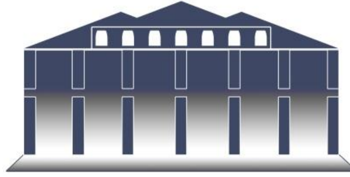
# The Division of Public Health Should Remain in the Department of Health and Human Services

**Final Report to the Joint Legislative Program Evaluation Oversight Committee**

**Report Number 2013-01**

**January 14, 2013**



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Director

January 14, 2013

Senator Fletcher L. Hartsell, Jr., Co-Chair, Joint Legislative Program Evaluation Oversight Committee
Representative Julia Howard, Chair, Joint Legislative Program Evaluation Oversight Committee

North Carolina General Assembly
Legislative Building
16 West Jones Street
Raleigh, NC 27601

Honorable Co-Chairs:

Session Law 2012-126 directed the Program Evaluation Division to study the feasibility of the transfer of all functions, powers, duties, and obligations vested in the Division of Public Health in the Department of Health and Human Services to the University of North Carolina Health Care System and/or the University of North Carolina School of Public Health.

I am pleased to report that the Division of Public Health, University of North Carolina Health Care System, and University of North Carolina School of Public Health cooperated with us fully and were at all times courteous to our evaluators during the evaluation.

Sincerely,

John W. Turcotte
Director

AN EQUAL OPPORTUNITY/AFFIRMATIVE ACTION EMPLOYER

**PROGRAM EVALUATION DIVISION**
**NORTH CAROLINA GENERAL ASSEMBLY**

January 2013 Report No. 2013-01

# The Division of Public Health Should Remain in the Department of Health and Human Services

## Summary

The General Assembly directed the Program Evaluation Division to study the feasibility of the transfer of all functions, powers, duties, and obligations vested in the Division of Public Health in the Department of Health and Human Services to the University of North Carolina Health Care System and/or the University of North Carolina School of Public Health.

**North Carolina's public health system is an intricate network of partnerships between the Division of Public Health and local health departments, state agencies and universities, and other entities.** The Division of Public Health is one part of the State's public health system, working with both internal and external partners to improve and protect the health of North Carolinians.

**The Division of Public Health should remain in the Department of Health and Human Services and should not be transferred to the University of North Carolina Health Care System or School of Public Health.** Public health authorities have powers that are reserved for states. These authorities perform other activities that are more appropriate for a state agency to perform than another entity. Further, the missions of the University of North Carolina Health Care System and School of Public Health do not match the work of the Division of Public Health.

**North Carolina's public health system is seen as a model, but the State ranks in the bottom half of states for health outcomes because of high risk factors.** North Carolina is ranked 32nd in the country for overall health due to risk factors that affect the State's health outcomes. Many of these risk factors are beyond the control of the Division of Public Health and require a comprehensive government-wide approach to address them.

**There are organizational models that could improve public health delivery in North Carolina.** The Program Evaluation Division identified additional strategies that could put North Carolina in the forefront of public health including strengthening regional activities, using data to focus efforts, and continuing quality improvement efforts.

**The Division of Public Health should remain in the Department of Health and Human Services. However, creating a government-wide approach and exploring new strategies could strengthen the public health system. The General Assembly should**

- establish the North Carolina Public Health Council to develop a government-wide action plan for improving health outcomes; and
- direct the Division of Public Health to strengthen the public health system by exploring ways to increase regionalization, improve the use the data, and strengthen quality improvement activities.

## Purpose and Scope

The General Assembly directed the Program Evaluation Division to study the feasibility of the transfer of all functions, powers, duties, and obligations vested in the Division of Public Health in the Department of Health and Human Services to the University of North Carolina Health Care System and/or the University of North Carolina School of Public Health.[1]

This evaluation addressed three central research questions:

- What are the functions, powers, duties, and obligations vested in the Division of Public Health?
- Should any or all of the functions, powers, duties, and obligations vested in the Division of Public Health be transferred to the University of North Carolina (UNC) Health Care System and/or UNC School or Public Health?
- Are there other organizational models that could enhance how North Carolina delivers public health services?

The Program Evaluation Division collected data from several sources including

- interviews with staff at the Division of Public Health, UNC Health Care, and UNC School of Public Health;
- program expenditures and revenues, organizational charts, and services;
- interviews with local health department directors, county administrators, and officials at the Association of State and Territorial Health Officials, the North Carolina Hospital Association, and the North Carolina Medical Society;
- surveys of local health departments; and
- research on other states.

## Background

According to the Centers for Disease Control and Prevention, "public health is the science of protecting and improving the health of families and communities through promotion of healthy lifestyles, research for disease and injury prevention, and detection and control of infectious diseases." Public health authorities work to protect the health of the whole population by trying to prevent problems from happening or recurring through education, recommending policies, administering services, and conducting research. The work of public health is different from that of clinical professionals like doctors and nurses who focus primarily on treating people after they become sick or injured.

**North Carolina's public health system goes back to 1877 when the General Assembly established a state board of health.** This board consisted of the entire membership of the North Carolina Medical Society. Two years later, the General Assembly reduced the state board of health to nine members and established a statewide system of county public health boards. By 1915, the state board of health had designated a full-

[1] N.C. Sess. Laws, 2012-126

time health director to oversee public health functions including vital statistics, school inspections, and a laboratory of hygiene.

Originally, most of the functions, powers, duties, and obligations of public health resided in the Division of Health Services in the Department of Human Resources.[2] Since 1989, the General Assembly has moved public health functions back and forth between the state's human services and environmental resources agencies. The most recent change occurred in 2011 when the General Assembly transferred environmental health related functions from the Department of Environment and Natural Resources to the Division of Public Health in the Department of Health and Human Services (DHHS). Exhibit 1 summarizes key events in the history of North Carolina's public health system.

## Exhibit 1: Legislative History of Public Health in North Carolina

| Year | Legislative Action |
|---|---|
| 1877 | • General Assembly enacts a law designating the entire membership of the State Medical Society as a state board of health |
| 1879 | • General Assembly reduces state board of health to nine members<br>• Statewide system of county public health boards established, requiring the participation of all practicing physicians in the county, chair of the board of county commissioners, mayor of the county town, and county surveyor |
| 1911 | • State law reduces membership on county boards of health to seven members with medical and lay backgrounds |
| 1957 | • General Assembly rewrites, clarifies, and organizes public health laws |
| 1983 | • General Assembly rewrites public health laws as N.C. Gen. Stat. § Chapter 130A |
| 1989 | • General Assembly establishes the Department of Environment, Health, and Natural Resources and transfers public health functions, powers, duties, and obligations from the Department of Human Resources |
| 1997 | • General Assembly creates the Department of Health and Human Services and transfers to it public health functions, powers, duties, and obligations from the Department of Environment, Health, and Natural Resources |
| 2011 | • General Assembly transfers the Environmental Health Services section, On-site Water Protection Section, and the Office of Education and Training from the Department of Environment and Natural Resources to the Division of Public Health in the Department of Health and Human Services |

Notes: The Department of Human Resources became the Department of Health and Human Services and the Department of Environment, Health, and Natural Resources was renamed the Department of Environment and Natural Resources in 1997.

