strong></td>
</tr>
<tr>
<td>■ Can bring in multiple revenue streams that can subsidize public health</td>
</tr>
<tr>
<td>■ Can allow county to control public health costs (e.g., with a fixed per capita appropriation)</td>
</tr>
<tr>
<td><strong>Workforce</strong></td>
</tr>
<tr>
<td>■ Increased flexibility in hiring; can set own personnel policies</td>
</tr>
<tr>
<td><strong>Service Delivery</strong></td>
</tr>
<tr>
<td>■ Increased flexibility in providing services because of independence from county</td>
</tr>
<tr>
<td>■ Can serve clients from outside of county</td>
</tr>
<tr>
<td><strong>Mgmt &amp; Governance</strong></td>
</tr>
<tr>
<td>■ More flexibility with hiring, contracting, and procurement because of independence from county</td>
</tr>
<tr>
<td>■ Might be more attractive to private and non-profit sector organizations that do not want to partner with a bureaucratic government agency, or one that can only provide services in one jurisdiction</td>
</tr>
<tr>
<td>■ Authority board may have more opportunity to adopt policies because it is even more insulated from politics than traditional BOH</td>
</tr>
</tbody>
</table>

BOCC: board of county commissioners; BOH: board of health
### Table 3.5. Stakeholders’ Perceptions of Consolidated Human Services Agencies

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Challenges/Concerns</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Finance</strong></td>
<td></td>
</tr>
<tr>
<td>■ May be able to save money and achieve administrative efficiencies by combining human resources, finance, and information technology</td>
<td>■ Concern that combining administrative operations would not lead to cost savings or might only be realized in small counties</td>
</tr>
<tr>
<td>■ Might save on high level salary (if human services director replaces public health, social services, and mental health director positions)</td>
<td>■ Concern that public health’s prevention role will not compete well for funding with crisis intervention role of other agencies</td>
</tr>
<tr>
<td>■■</td>
<td>■ Might add high level salary (if human services director is added and division directors are retained)</td>
</tr>
<tr>
<td><strong>Workforce</strong></td>
<td></td>
</tr>
<tr>
<td>■ Can cross-train staff</td>
<td>■ Requires a leader with training/experience in public health, social services, and mental health, as well as integrated service delivery</td>
</tr>
<tr>
<td>■ Provides an opportunity for shared leadership; division directors can work together to prioritize use of human and financial resources</td>
<td>■ Challenge of finding a qualified leader would be magnified for small counties</td>
</tr>
<tr>
<td><strong>Service Delivery</strong></td>
<td></td>
</tr>
<tr>
<td>■ Provides an opportunity to coordinate service delivery</td>
<td>■ May be challenging to coordinate services, especially because funding streams have numerous restrictions and requirements that define who can receive services</td>
</tr>
<tr>
<td>■ Recipients of service (clients) overlap; may be able to minimize or avoid duplication of services</td>
<td>■ Clients are not the same; overlap is limited and occurs mainly around clinical services, which not all public health agencies provide</td>
</tr>
<tr>
<td><strong>Mgmt &amp; Governance</strong></td>
<td></td>
</tr>
<tr>
<td>■ Has lines of authority that are similar to other county departments (health director reports to county manager and all employees fall under county personnel system); enables county manager to more readily promote a “county vision of services”</td>
<td>■ Concern that health director’s effectiveness might be marginalized if core functions (e.g., HR, finance) are centralized</td>
</tr>
<tr>
<td>■ Can quickly shift resources (human, financial) in an emergency</td>
<td>■ Political insulation with regard to hiring provided by State Personnel Act is lost</td>
</tr>
<tr>
<td>■■</td>
<td>■ Challenging to work across divisions and cultures</td>
</tr>
<tr>
<td>■■</td>
<td>■ Integration of information technology systems across agencies may be costly</td>
</tr>
<tr>
<td>■■</td>
<td>■ Concern about ability of consolidated board (or BOCC) to make effective decisions given need to know rules and regulations of public health, social services, and mental health</td>
</tr>
<tr>
<td>■■</td>
<td>■ Concern that consolidated board is too large</td>
</tr>
</tbody>
</table>
Advice from Stakeholders

What advice do stakeholders have for counties that may be considering changing from one agency type to another?

Stakeholders at the state and local levels who have direct experience with the state's less common agency types (district health departments, public health authorities, and consolidated human services agencies), or who have considered changing to one of these models, offered advice to other stakeholders who may be considering change. A selection of representative comments is provided below. Please note that this is advice collected, but not necessarily endorsed, by the research team.

General Advice Regarding Change

• “Be very clear about the reasons you are going to change. . . . [I]f you’re not honest about that I think you can find yourself in not necessarily a better position. . . . Be very honest about why you are making the change and what you perceive to be broken that is moving you towards a different model.”

• “In 100 years, 200 years, 500 years, there are still going to be these conversations about the best way to organize, the best way for governance. . . . It’s really more about how you recognize the system you’re working in and how you can leverage the resources and the people in the most effective way to get the results you want regardless of what structure you’re in.”

Advice on Becoming a District Health Department

• “I don’t think you can underestimate how important the political environments are and the cultures [are].” To assess whether or not a successful district can be created, stakeholders stressed the need to understand the cultural and political environment of counties, as well as their historical alignment.

• “We do so much with you anyway. We know you. We like you.” Stakeholders emphasized that district health departments function best when comprised of willing partners that have a history of collaborating regionally in other areas.