*Source: Program Evaluation Division based on review of North Carolina General Statutes.*

**Functions, powers, duties, and obligations of the Division of Public Health.** The Division of Public Health (DPH) is charged with improving and protecting the health of North Carolinians. Its statutorily defined mission is to promote and contribute to the highest level of health for the people of North Carolina.[3] The Secretary of DHHS appoints the State Health Director to perform duties and exercise authority to enforce state health laws and rules. The Commission for Public Health has the authority and duty to adopt rules to protect and promote public health and implement public health programs.

In 1994, the Centers for Disease Control and Prevention established ten essential public health services to describe the public health activities that

[2] The Department of Human Resources became the Department of Health and Human Services in 1997.
[3] N.C. Gen. Stat. § 130A-1.1

should be undertaken in all communities. DPH ensures that these services are provided in North Carolina.

- monitor health status to identify community health problems;
- diagnose and investigate health problems and hazards in the community;
- inform, educate, and empower people about health issues;
- mobilize community partnerships to identify and solve health problems;
- develop policies and plans that support individual and community health efforts;
- enforce laws and regulations that protect health and ensure safety;
- link people to needed personal health services that assure the provision of health care when otherwise unavailable;
- assure a competent public health and personal healthcare workforce;
- evaluate effectiveness, accessibility, and quality of personal and population-based health services; and
- research for new insights and innovative solutions to health problems.

State law and administrative rules grant DPH the power and authority to compel people to act to ensure the health of the public, including

- access to medical information;
- right of entry to enforce public health laws;
- injunction for violating public health laws;
- abatement of public health nuisance and imminent hazard;
- embargo authority concerning food and drink;
- administrative penalties for violation of public health laws;
- suspension and revocation of permits and program participation for violation of public health laws; and
- misdemeanors for violation of public health laws.

DPH is divided into 11 sections and offices that manage 51 public health services. These services range from Asbestos and Lead-Based Paint Hazard Management to the Supplemental Nutrition Program for Women, Infants, and Children (WIC). Exhibit 2 describes each section and Appendix A lists and describes each public health service.

## Exhibit 2: Description of the Eleven Sections within the Division of Public Health

| Section | Purpose |
|---|---|
| Administrative, Local, and Community Support | Provide direct and indirect services to the public and local health agencies |
| Chronic Disease and Injury Prevention | Reduce death and disabilities through education, policy change, and services |
| Environmental Health | Safeguard life, promote human health, and protect the environment through the practices of modern environmental health science, the use of technology, rules, public education, and dedication to the public trust |
| Epidemiology | Understand the causes and effects of disease in communities and find ways to prevent or control those diseases and their negative effects on people and society |
| Medical Examiner | Investigate deaths of a suspicious, unusual, or unnatural nature |
| Minority Health and Health Disparities | Bridge the health status gap between racial/ethnic minorities and the general population, and advocate for policies and programs that improve access to public health services for underserved populations |
| Oral Health | Provide prevention and education services on dental health with an emphasis on children |
| State Center for Health Statistics | Collect data, conduct health-related research, produce reports, and maintain a comprehensive collection of health statistics |
| State Laboratory of Public Health | Provide certain medical and environmental laboratory services to public and private health provider organizations |
| Vital Records | Register all births, deaths, fetal deaths, marriages, and divorces which occur in North Carolina |
| Women's and Children's Health | Assure, promote, and protect the health and development of families with an emphasis on women, infants, children, and youth |

Note: Medical Examiner and State Laboratory of Public Health operate under the Epidemiology section. State Center for Health Statistics and Vital Records operate under the Chronic Disease and Injury Prevention section.

*Source: Program Evaluation Division based on information from the Division of Public Health.*

**Structure and funding of the public health system**. North Carolina is one of 27 states with a decentralized public health system with local-led health units having shared authority with state government. State law requires every county to provide public health services. Counties have several options to carry out these duties

- operate a county health department, governed by a county board of health;
- join with one or more other counties to operate a district health department, governed by a district board of health;
- form a single-county or multi-county public health authority, governed by a public health authority board; or
- establish a consolidated human services agency that offers public health, social services, mental health, developmental disabilities and substance abuse services, governed by a consolidated human services board.

In addition, local boards of health have the authority to appoint the local health director and impose fees for certain public health services. The county board of commissioners appoints the members of the local board of health and approves the local health department's budget.

North Carolina's public health system operates through state-local partnerships between DPH and 85 local health departments. DPH is

responsible for administering and monitoring state public health programs, making and enforcing statewide public health rules, and allocating funds to local public health agencies. DPH has a consolidated agreement with each local health department to protect and promote public health in their jurisdictions. Local health directors have delegated authority from the state health director for certain activities, such as issuing quarantines for persons or animals which have been exposed to a communicable disease. To support local efforts, DPH monitors local enforcement of public health laws and rules; coordinates with federal public health agencies and other state agencies with responsibility in public health; and provides direct services to counties, such as the vital records program and post-mortem investigations by the Chief Medical Examiner.

**State and local expenditures support North Carolina's public health system**. DPH receives the majority of funding from seven different federal agencies to support public health services.[4] During Fiscal Year 2011-12, 61% of the $748 million in public health funding came from federal receipts (see Exhibit 3). This funding is used to administer and deliver public health services.

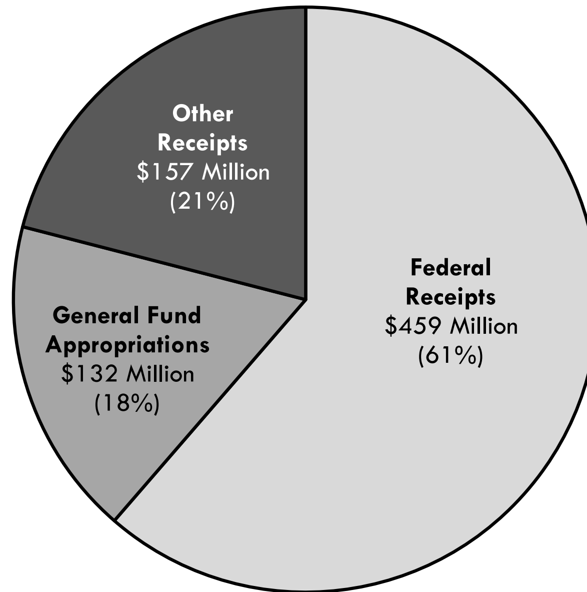
- **Aid to counties and services ($547 million)**. This category includes drug expenses and WIC food expenses, and funding for local health departments.
- **Division administration and operations ($201 million).** This category includes personnel costs[5] as well as general operation expenses for legal services, supplies, equipment, employee travel, repairs, telephone, and insurance.

In addition, local boards of health contribute funds to public health. In Fiscal Year 2009-10, local health departments reported the local contribution to public health services was approximately $477.8 million.[6] Sources of local funding come from local government appropriations, Medicaid reimbursement, and other sources.