• “Every business has to be capitalized. . . . There’s a cost, and I’m afraid that many people think there’s this immediate savings.” Stakeholders reported that anticipated financial savings may not be immediate when forming a new district because of start-up costs (e.g., need to spend resources to develop compatible information technology across counties).
“You’ve got to try to put together a package of healthcare and a package of benefits. That’s the biggest question on existing employees’ minds.”

Advice on Becoming an Authority

• “It’s about a year-and-a-half process; you don’t get this overnight.”

• “Everybody has to be on the same page about what expectations of each other are . . . . You need to be really clear about . . . where your support is going to come from and what kind of support you are going to have.” Stakeholders emphasized the importance of having clear—and preferably written—agreements between the county and authority (especially funding agreements).

• “The biggest hurdle . . . is the retirement issue.” Consistent with the stakeholders’ comments above about district health departments, employee benefits can be a significant issue when transitioning to a public health authority.

Advice on Becoming a Consolidated Human Services Agency

• “People have to say: I believe in integration and I am doing this because I want an integrated system of care for my community.”

• “It’s not something that you just flip a switch and magic, everybody has decided we’re here to work for the same purpose . . . . You’ve really got to be invested for the long haul and it’s got to be right for your community.”

• “[Make] sure you’re designing a system that meets the needs of your partner agencies, your consumers, your patients, your anchor institutions . . . . It’s really important to build a system that works for your community.”

• “When you take on these kinds of reorganizations, there is a cost to staff and to the taxpayer. There is a real hard cost to it but there’s also the cost of trying to keep your work going as well as participating in this reengineering and redesign work.”
Conclusion
In the course of focus groups and interviews, stakeholders offered many thoughtful reflections and insights about the four types of local public health agencies in operation in North Carolina. More stakeholders are familiar with county and district health departments and had information to share about those types of agencies. Many expressed a desire to have access to more and better information about all of the different types of agencies, especially with regard to how the agencies compare in terms of performance and efficiency. The next section offers answers to some of these questions, though certainly many more questions remain.

One of the concerns that arose repeatedly during the interviews and focus groups is beyond the scope of this report but is worth highlighting. Numerous stakeholders voiced the opinion that a discussion of the benefits and challenges of different types of local public health agencies should be part of a larger conversation. Given the economic recession, healthcare reform, and other factors affecting public health, these stakeholders expressed a desire for a strategic examination of the overall public health system in the state. As one local public health practitioner explained: “The challenge that I think local public health is going to have is carving out its niche. What is local public health? What does it need to be?”
Part 4. The Numbers: Comparing the Types of Local Public Health Agencies

Questions

- Background
  - What did we want to learn?
  - What types of agencies did we compare?
  - What measures did we analyze and where did we get the data?
- Financing
  - Does source of funding vary by agency type?
  - Do median total expenditures per capita vary by agency type?
  - Do total expenditures per capita vary within agency types?
  - Do median expenditures per capita from different funding sources vary by agency type?
- Workforce
  - Do median FTEs per 1,000 population vary by agency type?
  - Do FTEs per 1,000 population vary within agency type?
- Information Technology
  - Does the ability to supplement or replace state-provided clinical and billing software vary by agency type?
  - Does the use of mobile technology vary by agency type?
- Services Delivered
  - Does the median percentage of services offered vary by agency type?
- Performance on Selected Service Delivery Outputs and Community Health Outcomes
  - Does agency type explain variation in performance on selected service delivery outputs or community health outcomes?
  - If agency type does not explain variation in performance, what does?
Key Findings

- Source of funding appears to be associated with agency type. County health departments and consolidated human services agencies tend to receive a larger percentage of their funding from county appropriations than districts and authorities, which receive a comparatively larger percentage of funding from other sources, such as fees for services.
- Regardless of agency type, as the size of the population served increases, both total expenditures per capita and FTEs per 1,000 population tend to decrease.
- While this research is focused on comparing the different types of agencies, it is important to note that the data indicate that there is as much variation within types of agencies as between types of agencies for most measures examined.
- Agency type does not appear to be associated with
  - use of mobile technology,
  - ability to supplement or replace state-provided software, or
  - number of public health services provided.
- Variation in local public health agency performance on selected service delivery outputs and community health outcomes cannot be explained by agency type.
Background

What did we want to learn?
We wanted to know how the different types of local public health agencies compare with one another in five key areas: financing, workforce, information technology, services delivered, and performance on selected service delivery outputs and community health outcomes (see Appendix E for a full description of methods). We selected these five areas for comparison after reviewing the academic literature related to public health services and systems as well as the readily available data sources in North Carolina. We conducted both a descriptive statistical analysis as well as a more complex regression analysis.

What types of agencies did we compare?
For the descriptive statistical analyses, we compared all five agency types currently in operation in North Carolina: county health departments, district health departments, consolidated human services agencies, the public health authority, and the hospital authority.39 Given that some of the less-common agency types are associated with population extremes in the state (that is, two consolidated human services agencies serve large populations, and the public health authority serves a small population), and because single-county health departments serve a wide range of population sizes, it was necessary to take population into account when generating these comparisons. Specifically, county health departments were divided into three groups based on population served, as shown in Table 4.1.

For the more complex statistical analyses that examined local agency performance on selected service delivery outputs and community health outcomes, a different grouping was used. All county health departments were grouped together, as were all district health departments. Consolidated human services agency (n=2), public health authority (n=1), and hospital authority (n=1) were grouped together because there are simply too few of these agency types in existence in North Carolina to render results that are generalizable or applicable in similar settings.

What measures did we analyze and where did we get the data?
We compared agency types across a variety of measures and gathered data from various publicly available sources (see Appendix F for the data definitions and sources). Some of the data is self-reported by local agencies and has not been independently verified. This includes local expenditure data as reported in the North Carolina Local Health Department Revenue Source Books, and full-time equivalent (FTE), information technology, and service delivery data as reported in North Carolina Local Health Department Surveys.

39. In Cabarrus County, the local public health agency is a public hospital authority. At this time, no other local public health agencies are allowed to convert to a public hospital authority, but they are allowed to convert to a public health authority. The two types of authorities are similar enough that we concluded it would be appropriate to include data from Cabarrus in this analysis. For more information about public health authorities and public hospital authorities, see www.ncphagencies.unc.edu (Additional Legal Q&A).
Financing

*Note:* Throughout this section, dollars are not adjusted for inflation. Additionally, median figures (rather than averages) are used to minimize the impact of outliers.

**Does source of funding vary by agency type?**

Yes. Source of funding appears to be associated with agency type. Four main funding sources are tracked by the state:

- County appropriations
- Medicaid reimbursements
- State and federal funds
- Other revenues

Descriptions of the various funding sources are found in Table 4.2.

As shown in Figure 4.1, county health departments and consolidated human services agencies receive a greater percentage of their funding from county appropriations and a lower percentage of funding from other revenues as compared to district health departments and health authorities.

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*40. North Carolina tracks the amount of money spent by local agencies on public health activities from each of these four sources. These figures do not necessarily represent the total revenue generated for each funding source.*
Table 4.2. Funding Sources

<table>
<thead>
<tr>
<th>Funding Source</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>County appropriations</td>
<td>Portion of local taxes dedicated to public health services.</td>
</tr>
<tr>
<td>Medicaid reimbursements</td>
<td>Fees for services and a cost settlement distributed by the state.</td>
</tr>
<tr>
<td>State and federal funds</td>
<td>Expenditures of funds from four sources:</td>
</tr>
<tr>
<td></td>
<td>■ General aid to counties (funding awarded on an annual basis by the state to be used at the discretion of the health director);</td>
</tr>
<tr>
<td></td>
<td>■ Funding from the state to support environmental health;</td>
</tr>
<tr>
<td></td>
<td>■ State grants (restricted funding dedicated to specific programs); and</td>
</tr>
<tr>
<td></td>
<td>■ Federal grants (restricted funding dedicated to specific programs).</td>
</tr>
<tr>
<td></td>
<td>State and federal grants may be competitive, or they may be automatically awarded on the basis of a community’s health status. Available data sources do not distinguish between these types of grants.</td>
</tr>
<tr>
<td>Other revenues</td>
<td>Any revenues that do not fit into the other three categories, including</td>
</tr>
<tr>
<td></td>
<td>■ Fees from women’s health services and breast cancer and cervical cancer prevention that have mandatory sliding fee scales;</td>
</tr>
<tr>
<td></td>
<td>■ Medicare reimbursements from home health and diabetes care;</td>
</tr>
<tr>
<td></td>
<td>■ Fees from environmental health services;</td>
</tr>
<tr>
<td></td>
<td>■ Grants from private organizations; and</td>
</tr>
<tr>
<td></td>
<td>■ Other similar revenues.</td>
</tr>
</tbody>
</table>

Figure 4.1. Median Proportion of Expenditures by Funding Source,* FY2010

<table>
<thead>
<tr>
<th>Agency Type</th>
<th>County Appropriations</th>
<th>Medicaid</th>
<th>Other Revenues</th>
<th>State and Federal</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHSA (n=2)</td>
<td>52%</td>
<td>9%</td>
<td>16%</td>
<td>22%</td>
</tr>
<tr>
<td>CHD–High Pop (n=24)</td>
<td>43%</td>
<td>14%</td>
<td>11%</td>
<td>27%</td>
</tr>
<tr>
<td>CHD–Med Pop (n=23)</td>
<td>32%</td>
<td>23%</td>
<td>14%</td>
<td>23%</td>
</tr>
<tr>
<td>CHD–Low Pop (n=28)</td>
<td>30%</td>
<td>16%</td>
<td>13%</td>
<td>31%</td>
</tr>
<tr>
<td>HA (n=1)</td>
<td>30%</td>
<td>21%</td>
<td>34%</td>
<td>15%</td>
</tr>
<tr>
<td>DHD (n=6)</td>
<td>16%</td>
<td>18%</td>
<td>34%</td>
<td>34%</td>
</tr>
<tr>
<td>PHA (n=1)</td>
<td>3%</td>
<td>18%</td>
<td>44%</td>
<td>36%</td>
</tr>
</tbody>
</table>

* Percentages do not total 100 percent for every agency type since median, not mean, figures were used.

Data Source: NC DHHS Revenue Source Book, FY2010
Do median total expenditures per capita vary by agency type?

Yes, but the variation is probably associated more with population size than with agency type. As shown in Figure 4.2 and Table 4.3, there is variation among the agency types with regard to median total expenditures. However, as Figure 4.3 demonstrates, this variation appears to be associated with the size of the population served by the agency independent of agency type (with the exception of hospital authority). In other words, as population size increases, total expenditures per capita tend to decrease.