[4] The seven federal agencies providing funding are the U.S. Department of Health and Human Services, U.S. Department of Education, Environmental Protection Agency, Federal Emergency Management Agency, U.S. Department of Housing and Urban Development, Substance Abuse and Mental Health Services Administration, and U.S. Department of Agriculture.
[5] Personnel costs include staff that provides direct services.
[6] Latest data available from Department of Health and Human Services (2011, November). *Local Health Departments Revenue Sources Per Capita SFY 09-10*. Raleigh, NC.

## Exhibit 3

Funding for the Division of Public Health Totaled $748 Million in Fiscal Year 2011-12




*Source: Program Evaluation Division based on review of Division of Public Health's 2012 Annual Report.*

Public health aims to improve the health status of all people and is important because people who are healthier tend to live longer, use fewer health care services, be generally happier, and be more productive at work. Improving public health is also an important economic development strategy; a healthy workforce is an important contributor to the State's productivity. North Carolina has made improvements in the last several years in many health measures including a decrease in its infant mortality rate, cardiovascular death rate, and percentage of high school aged individuals who use tobacco. Despite these improvements, North Carolina is still ranked in the bottom half of states. To see improvements in the health of the State's citizens a focus on public health is needed.

# Findings

**Finding 1. North Carolina's public health system is an intricate network of partnerships among the Division of Public Health and local health departments, state agencies and universities, and other entities.**

**The Division of Public Health (DPH) works closely within its division, with other divisions in the Department of Health and Human Services, and with other state and non-state entities to promote and protect public health in North Carolina.** Each DPH section works with other DPH sections and local health departments to administer the 51 public health services. For example, when DPH responded to the H1N1 pandemic, multiple branches of the division and local health departments participated in the response through the following activities:

- division leadership developed plans on how to respond;

- State Laboratory of Public Health received specimens to evaluate;
- Communicable Disease branch quarantined individuals showing symptoms;
- Immunization branch worked to get vaccines to the public as quickly as possible;
- Governor and State Health Director sent out information to the public through state and local media outlets about H1N1 using the Communications Branch and Department of Health and Human Services Public Affairs Office;
- local health departments coordinated vaccine transfers and quarantined individuals; and
- division leadership coordinated with state and federal response agencies.

The Division of Public Health works directly with the local health departments. For example, the Environmental Health section protects public health through the development of standards, review of plans, and monitoring of enforcement activities for food handling and lodging establishments. Local health departments continuously monitor compliance with statewide standards for food protection, whereas staff at the state level provide training and oversight to the local level. The Environmental Health section also works with the Epidemiology section and the State Laboratory of Public Health to monitor incidents of communicable diseases spread through food handling and lodging establishments.

DPH is highly integrated into the Department of Health and Human Services (DHHS). As shown in Exhibit 4, DPH's programs and services meet four of the five departmental goals. In addition, DPH partners with 12 DHHS divisions and offices to administer public health services.[7] For example, DPH's Chronic Disease and Injury Prevention section coordinates activities for the Heart Disease and Stroke Prevention program with the DHHS' Division of Aging and Adult Services, Division of Medical Assistance, and Office of Rural Health and Community Care.

[7] DPH partners with the following DHHS divisions and offices: Aging and Adult Services, Child Development and Early Education, Health Services Regulation, Information Resource Management, Medical Assistance, Mental Health, Developmental Disabilities and Substance Abuse Services, Social Services, State Operated Health Care Facilities, Vocational Rehabilitation, Office of Health Information Technology, Office of Rural Health and Community Care, and the Controller's Office.

## Exhibit 4: Division of Public Health Services Address Four of Five Department-Wide Goals

| **Department of Health and Human Services Goals** | | | | |
|---|---|---|---|---|
| **Goal 1**<br>Manage resources to provide effective and efficient delivery of services to North Carolinians. | **Goal 2**<br>Expand awareness, understanding and use of information to enhance the health and safety of North Carolinians. | **Goal 3**<br>Provide outreach, support, and services to individuals and families identified as being at risk of compromised health and safety to eliminate or reduce those risks. | **Goal 4**<br>Provide services and supports to individuals and families experiencing health and safety needs to assist them in living successfully in the community. | **Goal 5**<br>Provide services and protection to individuals and families experiencing serious health and safety needs who are not, at least temporarily, able to assist themselves with the goal of helping them to return to independent, community living. |
| • Asbestos and Lead Based Paint Hazard Management<br>• Building Capacity for Service Delivery<br>• Child Fatality Prevention Team<br>• Communicable Disease Surveillance and Control<br>• Environmental Health Regulation<br>• Forensic Tests for Alcohol<br>• Injury and Violence Prevention<br>• Medical Examiner System<br>• Occupational Surveillance<br>• On-Site Water Protection<br>• Performance Improvement and Accountability<br>• Public Health Workforce Development<br>• State Center for Health Statistics<br>• State Laboratory of Public Health<br>• Vital Records | • Asthma<br>• Best Practices in Children's Health<br>• Child and Adult Care Food (CACFP)<br>• Child Maltreatment Prevention<br>• Children's Preventive Health Services<br>• Community Capacity Building to Eliminate Health Disparities<br>• Comprehensive Cancer<br>• Diabetes Awareness, Education, and Health Care Delivery<br>• Healthy Carolinians and Health Education<br>• Heart Disease and Stroke Prevention<br>• Industrial Hygiene Consultation<br>• National Toxic Substance Incidents<br>• Physical Activity and Nutrition<br>• Public Health Preparedness and Response<br>• Summer Food Service<br>• Tobacco Prevention and Control<br>• Women's Health Public Education | • Breast and Cervical Cancer Control<br>• Child and Family Support Team<br>• Community Focus Infant Mortality<br>• Family Planning<br>• Farmer's Market Nutrition<br>• Genetics and Newborn Screening<br>• HIV/STD Prevention Activities<br>• Maternal Health<br>• Medical Evaluation and Risk Assessment<br>• Oral Health Preventive Services<br>• Refugee Health Assessments<br>• School Health Services<br>• Teen Pregnancy Prevention Initiatives<br>• Vaccine Distribution and Administration<br>• Women, Infants, and Children (WIC)<br>• WISEWOMAN | • Early Intervention<br>• HIV/AIDS Care Services<br>• Sickle Cell Syndrome - Services for Adults<br>• Sickle Cell Syndrome - Services for Children<br>• TB Elimination | |

Note: Healthy Carolinians and Health Education is no longer an active service.

*Source: Program Evaluation Division based on information from the Division of Public Health.*

DPH also partners with 23 state agencies and universities to administer and deliver public health services. Exhibit 5 shows the number of services where each DPH section maintains a working relationship with another state entity. (DPH sections are listed across the top and the state agencies and universities that the division partners with are listed on the left side. The numbers in the table represent the services with which that agency partners with a DPH section.) For example, the Chronic Disease and Injury Prevention (CDI) section partners with the Department of Transportation (DOT) for three of its ten services.

- **Forensic Tests for Alcohol**. CDI provides administrative support to DOT's Division of Motor Vehicles' Driver's License section and the Driver's License Medical Review branch. In addition, DOT transfers $25 collected from the driver's license restoration fee to support the statewide chemical alcohol testing program.[8]
- **Injury and Violence Prevention**. CDI and DOT work together to prevent motor vehicle crashes among drivers ages 15-25 and ages 70 and older.
- **Physical Activity and Nutrition**. CDI and DOT have collaborated to create walking and biking trails as part of efforts to make communities, worksites, and schools healthier places to live.

As shown in Exhibit 5, DPH works most often with the Departments of Public Instruction and Public Safety. Partnerships with specific universities as well as the University of North Carolina system as a whole assist DPH in the delivery of programs in CDI, State Center for Health Statistics, and Women's and Children's Health. Local officials reported that DPH's interaction with other state agencies helps to facilitate relationships on the local level. For example, local health departments are required to serve on school health advisory councils. The relationship between school districts and the local health department is affected by the quality of interaction between DPH and the Department of Public Instruction.

[8] The driver's license restoration fee is $100; $50 is deposited in the Highway Fund, $25 is transferred to the Forensic Alcohol Testing Branch, and the remainder is deposited into the General Fund.

## Exhibit 5: Division of Public Health Partners With 23 State Agencies and Universities to Provide Services

| State Agency or University | Administrative, Local, and Community Support | Chronic Disease and Injury Prevention | Environmental Health | Epidemiology | Medical Examiner | Minority Health and Health Disparities | Oral Health | State Center for Health Statistics | State Laboratory of Public Health | Vital Records | Women's and Children's Health | Total Services by Partner |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Department of Public Instruction** | | 5 | 2 | 3 | | | 1 | 1 | | | 3 | **15** |
| **Department of Public Safety** | | 2 | 2 | 7 | 1 | | 1 | | 1 | | | **14** |
| **The University of North Carolina System** | | 5 | | | | | 1 | 1 | | | 5 | **12** |
| **UNC Chapel Hill** | | 5 | | | | 1 | 1 | 1 | | | 3 | **11** |
| **Department of Agriculture and Consumer Services** | | 1 | 2 | 4 | | | | | 1 | | 2 | **10** |
| **Department of Environment and Natural Resources** | | 1 | 3 | 4 | | | 1 | | 1 | | | **10** |
| **Department of Transportation** | | 3 | 2 | 3 | 1 | | 1 | | | | | **10** |
| **Department of Insurance** | | 1 | 2 | 1 | | 1 | | | 1 | | 1 | **7** |
| **Department of Justice** | | | 2 | 1 | 1 | | | | | | 3 | **7** |
| **East Carolina University** | | 2 | | | | | 1 | 1 | | | 2 | **6** |
| **Department of Labor** | | | 1 | 4 | | | | | | | | **5** |
| **Department of Administration** | | | 1 | | | 1 | | | 1 | | | **3** |
| **North Carolina State University** | | 2 | | | | | | 1 | | | | **3** |
| **Office of Information Technology Services** | 1 | | | | | | | | 1 | | 1 | **3** |

| State Agency or University | Administrative, Local, and Community Support | Chronic Disease and Injury Prevention | Environmental Health | Epidemiology | Medical Examiner | Minority Health and Health Disparities | Oral Health | State Center for Health Statistics | State Laboratory of Public Health | Vital Records | Women's and Children's Health | Total Services by Partner |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **UNC Greensboro** | | | | | | 1 | | 1 | | | 1 | **3** |
| **Administrative Office of the Courts** | | | | | 1 | | | | | 1 | | **2** |
| **Appalachian State University** | | | | | | | | 1 | | | 1 | **2** |
| **Department of Commerce** | | 1 | 1 | | | | | | | | | **2** |
| **Wildlife Resources Commission** | | | 1 | 1 | | | | | | | | **2** |
| **Department of Cultural Resources** | | | | | 1 | | | | | | | **1** |
| **North Carolina Partnership for Children** | | | | | | | 1 | | | | | **1** |
| **North Carolina Board of Dental Examiners** | | | | | | | 1 | | | | | **1** |
| **Office of Administrative Hearings** | | | | | 1 | | | | | | | **1** |
| **Number of Partnerships with State Entities** | **1** | **28** | **19** | **28** | **6** | **4** | **9** | **7** | **6** | **1** | **22** | |

Note: Medical Examiner and State Laboratory of Public Health operate under the Epidemiology section. State Center for Health Statistics and Vital Records operate under the Chronic Disease and Injury Prevention section.

*Source: Program Evaluation Division based on Division of Public Health list of partnerships.*

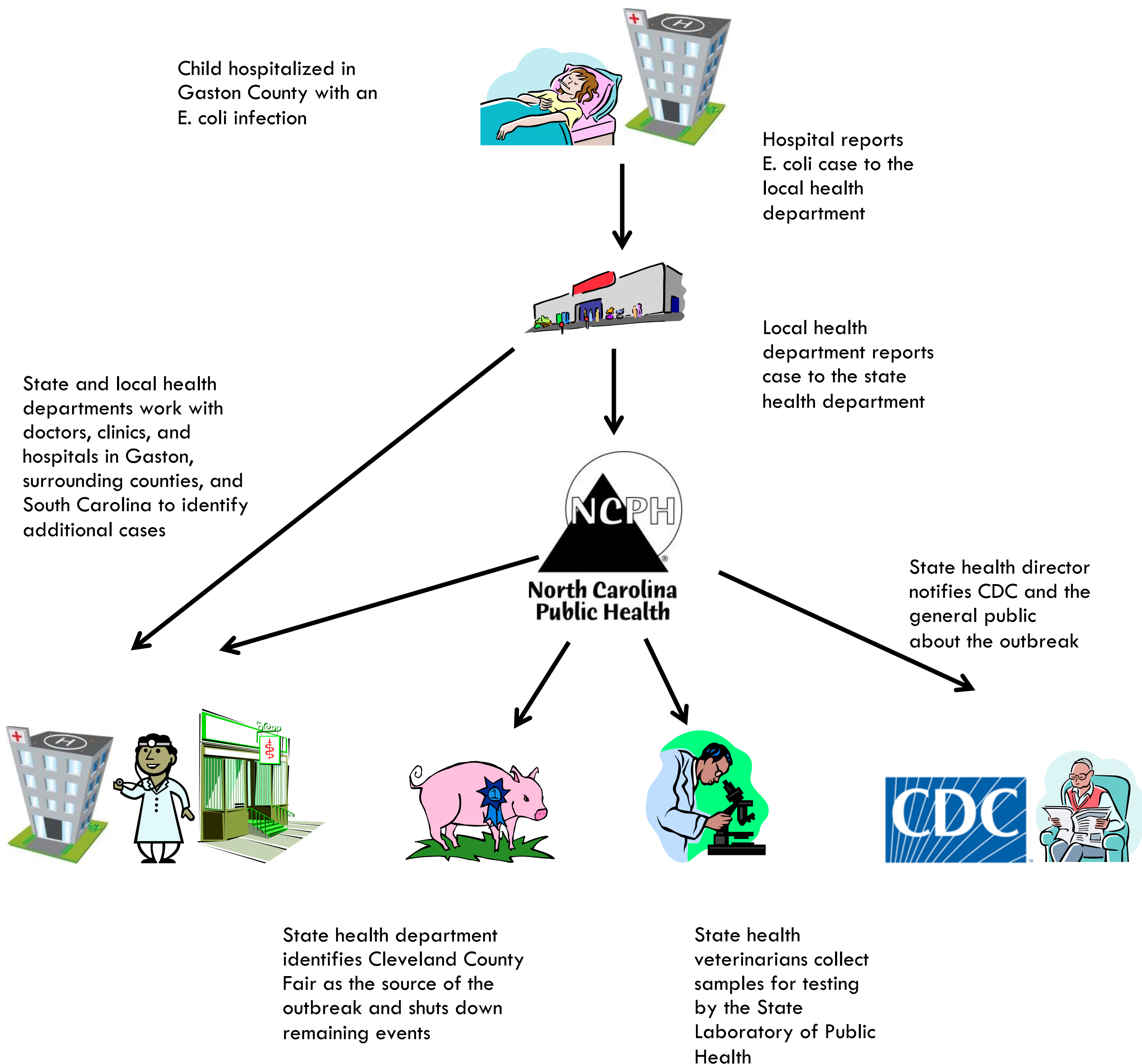
DPH and local health departments work with hospitals and physicians on a variety of public health matters. Representatives from the North Carolina Hospital Association meet monthly with state and local health directors to improve community health. In addition, physicians must serve as members of the Commission for Public Health and local boards of health.[9] Local health departments coordinate with hospitals and health centers to complete community needs assessments required for hospitals to retain non-profit status and for health centers to obtain the federally qualified health center designation from the U.S. Department of Health and Human Services. Also, hospitals must comply with statutory requirements regarding public health, such as reporting health information to the statewide surveillance and reporting system and collecting information necessary to register live births and deaths.