Figure 4.2. Median Total Expenditures per Capita, FY2006–FY2010

Table 4.3. Median Total Expenditures, in Dollars per Capita, FY2006–FY2010

<table>
<thead>
<tr>
<th></th>
<th>FY2006</th>
<th>FY2007</th>
<th>FY2008</th>
<th>FY2009</th>
<th>FY2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHD–High Pop (n=24)</td>
<td>48</td>
<td>52</td>
<td>59</td>
<td>60</td>
<td>59</td>
</tr>
<tr>
<td>CHD–Med Pop (n=23)</td>
<td>64</td>
<td>72</td>
<td>80</td>
<td>82</td>
<td>85</td>
</tr>
<tr>
<td>CHD–Low Pop (n=28)</td>
<td>74</td>
<td>77</td>
<td>103</td>
<td>90</td>
<td>91</td>
</tr>
<tr>
<td>DHD (n=6)</td>
<td>92</td>
<td>91</td>
<td>95</td>
<td>99</td>
<td>98</td>
</tr>
<tr>
<td>PHA (n=1)</td>
<td>226</td>
<td>211</td>
<td>212</td>
<td>222</td>
<td>210</td>
</tr>
<tr>
<td>HA (n=1)</td>
<td>100</td>
<td>103</td>
<td>111</td>
<td>117</td>
<td>105</td>
</tr>
<tr>
<td>CHSA (n=2)</td>
<td>42</td>
<td>44</td>
<td>49</td>
<td>51</td>
<td>50</td>
</tr>
</tbody>
</table>

*Data Source: NC DHHS Revenue Source Book, FY2006, FY2007, FY2009, and FY2010*

Figure 4.3. Relationship of Population to Total Expenditures per Capita, FY2010

*Data Source: NC DHHS Revenue Source Book, FY2010*
Do total expenditures per capita vary within agency types?

Yes. There is significant variation in total expenditures per capita within agency types, as shown in Table 4.4. County health departments with low populations (CHD–Low Pop) have one of the widest ranges, with a minimum total expenditure per capita of $48 and a maximum of $282.

<table>
<thead>
<tr>
<th>Table 4.4. Median, Minimum, and Maximum Total Expenditures per Capita, FY2010</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Median</strong></td>
</tr>
<tr>
<td>CHD–High Pop (n=24)</td>
</tr>
<tr>
<td>CHD–Med Pop (n=23)</td>
</tr>
<tr>
<td>CHD–Low Pop (n=28)</td>
</tr>
<tr>
<td>DHD (n=6)</td>
</tr>
<tr>
<td>PHA (n=1)</td>
</tr>
<tr>
<td>HA (n=1)</td>
</tr>
<tr>
<td>CHSA (n=2)</td>
</tr>
</tbody>
</table>

Data Source: NC DHHS Revenue Source Book, FY2010

Do median expenditures per capita from different funding sources vary by agency type?

The answer to this question varies by the type of funding source:

- **County appropriations.** Expenditures from county appropriations appear to be associated with agency type. Consolidated human services agencies and county health departments have higher median expenditures per capita from county appropriations than district health departments and the public hospital authority. See Table 4.5.

- **Medicaid reimbursements.** Expenditures from Medicaid reimbursements do not appear to be associated with agency type, but they do appear to be associated with population. As population increases, expenditures per capita from Medicaid reimbursements tend to decrease. See Table 4.6.

- **State and federal sources.** Expenditures from state and federal sources do not appear to be associated with agency type. See Table 4.7.

- **Other revenues.** Expenditures from other revenues appear to be associated with agency type. District health departments, the public health authority, and the hospital authority have higher median expenditures per capita from other revenues than consolidated human services agencies and county health departments. See Table 4.8.

Note that there is significant variation within agency types for all funding sources.
### Table 4.5. Expenditures Funded by County Appropriations, in Dollars per Capita, FY2010

<table>
<thead>
<tr>
<th>Entity</th>
<th>Median</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHD–High Pop (n=24)</td>
<td>23</td>
<td>12</td>
<td>63</td>
</tr>
<tr>
<td>CHD–Med Pop (n=23)</td>
<td>27</td>
<td>8</td>
<td>48</td>
</tr>
<tr>
<td>CHD–Low Pop (n=28)</td>
<td>30</td>
<td>6</td>
<td>89</td>
</tr>
<tr>
<td>DHD (n=6)</td>
<td>9</td>
<td>7</td>
<td>22</td>
</tr>
<tr>
<td>PHA (n=1)</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>HA (n=1)</td>
<td>32</td>
<td>32</td>
<td>32</td>
</tr>
<tr>
<td>CHSA (n=2)</td>
<td>26</td>
<td>23</td>
<td>29</td>
</tr>
</tbody>
</table>

*Data Source: NC DHHS Revenue Source Book, FY2010*

### Table 4.6. Expenditures Funded by Medicaid Reimbursements, in Dollars per Capita, FY2010

<table>
<thead>
<tr>
<th>Entity</th>
<th>Median</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHD–High Pop (n=24)</td>
<td>8</td>
<td>3</td>
<td>22</td>
</tr>
<tr>
<td>CHD–Med Pop (n=23)</td>
<td>16</td>
<td>3</td>
<td>57</td>
</tr>
<tr>
<td>CHD–Low Pop (n=28)</td>
<td>13</td>
<td>0</td>
<td>83</td>
</tr>
<tr>
<td>DHD (n=6)</td>
<td>13</td>
<td>0</td>
<td>51</td>
</tr>
<tr>
<td>PHA (n=1)</td>
<td>37</td>
<td>37</td>
<td>37</td>
</tr>
<tr>
<td>HA (n=1)</td>
<td>22</td>
<td>22</td>
<td>22</td>
</tr>
<tr>
<td>CHSA (n=2)</td>
<td>5</td>
<td>3</td>
<td>7</td>
</tr>
</tbody>
</table>