In addition, DPH maintains contracts with other entities to support North Carolina's public health system. These entities include non-profit organizations, community colleges, private colleges and universities, and for-profit entities. In Fiscal Year 2011-12, DPH had 237 contracts with non-state entities.

A 2012 outbreak of E. coli at the Cleveland County Fair provides an illustrative example of North Carolina's public health system in action (see Exhibit 6). State and local health officials worked closely with hospitals and physicians in the region to identify additional cases related to this public health emergency. State health officials localized the outbreak to the Cleveland County Fair and required fair organizers to cancel the remaining events. DPH sent staff to collect samples for testing by the State Laboratory of Public Health and updated the Centers for Disease Control and the general public about the status their work in containing the spread of this disease.

[9] N.C. Gen. Stat. § 130A-30(a) requires that four of the 13 members of the Commission for Public Health are appointed by the North Carolina Medical Society. N.C. Gen. Stat. §§ 130A-35(b), 130A-37(b), 130A-45.1(c)(1) requires one physician to serve on local boards of health.

**Exhibit 6: North Carolina's Public Health System Addresses E. coli Outbreak**




*Source: Program Evaluation Division based on North Carolina Health News.*

In summary, DPH is highly integrated internally, with other divisions in DHHS, with other state and non-state entities, and local health departments to ensure that public health services are available statewide. Each public health service is based in a section within DPH which works with multiple partners to ensure that the service is provided. These partnerships are integral to the work of the division.

**Finding 2. The Division of Public Health should remain in the Department of Health and Human Services and should not be transferred to the University of North Carolina Health Care System or School of Public Health.**

Every state in the country has a public health authority located in a state agency. These authorities have powers that are reserved for states, and perform activities that are more appropriate to be done by state agencies than by other entities. In addition, the missions of the University of North Carolina (UNC) Health Care System and School of Public Health do not match the work of the Division of Public Health (DPH). Finally, local health directors and other stakeholders believe the division should remain in the Department of Health and Human Services (DHHS).

**DPH has powers that must be held by a state agency.** Public health is a police power function under the 10th amendment of the U.S. Constitution and is reserved for the State. These powers include activities such as quarantining, inspecting food establishments, and closing down a school due to an epidemic. For example, if a person with tuberculosis is not taking the required medication DPH has the authority to arrest and quarantine the individual until the person has resumed taking the medication needed. DPH also has regulatory functions that require it to be aligned with the State. Some of these functions include food service inspections of establishments and facilities,[10] permitting wastewater systems, and inspections for lead and asbestos. In addition, 69 of the 92 grants DPH receives from federal agencies can only be awarded to a state entity. These grants support 88% of the services provided by DPH.

**Other public health activities are more appropriate for a state agency to perform.** During health and environmental crises the State needs to be able to communicate with the public. The State Health Director is an official voice of the State and is able to get information to the public through state and local media outlets. For example, the State Health Director did public service announcements on the need for adults to get a pertussis (also known as whooping cough) booster because of an increase in the number of cases in North Carolina. If the State Health Director was staff of a university or health care system, he or she might be considered a representative of those institutions and not the voice of the State.

The State Health Director needs to have an aligned relationship with the governor's office to ensure that the State can quickly respond to health and environmental crises. Public health experts stated that if the director was embedded in a university he or she would report to the chancellor, whose appointment and tenure is decided by the university's governing board. The university would not have public health as its mission and decisions might be made based on considerations other than the public health of the State.

Furthermore, no other state has their public health authority in a non-state government agency. There are several different organizational models for state health authorities, but in every state the public health authority is

[10] Establishments and facilities include: restaurants, summer camps, confinement facilities, residential cares, hospitals, nursing homes, schools, meat markets, lodging establishments, tattoo parlors, and public swimming pools.

located in a governmental body. In 57% of states, health authorities are stand-alone entities. The remaining 43% are in an umbrella or super agency such as a department of health and human services.

**Neither the UNC Health Care System nor School of Public Health is an appropriate place for a state public health agency**. The General Assembly directed the Program Evaluation Division to evaluate the feasibility of transferring the functions, powers, duties, and obligations to either the UNC Health Care or UNC Chapel Hill School of Public Health. Based on interviews and focus groups with DPH, UNC Health Care, UNC School of Public Health, and other stakeholders; review of data; and research on other states, DPH should not be transferred to either entity and all functions, powers, duties, and obligations should remain with the division. Neither UNC Health Care nor UNC School of Public Health has a mission that matches the work of DPH and moving DPH could provide an unfair competitive advantage over other entities in the state. Finally, neither entity is interested in having DPH transferred to them.

**The missions of UNC Health Care and UNC School of Public Health do not match the work of DPH.** UNC Health Care is a public health care organization which supports the teaching mission of the UNC School of Medicine and provides patient care. UNC Health Care does not provide public health services. Executives at UNC Health Care stated that it should play a greater role in public health, but at this time it is focused on providing health care services to treat patient illnesses and diseases.

UNC School of Public Health is an academic institution and the core of its mission centers on education and research. Direct service delivery provided and overseen by DPH does not fit with the academic mission of the School of Public Health and the school is not set up to administer contracts or to oversee the 85 local health departments. Faculty from the school stated it would take extensive time, expertise, and money if the division was moved to the school and the return on investment would not be great enough to warrant the additional costs.

**Moving DPH to UNC Health Care or UNC School of Public Health could provide an unfair competitive advantage.** DPH receives federal and state funding for public health services and shapes statewide policy that affects health care organizations. If these functions were moved to UNC Health Care, it would have a competitive advantage over other health care systems. In addition, leading a collaboration of competitors could be problematic. DPH collects surveillance and disease information from emergency departments and must communicate with hospitals when there are disease outbreaks and other public health problems. For example, during the recent meningitis outbreak DPH contacted all the hospitals in the state to talk about the distribution of tainted medicine, reporting new cases, and recommendations for patients to minimize risk.

Similarly, transferring DPH functions to the UNC School of Public Health, would give the school an unfair advantage over other academic institutions in the state. Ten other state universities offer degrees and certificates in public health: Appalachian State University, East Carolina University, North Carolina A&T State University, North Carolina Central University, UNC Asheville, UNC Charlotte, UNC Greensboro, UNC Pembroke, UNC

Wilmington, and Western Carolina University. UNC Charlotte is currently planning to open the second accredited School of Public Health in the state. As discussed in Finding 1, DPH works with different academic institutions across the state. Transferring functions to the UNC School of Public Health may raise questions of impartiality.

**Finally, leadership at UNC Health Care and UNC School of Public Health do not support the transfer of DPH functions.** UNC Health Care executives stated they want to continue to focus on what they are best at, providing quality health care services. DPH already contracts with UNC Health Care for activities in which UNC Health Care has expertise. DPH can continue to take advantage of this expertise through contracting without moving the entire division.

Leadership at UNC School of Public Health also believes that DPH should not be transferred to the school. The division currently works closely with and contracts with the school on several initiatives including accreditation, workforce training, and technical assistance to local health departments. The division can continue to work with the school and draw upon the expertise of the faculty and staff at the school without transferring public health functions.

**Local health departments and other stakeholders do not support the transfer of DPH functions to other entities.** The Program Evaluation Division surveyed the 85 local health directors to gauge their interaction and satisfaction with DPH and their opinions about the transfer for the Division of Public Health to either the UNC Health Care or UNC School of Public Health; the survey yielded a 74% response rate.[11] Local health directors disagreed or strongly disagreed with transferring functions, powers, duties, or obligations of DPH to either UNC Health Care (100%) or UNC School of Public Health (94%). Local health directors commented that North Carolina's public health system "works well" and that any change may "undermine a well-established system and structure that has operated successfully for many years."

Other stakeholders echoed this sentiment. Representatives from the North Carolina Medical Society, North Carolina Hospital Association, and North Carolina Association of County Commissioners also believed that DPH should not be transferred. These entities cited several reasons for keeping the current model intact, including the lack of infrastructure to support statewide public health functions at the UNC School of Public Health, the unfair competitive advantage for UNC Health Care, and the lack of cost savings or system improvement if such a transfer would occur.

**Transferring DPH functions, duties, powers, and obligations may adversely affect recent changes to the public health system.** DPH leadership, UNC School of Public Health officials, UNC Health Care executives, and local health directors cited several changes to the public health system that need time to complete before additional changes are implemented.

- The Environmental Health Section was moved back under DPH in 2011, bringing all public health functions back together under one

[11] Sixty-three (63) out of 85 local health directors responded to the survey.

division. The division is working to integrate these programs and services with the work of other DPH sections.

- N.C. Sess. Laws, 2012-126 gives counties the authority to create a consolidated human services agency.[12] In response to this law, 14 counties are considering or moving towards creating a consolidated agency.
- N.C. Sess. Laws, 2012-126 also established a program to provide incentives for local health departments to create multi-county departments. The incentives are available to local health departments that create multi-county districts with a population of at least 75,000.[13]

Public health officials stated that further changes in the public health system would create instability and it could result in losing focus on improving the state's public health.

Finally, representatives from the Association of State and Territorial Health Officials stated that "whenever we reorganize, there are unintended consequences." Reorganizations of public health departments are disruptive and rarely, if ever, result in cost savings or a stronger public health department.

In summary, DPH should remain under the purview of the State and should not be moved to either UNC Health Care or UNC School of Public Health. Neither a health care organization nor academic institution is an appropriate place for a state public health authority. Some activities of the division must be done by a state entity and others are more appropriate for a governmental entity. Finally, restructuring takes considerable resources and doesn't always accomplish the goals intended.

**Finding 3. North Carolina's public health system is seen as a model, but the State ranks in the bottom half of states for health outcomes because of high risk factors.**

North Carolina's public health system is seen as a model by other states and many activities started in North Carolina have been implemented by other states across the country. Despite a strong public health system, the State is ranked 32$^{nd}$ in the country for overall health. The State's relatively low ranking is hard to understand given the strong system, but risk factors have an effect on the State's health outcomes. Many of these risk factors are beyond the control of the Division of Public Health (DPH) and require a comprehensive approach to address them.

**North Carolina's public health system is seen as a model decentralized system**. National experts of public health systems stated "North Carolina is the strongest model we've seen" based on the ability of DPH and the local health departments to work systematically and together. Regular communication between DPH and the local health departments is one aspect that has created this strong system.

[12] A consolidated human services agency includes public health, social services, mental health, developmental disabilities, and substance abuse services.
[13] No state funds were set aside for these incentives.

- DPH has staff at the division's headquarters in Raleigh and regional staff located throughout the state that are in regular contact with local health departments.
- DPH has consultants for each grant that are available to provide guidance.
- North Carolina Association of Local Health Directors meets monthly and state staff is always in attendance.
- During an outbreak or other public health crisis the affected area will have daily conference calls and in-person consultation with the State Health Director and staff to provide assistance and guidance.

Local health department directors stated that there was nearly daily communication between the local department and DPH. One local health director stated "not a day goes by when I don't send or receive an email from state staff." This regular communication was cited by local health department representatives as key to providing public health services to their communities.

North Carolina's decentralized structure in combination with the strong relationships between DPH and the local health departments helps ensure that people across the state have access to public health services. Some states with a decentralized public health system do not have public health services available across the state or dedicated staff that work with the local health departments. National experts stated that some states with weaker systems know that all public health services are not available to everyone and they accept the fact that some people won't get services.

In addition to the structure of North Carolina's public health system being seen as a model, some specific practices were also identified as models. Examples of these are described below.