*Data Source: NC DHHS Revenue Source Book, FY2010*
### Table 4.7. Expenditures Funded by State and Federal Sources, in Dollars per Capita, FY2010

<table>
<thead>
<tr>
<th></th>
<th>Median</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHD–High Pop (n=24)</td>
<td>15</td>
<td>8</td>
<td>32</td>
</tr>
<tr>
<td>CHD–Med Pop (n=23)</td>
<td>18</td>
<td>10</td>
<td>39</td>
</tr>
<tr>
<td>CHD–Low Pop (n=28)</td>
<td>28</td>
<td>16</td>
<td>89</td>
</tr>
<tr>
<td>DHD (n=6)</td>
<td>33</td>
<td>21</td>
<td>60</td>
</tr>
<tr>
<td>PHA (n=1)</td>
<td>75</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td>HA (n=1)</td>
<td>16</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>CHSA (n=2)</td>
<td>11</td>
<td>10</td>
<td>12</td>
</tr>
</tbody>
</table>

**Data Source:** NC DHHS Revenue Source Book, FY2010

### Table 4.8. Expenditures Funded by Other Revenue Sources, in Dollars per Capita, FY2010

<table>
<thead>
<tr>
<th></th>
<th>Median</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHD–High Pop (n=24)</td>
<td>6</td>
<td>0</td>
<td>27</td>
</tr>
<tr>
<td>CHD–Med Pop (n=23)</td>
<td>12</td>
<td>1</td>
<td>48</td>
</tr>
<tr>
<td>CHD–Low Pop (n=28)</td>
<td>12</td>
<td>1</td>
<td>73</td>
</tr>
<tr>
<td>DHD (n=6)</td>
<td>34</td>
<td>0</td>
<td>68</td>
</tr>
<tr>
<td>PHA (n=1)</td>
<td>93</td>
<td>93</td>
<td>93</td>
</tr>
<tr>
<td>HA (n=1)</td>
<td>35</td>
<td>35</td>
<td>35</td>
</tr>
<tr>
<td>CHSA (n=2)</td>
<td>8</td>
<td>5</td>
<td>11</td>
</tr>
</tbody>
</table>

**Data Source:** NC DHHS Revenue Source Book, FY2010
Workforce

Do median FTEs per 1,000 population vary by agency type?

Yes, but the variation is probably associated more with population size than with agency type. As shown below in Figure 4.4 and Table 4.9, there is variation among the agency types with regard to FTEs per 1,000 population. However, as Figure 4.5 demonstrates, this variation appears to be associated with the size of the population served by the agency independent of agency type. In other words, agencies with larger populations tend to have fewer FTEs per 1,000 population.

Note that in the figure below, the two consolidated human services agencies (Wake and Mecklenburg counties), are shown separately because they have different approaches to service delivery which may affect FTEs per 1,000 population. During this time period (FY2005–FY2011), Mecklenburg contracted with a private provider to deliver most public health services, creating a lower FTE count than Wake, which provided most public health services directly.

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Figure 4.4. Median FTEs per 1,000 Population, FY2005–FY2011


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41. FTE counts include funded full-time positions (filled and vacant), as well as part-time and contract positions. The total number of weekly part-time hours was converted to FTEs by dividing by 40, whereas the total number of annual contract hours was divided by 2000. A rate of FTEs per 1,000 was calculated for each LHD using survey data as the numerator and population estimates from North Carolina State Center for Health Statistics as the denominator.
Do FTEs per 1,000 population vary within agency type?

Yes. There appears to be more variation within agency type than between agency types. See Table 4.10. For example, county health departments with a medium population range from a minimum of 0.6 FTEs per 1,000 population to a maximum of 2.5.

Table 4.9. Median Number of FTEs per 1,000 Population, FY2005–FY2011

<table>
<thead>
<tr>
<th></th>
<th>FY2005</th>
<th>FY2007</th>
<th>FY2009</th>
<th>FY2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHD–High Pop (n=24)</td>
<td>0.9</td>
<td>0.9</td>
<td>0.9</td>
<td>0.8</td>
</tr>
<tr>
<td>CHD–Med Pop (n=23)</td>
<td>1.2</td>
<td>1.1</td>
<td>1.2</td>
<td>1.1</td>
</tr>
<tr>
<td>CHD–Low Pop (n=28)</td>
<td>1.5</td>
<td>1.5</td>
<td>1.5</td>
<td>1.4</td>
</tr>
<tr>
<td>DHD (n=6)</td>
<td>1.2</td>
<td>1.9</td>
<td>1.9</td>
<td>1.7</td>
</tr>
<tr>
<td>PHA (n=1)</td>
<td>2.9</td>
<td>2.8</td>
<td>3.1</td>
<td>2.8</td>
</tr>
<tr>
<td>HA (n=1)</td>
<td>1.4</td>
<td>1.3</td>
<td>1.2</td>
<td>0.9</td>
</tr>
<tr>
<td>CHSA (n=2)</td>
<td>0.9</td>
<td>0.9</td>
<td>0.7</td>
<td>0.7</td>
</tr>
<tr>
<td>Mecklenburg County</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
</tr>
<tr>
<td>Wake County</td>
<td>1.1</td>
<td>1.1</td>
<td>0.8</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Information Technology

Does the ability to supplement or replace state-provided clinical and billing software vary by agency type?

No. The ability to supplement or replace state-provided clinical and billing software does not appear to vary by agency type.

The state provides all local public health agencies with a billing and clinical management software program called Health Information System (HIS). All agencies have the option of contracting with outside vendors to supplement or replace the state-provided software program. Based on self-reported survey data summarized in Table 4.11, it appears that all types of agencies are purchasing alternate or supplemental software. Local public health agencies with larger populations appear to be exercising this option at a higher rate.

Does the use of mobile technology vary by agency type?

No. The use of mobile technology does not appear to vary by agency type. See Table 4.12.

Mobile technologies enable staff to work and access information remotely. Tools such as smartphones and tablets represent some of the most recent developments in mobile technology. Of the agencies using smartphones and tablets, the median number of mobile devices per FTE is .08—in other words, about one mobile device for every ten employees. Notably, Catawba County and Albemarle Regional District provide mobile devices to more than half of their health department employees.

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42. Results of the FY2011 North Carolina Local Health Department Survey, administered by the N.C. Department of Public Health on a biennial basis, provide the data for this measure. Given the rapid pace of change in technology, we use only the results of the FY2011 survey. The FY2011 survey achieved a 100 percent response rate (see Appendix G for the actual survey results by local agency). All data were self-reported and not independently verified, representing a potential limitation to this measure.

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Table 4.10. Median, Minimum, and Maximum FTEs per 1,000 Population, FY2011

<table>
<thead>
<tr>
<th>Type</th>
<th>Median</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHD–High Pop (n=24)</td>
<td>0.8</td>
<td>0.5</td>
<td>1.5</td>
</tr>
<tr>
<td>CHD–Med Pop (n=23)</td>
<td>1.1</td>
<td>0.6</td>
<td>2.5</td>
</tr>
<tr>
<td>CHD–Low Pop (n=28)</td>
<td>1.4</td>
<td>0.8</td>
<td>3.5</td>
</tr>
<tr>
<td>DHD (n=6)</td>
<td>1.7</td>
<td>0.7</td>
<td>3.1</td>
</tr>
<tr>
<td>PHA (n=1)</td>
<td>2.8</td>
<td>2.8</td>
<td>2.8</td>
</tr>
<tr>
<td>HA (n=1)</td>
<td>0.9</td>
<td>0.9</td>
<td>0.9</td>
</tr>
<tr>
<td>CHSA (n=2)</td>
<td>0.7</td>
<td>0.6</td>
<td>0.7</td>
</tr>
</tbody>
</table>

Data Source: NC LHD Survey, FY2011
Table 4.11. Percentage of Agencies That Supplemented or Replaced the State-Provided HIS Software, FY2011

<table>
<thead>
<tr>
<th></th>
<th>Clinical Software</th>
<th>Billing Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHD–High Pop (n=24)</td>
<td>42 (10/24)</td>
<td>79 (19/24)</td>
</tr>
<tr>
<td>CHD–Med Pop (n=23)</td>
<td>35 (8/23)</td>
<td>61 (14/23)</td>
</tr>
<tr>
<td>CHD–Low Pop (n=28)</td>
<td>32 (9/28)</td>
<td>50 (14/28)</td>
</tr>
<tr>
<td>DHD (n=6)</td>
<td>83 (5/6)</td>
<td>67 (4/6)</td>
</tr>
<tr>
<td>PHA (n=1)</td>
<td>100 (1/1)</td>
<td>100 (1/1)</td>
</tr>
<tr>
<td>HA (n=1)</td>
<td>100 (1/1)</td>
<td>100 (1/1)</td>
</tr>
<tr>
<td>CHSA (n=2)</td>
<td>50 (1/2)</td>
<td>100 (2/2)</td>
</tr>
</tbody>
</table>

Data Source: NC LHD Survey, FY2011

Table 4.12. Percentage of Agencies Using Mobile Technology, FY2011

<table>
<thead>
<tr>
<th></th>
<th>Wireless Internet</th>
<th>Virtual Private Network</th>
<th>Geographic Info System</th>
<th>Global Positioning System</th>
<th>Smartphones or Tablets</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHD–High Pop (n=24)</td>
<td>75 (18/24)</td>
<td>92 (22/24)</td>
<td>96 (23/24)</td>
<td>33 (8/24)</td>
<td>83 (20/24)</td>
</tr>
<tr>
<td>CHD–Med Pop (n=23)</td>
<td>78 (18/23)</td>
<td>74 (17/23)</td>
<td>96 (22/23)</td>
<td>17 (4/23)</td>
<td>61 (14/23)</td>
</tr>
<tr>
<td>CHD–Low Pop (n=28)</td>
<td>68 (19/28)</td>
<td>54 (15/28)</td>
<td>79 (22/28)</td>
<td>32 (9/28)</td>
<td>71 (20/28)</td>
</tr>
<tr>
<td>DHD (n=6)</td>
<td>33 (2/6)</td>
<td>67 (4/6)</td>
<td>17 (1/6)</td>
<td>0 (0/6)</td>
<td>50 (3/6)</td>
</tr>
<tr>
<td>PHA (n=1)</td>
<td>100 (1/1)</td>
<td>100 (1/1)</td>
<td>0 (0/1)</td>
<td>0 (0/1)</td>
<td>0 (0/1)</td>
</tr>
<tr>
<td>HA (n=1)</td>
<td>100 (1/1)</td>
<td>100 (1/1)</td>
<td>100 (1/1)</td>
<td>100 (1/1)</td>
<td>100 (1/1)</td>
</tr>
<tr>
<td>CHSA (n=2)</td>
<td>100 (2/2)</td>
<td>100 (2/2)</td>
<td>100 (2/2)</td>
<td>50 (1/2)</td>
<td>50 (1/2)</td>
</tr>
</tbody>
</table>

Data Source: NC LHD Survey, FY2011
Services Delivered

Does the median percentage of services offered vary by agency type?