- **Accreditation**. North Carolina was the first state to mandate that each local health department be accredited.[14] Accreditation is a key strategy for improving the functioning of local health departments and requires the department's capacity and performance be measured against benchmarks and standards. North Carolina's accreditation program aims to increase the capacity, accountability, and consistency of the policies and practices of all local health departments.
- **Partnering**. DPH partners with many different groups to find ways to maximize the State's resources and to help ensure that public health services are available to all people. The division's partnering efforts are seen as models and have been implemented in other states.
    - The DPH partners with historically minority colleges in the State to expand HIV and sexually transmitted disease prevention/risk reduction education programs on campus. This program is a national prevention model for HIV/AIDS.
    - Adult care homes notify the division when glucometers have been shared, putting residents at risk for Hepatitis B. This notification helps reduce the number of Hepatitis B cases.

[14] N.C. Gen. Stat. § 130A-34.1

- **Data**. The division receives near real-time emergency department surveillance data and communicable disease reports from North Carolina hospitals. Allowing the division to identify new diseases and outbreaks, track their progression, and implement strategies to mitigate the risks to the public.

**Despite the State's prestige as a model public health system, it ranks 32nd in the country for overall health**. The United Health Foundation analyzes data and develops an overall ranking for each state (See Exhibit 7). This information is presented in an annual report, *America's Health Rankings*,[15] and includes 23 measures in two general categories determinants—actions that will affect the future health of the population—and outcomes—what has already occurred.

[15] United Health Foundation. (2011). *America's Health Rankings: A Call to Action for Individuals and Their Communities*. Minnetonka, MN: United Health Foundation.

## Exhibit 7

North Carolina Ranks 32nd in Overall Health, 2011

| State | Overall Rank | Determinants Rank | Outcomes Rank |
|---|---|---|---|
| Vermont | 1 | 1 | 5 |
| New Hampshire | 2 | 3 | 4 |
| Connecticut | 3 | 2 | 7 |
| Hawaii | 4 | 4 | 1 |
| Massachusetts | 5 | 5 | 3 |
| Minnesota | 6 | 7 | 2 |
| Utah | 7 | 6 | 6 |
| Maine | 8 | 8 | 18 |
| Colorado | 9 | 10 | 13 |
| Rhode Island | 10 | 9 | 17 |
| New Jersey | 11 | 12 | 12 |
| North Dakota | 12 | 11 | 20 |
| Wisconsin | 13 | 14 | 14 |
| Oregon | 14 | 12 | 15 |
| Washington | 15 | 17 | 10 |
| Nebraska | 16 | 20 | 11 |
| Iowa | 17 | 23 | 8 |
| New York | 18 | 21 | 9 |
| Idaho | 19 | 22 | 15 |
| Virginia | 20 | 15 | 26 |
| Wyoming | 21 | 19 | 23 |
| Maryland | 22 | 16 | 33 |
| South Dakota | 23 | 18 | 32 |
| California | 24 | 24 | 18 |
| Montana | 25 | 26 | 25 |
| Kansas | 26 | 27 | 21 |
| Pennsylvania | 26 | 25 | 29 |
| Illinois | 28 | 28 | 22 |
| Arizona | 29 | 29 | 27 |
| Delaware | 30 | 33 | 30 |
| Michigan | 30 | 32 | 35 |
| **North Carolina** | **32** | **31** | **38** |
| Florida | 33 | 30 | 41 |
| New Mexico | 34 | 35 | 30 |
| Alaska | 35 | 39 | 24 |
| Ohio | 36 | 36 | 37 |
| Georgia | 37 | 38 | 40 |
| Indiana | 38 | 41 | 34 |
| Tennessee | 39 | 37 | 42 |
| Missouri | 40 | 40 | 39 |
| West Virginia | 41 | 34 | 47 |
| Nevada | 42 | 45 | 36 |
| Kentucky | 43 | 42 | 45 |
| Texas | 44 | 49 | 28 |
| South Carolina | 45 | 44 | 43 |
| Alabama | 46 | 43 | 49 |
| Arkansas | 47 | 46 | 44 |
| Oklahoma | 48 | 47 | 46 |
| Louisiana | 49 | 50 | 48 |
| Mississippi | 50 | 48 | 50 |

Note: The health rankings are from 1 to 50. The state with the highest ranking or best overall health is ranked 1and the state with the worst overall health is ranked 50.

*Source: Program Evaluation Division based on United Health Foundation's report, America's Health Rankings.*

**North Carolina ranks 31st in health determinants.** Determinants identified in *America's Health Rankings* are divided into four groups; behaviors, community and environment, public and health policies, and clinical care. These factors are serious barriers to progress towards optimal health. Some of the determinants that affect North Carolina's health ranking are child poverty, public health funding, lack of health insurance, smoking, and high school graduation rate (See Exhibit 8 for North Carolina's determinants rankings).

- **Child poverty.** North Carolina has the fourth highest child poverty rate in the country and the percentage of children living in poverty increased in the last five years from 18% to 28%. Children living in poverty are challenged by lack of access to health care, limited availability of healthy foods, fewer choices for physical activity, limited access to educational opportunities, and stressful living situations.
- **Public health funding.** North Carolina ranks 42nd in the country for public health funding at $53 per person (a rank of 1 denotes the most public health funding per person); well below the national average of $95 per person. Research shows that an investment of $10 per person per year in proven programs for physical activity, nutrition, and smoking prevention could save the country $16 billion annually within five years, a return of $5.60 for every $1 invested.
- **Lack of health insurance**. North Carolina ranks 38th for the percentage of the population without health insurance (a rank of 1 denotes the lowest percentage without health insurance). People without health insurance have a harder time accessing needed health care and often don't get the preventive care they need leading to higher health care costs.
- **Smoking**. Nearly 20% of the State's population smokes, ranking North Carolina 36th in the country (a rank of 1 denotes the lowest percentage of people who smoke). Smoking affects overall health by causing increased cases of respiratory diseases, heart disease, stroke, cancer, preterm birth, low birth weight, and premature death. Tobacco use is estimated to be responsible for about 20% of deaths annually.
- **High school graduation rates**. North Carolina ranks 36th in the country with 73% of ninth graders graduating four years later (a rank of 1 denotes the highest percentage of graduates). Education helps individuals learn about, create, and maintain a healthy lifestyle.

Determinants influence health outcomes and are the predictors of future health. In other words, improving determinants will improve outcomes over time. For example, researchers have found a clear link between rising incomes and declining infant mortality that is significant even after adjusting for other factors.

**Exhibit 9:**

North Carolina Ranks 31st in Health Determinants, 2011

| Measure | Ranking |
| --- | --- |
| **Behaviors** | |
| Binge drinking | 8 |
| Obesity | 30 |
| High school graduation | 36 |
| Smoking | 36 |
| **Community and Environment** | |
| Infectious disease | 15 |
| Occupational fatalities | 22 |
| Violent crime | 27 |
| Air pollution | 35 |
| Children in poverty | 47 |
| **Public and Health Policies** | |
| Immunization coverage | 6 |
| Lack of health insurance | 38 |
| Public health funding | 42 |
| **Clinical Care** | |
| Early prenatal care | 18 |
| Preventable hospitalizations | 24 |
| Primary care physicians | 26 |
| **All Determinants** | **31** |

Note: The health rankings are from 1 to 50. The state with the highest ranking or best health for that measure is ranked 1and the state with the worst health is ranked 50.