We explored the relationship between agency type and number of services offered by examining the percentage of 127 public health services and activities that each agency offered in FY2011. As shown in Figure 4.6, there was only a ten percentage point difference in the median share of tracked service activities offered across agency types, suggesting that agency type does not have a major impact on number of services offered. While there is little variation between agency types, there is substantial variation within agency types (see Table 4.13).

Figure 4.6. Median Percentage of 127 Public Health Activities Offered by Agency Type, FY2011

Table 4.13. Median Percentage of 127 Services Offered by Agency Type, FY2011

<table>
<thead>
<tr>
<th>Agency Type</th>
<th>Median</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>CHD–High Pop (n=24)</td>
<td>67</td>
<td>56</td>
<td>87</td>
</tr>
<tr>
<td>CHD–Med Pop (n=23)</td>
<td>70</td>
<td>49</td>
<td>85</td>
</tr>
<tr>
<td>CHD–Low Pop (n=28)</td>
<td>63</td>
<td>48</td>
<td>91</td>
</tr>
<tr>
<td>DHD (n=6)</td>
<td>70</td>
<td>51</td>
<td>80</td>
</tr>
<tr>
<td>PHA (n=1)</td>
<td>62</td>
<td>62</td>
<td>62</td>
</tr>
<tr>
<td>HA (n=1)</td>
<td>66</td>
<td>66</td>
<td>66</td>
</tr>
<tr>
<td>CHSA (n=2)</td>
<td>72</td>
<td>69</td>
<td>75</td>
</tr>
</tbody>
</table>

Data Source: NC LHD Survey, FY2011

43. See Appendix B for a list of the full range of 127 services included in the survey and Appendix H for the actual 2011 survey results by agency.
Performance on Selected Service Delivery Outputs and Community Health Outcomes

To conclude our study, we examined whether agency type explained variation in public health performance using multivariate regression analysis. Specifically, we examined the relationship between agency type and selected service delivery outputs (see Figure 4.7) and community health status outcomes (see Figure 4.8). We also included a number of other independent variables in our analysis as prior research confirms that other factors could account for differences in public health performance (see Table 4.14). More detailed summaries of the service delivery outputs, community health outcomes, and independent variables are included in Appendix F.

We developed two statistical models to analyze the relationship between agency type and selected service delivery outputs and community health outcomes:

1. In Model 1, we examined the relationship between agency type and selected service delivery outputs, controlling for demographics, expenditures, FTEs per 1,000 population, and availability of selected services.
2. In Model 2, we examined the relationship between agency type and selected community health outcomes, controlling for demographics, expenditures, FTEs per 1,000 population, availability of selected services, and selected service delivery outputs.

Figure 4.7. Service Delivery Outputs

<table>
<thead>
<tr>
<th>Service</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WIC Services</td>
<td>Percentage of Medicaid deliveries where prenatal WIC assistance was received</td>
</tr>
<tr>
<td>Health Check Visits</td>
<td>Percentage of Medicaid-enrolled children who received annual screening</td>
</tr>
<tr>
<td>Lead Screening Tests</td>
<td>Percentage of Medicaid-eligible children (0-2) who received direct tests</td>
</tr>
<tr>
<td>Immunization Compliance</td>
<td>Percentage of 2 y.o. children who have received age-appropriate immunizations</td>
</tr>
</tbody>
</table>
Figure 4.8. Community Health Outcomes

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlamydia Rate</td>
<td></td>
</tr>
<tr>
<td>Gonorrhea Rate</td>
<td></td>
</tr>
<tr>
<td>HIV-Disease Rate</td>
<td></td>
</tr>
<tr>
<td>HIV-Death Rate</td>
<td></td>
</tr>
<tr>
<td>Syphilis Rate</td>
<td></td>
</tr>
<tr>
<td>Tuberculosis Rate</td>
<td></td>
</tr>
<tr>
<td>Positive Lead Screening Results</td>
<td></td>
</tr>
<tr>
<td>Infant Mortality Rate</td>
<td></td>
</tr>
<tr>
<td>Smoking</td>
<td></td>
</tr>
<tr>
<td>Obesity</td>
<td></td>
</tr>
<tr>
<td>Teenage Pregnancy Rate</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.14. Independent Variables Used in Statistical Analysis

<table>
<thead>
<tr>
<th>Type of Agency</th>
<th>County Health Department (n = 75)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>District Health Department (n = 6)</td>
</tr>
<tr>
<td></td>
<td>Other Agency Types (n = 4): Comprising Consolidated, Public Health Authority, and Hospital Authority</td>
</tr>
<tr>
<td>Agency Demographics</td>
<td>Percentage of population identified as White</td>
</tr>
<tr>
<td></td>
<td>Percentage of population identified as Black</td>
</tr>
<tr>
<td></td>
<td>Percentage of population identified as Hispanic</td>
</tr>
<tr>
<td></td>
<td>Percentage of population not identified by the above categories</td>
</tr>
<tr>
<td></td>
<td>Percentage uninsured (ages birth to 64)</td>
</tr>
<tr>
<td></td>
<td>Population size</td>
</tr>
<tr>
<td></td>
<td>Population density</td>
</tr>
<tr>
<td></td>
<td>Percentage unemployed</td>
</tr>
<tr>
<td></td>
<td>Median household income</td>
</tr>
<tr>
<td>Agency Resources</td>
<td>Local expenditures per capita</td>
</tr>
<tr>
<td></td>
<td>State and federal expenditures per capita</td>
</tr>
<tr>
<td></td>
<td>Number of full-time equivalent positions (FTEs) per 1,000 population</td>
</tr>
<tr>
<td>Agency Services</td>
<td>Percentage of the 93 consistently tracked services offered by the agency (see Appendix E for list of services)</td>
</tr>
<tr>
<td></td>
<td>Specific services related to each output or outcome (see Appendix E for list of services)</td>
</tr>
</tbody>
</table>
Does agency type explain variation in performance on selected service delivery outputs or community health outcomes?

No. Agency type does not appear to be associated with variation in performance on the selected service delivery outputs or community health outcomes.

With respect to service delivery outputs, there was some evidence to suggest that an agency organized as a district health department may have a slightly lower number of health check visits per capita. Otherwise, there was no relationship shown between agency type and service delivery outputs.

With respect to community health outcomes, there was some evidence to suggest that an agency organized as a district health department could have slightly lower rates of tuberculosis. Overall, no agency type showed a consistent and strong association across community health outcomes.

If agency type does not explain variation in performance, what does?

Uninsured

The most consistent result was that there was a connection between the percentage of people who are uninsured (birth to age sixty-four) in the population served and community health outcomes. As the percentage of uninsured increased, the prevalence of certain health status outcomes increased. The largest effect was on the obesity rate. Results showed that a one percentage point increase in the number of people who are uninsured leads to a 0.74 percentage point increase in the obesity rate.

Other community health outcomes similarly affected by percentage of uninsured include the tuberculosis rate, percentage of smokers, positive blood-lead test, chlamydia rate, gonorrhea rate, HIV-disease rate, HIV-death rate, and syphilis rate. In all of these cases, as the percentage of uninsured in the population served increased, the negative health outcome increased. Infant mortality rate was not affected.

Resources

There is also a relationship between resources—expenditures per capita and FTEs per 1,000 population—and community health outcomes. A greater commitment of these resources is associated with better health outcomes. However, the material effect is not great; a 1 percent increase in FTEs per 1,000 population or in state and federal expenditures reduced cases by less than 1 percent.

- **Financial resources.** State and federal expenditures per capita had an impact on six of the eleven health status outcomes. On average, a 1 percent increase in federal and state per capita expenditures was associated with rate decreases for gonorrhea (0.73 percent), HIV disease (0.71 percent), HIV-related deaths (0.60 percent), tuberculosis (0.65 percent), positive blood-lead test results (0.19 percent), and the teenage pregnancy rate (0.15 percent).

- **Human resources.** Higher FTEs per 1,000 population often affected outcomes. A 1 percent change in the FTEs per 1,000 population is associated with rate decreases in syphilis (0.56 percent) and HIV-disease
(0.57 percent). However, it produced small increases in other outcomes. A 1 percent change in FTEs per 1,000 population produced a 0.19 percent increase in the percentage of positive lead screening results and a 0.11 percentage point increase in the teenage pregnancy rate.
Conclusion

North Carolina counties are required by law to provide public health services to their residents. State and local policymakers and public health officials share an interest in providing those services in a manner that is efficient, effective, and responsive to local needs. Over time, different ways of providing public health services have been incorporated into the state laws that define various types of local public health agencies and governance structures.

State laws provide the basic framework for a discussion of local public health practice and policy in North Carolina, but they do not paint the complete picture. The existing legal framework allows different local agencies to manage operations and service delivery in a variety of ways, and there is a fair amount of variation in local practice. State laws also do not answer important questions about how the different agency types compare on measures such as staffing, costs, service delivery, and health outcomes in the communities they serve. We sought to answer these questions and to find out more about how key stakeholders view local public health service delivery in North Carolina.

One of our overarching goals was to determine whether the type of agency used to provide local public health services affects public health service delivery or health status outcomes within the county or counties served by the agency. We found that it does not. There was no statistically significant association between type of agency and health service delivery or health status outcomes.

Other information that we acquired, however, may be relevant to stakeholders as they consider state and local policy changes affecting agency type. First, the source of funding for local agencies varies by agency type. County health departments and consolidated human services agencies receive larger proportions of their total funding from county appropriations, while district health departments and public health authorities receive larger proportions of funding from other sources, such as fees for services. Second, most stakeholders at both the state and local level value local government’s role in public health and want to have a menu of options available for local officials to decide how best to manage public health services in their jurisdictions.

We also found some evidence of a relationship between population size and both expenditures on public health and FTEs per 1,000 population. For the most part, local public health agencies that serve larger populations have lower total per capita expenditures and fewer FTEs per 1,000 population. These findings are consistent with other research in this field, but because agency type rather than population size was the focus of our research, we did not further explore the role of population size.
Appendixes

All appendixes are available online at www.ncphagencies.unc.edu. The website also includes supplementary material, such as more detailed questions and answers about the different types of local public health agencies.

Appendix A: Local Public Health Agency Services and Functions
Appendix B: North Carolina Local Health Department Survey Public Health Service Categories and Activities (FY2011)
Appendix C: Comparing the Organizational Structures of the Different Types of Agencies
Appendix D: Perspectives of Stakeholders: Comprehensive Findings
Appendix E: Methodology for Statistical Analyses
Appendix F: Data Definitions and Sources
Appendix G: IT Survey Results by Agency (FY2011)
Appendix H: Services Survey Results by Agency (FY2011)
Appendix I: Statistical Outputs