*Source: Program Evaluation Division based on United Health Foundation's report, America's Health Rankings.*

**North Carolina ranks 38th in health outcomes.** Health outcome measures provide information on what has already occurred in regards to death, disease, or missed days due to illness. Outcomes also measure quality of life (poor mental health and poor physical health days) and the disparity between different populations (geographic disparity). North Carolina ranks in the bottom half of states in all outcomes except one, geographic disparity (ranked 20), and in the bottom third of states in four of the eight measures (See Exhibit 10).

- **Infant mortality.** North Carolina has the fifth highest infant mortality rate in the country. Infant mortality is associated with factors such as maternal health, prenatal care, and access to quality health care.
- **Diabetes.** North Carolina ranks 36th in the country (a rank of 1 denotes the lowest rate of diabetes) for prevalence of diabetes, a life-long illness that is a major cause of heart disease, stroke, and the leading cause of kidney failure, lower-limb amputations, and blindness in adults. Studies have indicated that the onset of type 2 diabetes can be prevented through weight loss, increased physical activity, and healthy eating.
- **Premature deaths.** North Carolina ranks 36th for premature deaths (a rank of 1 denotes the lowest rate of premature deaths), which measures the loss of years of life due to death before age 75. This measure is an indication of the number of useful years that are lost due to early death. In many cases early death is preventable with education, health care access, and public health programs.
- **Cancer deaths.** North Carolina ranks 35th for cancer deaths (a rank of 1 denotes the lowest rate of cancer deaths). Cancer is the second

leading cause of death in the U.S. There are strategies for reducing the risk of developing some cancers and preventing others.

**Exhibit 10:**

North Carolina Ranks 38th in Health Outcomes, 2011

| Measure | Ranking |
|---|---|
| Geographic disparity | 20 |
| Poor physical health days | 26 |
| Poor mental health days | 30 |
| Cardiovascular deaths | 31 |
| Cancer deaths | 35 |
| Diabetes | 36 |
| Premature deaths | 36 |
| Infant mortality | 46 |
| **All Outcomes** | **38** |

Note: The health rankings are from 1 to 50. The state with the highest ranking or best health for that measure is ranked 1and the state with the worst health is ranked 50.

*Source: Program Evaluation Division based on United Health Foundation's report, America's Health Rankings.*

North Carolina's determinants' rank is 31 whereas its outcomes rank is 38. According to the United Health Foundation, having a better determinants' rank than outcomes' rank means that the State will likely improve its health outcomes rank over time. Determinants influence health outcomes and many of these determinants fall under the purview of other state agencies. Many state agencies play an important role in the public health of North Carolina. For example, clean water and air are the responsibility of the Department of Environment and Natural Resources and increasing the high school graduation rate is a function of the Department of Public Instruction.

**Improvement in public health outcomes requires the efforts of many different partners and state agencies.** As stated in Finding 1, DPH works with multiple state agencies, universities, local health departments, and non-profits. One major effort has been the creation of *Healthy North Carolina 2020*.[16] The North Carolina Institute of Medicine in collaboration with DPH, the Governor's Task Force for Healthy Carolinians, and other divisions within the Department of Health and Human Services developed *Healthy North Carolina 2020* which identifies 40 objectives with the goal of making North Carolina a healthier state (See Appendix B for a list of the 40 objectives). Objectives fall into 13 focus areas,[17] nine of which have been identified as major preventable risk factors contributing to the State's leading cause of death and disability. Each objective has a discrete target to measure progress. In addition, the report contains evidence-based strategies for achieving each objective.

Achieving these objectives requires the efforts of many different partners and state agencies. DPH, led by the State Health Director, oversees the activities related to meeting the objectives identified in *Healthy North Carolina 2020* and encourages stakeholders to adopt the objectives and implement the evidence-based strategies provided. However, the division cannot compel other organizations to act. The division currently works on

[16] North Carolina Institute of Medicine. (2011). *Healthy North Carolina 2020: A Better State of Health*. Morrisville, NC: North Carolina Institute of Medicine.

[17] The 13 focus areas are tobacco use, nutrition and physical activity, sexually transmitted disease and unintended pregnancy, substance abuse, environmental health, injury and violence, infectious disease and foodborne illness, mental health, social determinants of health, maternal and infant health, oral health, chronic disease, and a cross-cutting focus area.

specific services with many different state agencies, but there is no formal structure to bring together all state agencies with a role in public health.

**The federal government has created a cabinet-level council to bring focus, coordination, and leadership to public health issues.** The National Prevention, Health Promotion, and Public Health Council includes the heads of 17 federal agencies[18] and is chaired by the Surgeon General. It is working to change the nation's focus from one of sickness and disease to one based on prevention and wellness. The council began this effort by creating a National Prevention Strategy that outlines ways to improve health and quality of life for individuals, families, and communities.

California has created, and Rhode Island is in the process of creating, a similar council to bring state agencies together to address public health issues. If North Carolina were to create a state-level council it would help bring a government-wide approach to public health and find ways to maximize resources to achieve better health outcomes.

In summary, North Carolina's overall health ranking is 32nd in the country, putting the State in the bottom half of states for health. However, given the State's challenges with child poverty, public health funding, lack of health insurance, smoking, and high school graduation, North Carolinians have better health than expected. However, improvement in health outcomes will take the efforts of other agencies in addition to DPH. A comprehensive approach by multiple state agencies is needed to improve the State's overall health. The federal government as well as California and Rhode Island have created cabinet level councils to bring state agencies together to address public health issues.

**Finding 4. There are organizational models that could improve public health delivery in North Carolina.**

As part of this evaluation, the Program Evaluation Division interviewed and queried public health stakeholders to determine how North Carolina could improve public health delivery. As stated in Finding 3, North Carolina is recognized as having a strong public health system and is seen as a model in several ways, but still ranks in the bottom half of states for overall health. The Program Evaluation Division identified additional strategies that could put North Carolina in the forefront of public health with the goal of improving health outcomes. Ideas for improving public health in North Carolina include strengthening regional activities, using data to focus efforts, and continuing quality improvement efforts.

**Studies show that the strongest predictor of performance is size of jurisdiction of a public health department.** These studies show that there are significant improvements in performance when districts serve at least 50,000 to 100,000 people and the greater the size the better the performance. One study found that performance improved until the size of the district reached 500,000 people.

[18] Agencies represented on the council include Departments of Agriculture, Defense, Education, Environmental Protection Agency, Health and Human Services, Homeland Security, Housing and Urban Development, Interior, Justice, Labor, Transportation, and Veterans Affairs and the Federal Trade Commission, Office of National Drug Control Policy, Domestic Policy Council, Corporation for National and Community Service, and Office of Management and Budget.

Currently in North Carolina there are 6 multi-county health departments, 77 single county health departments or health authorities, and 2 consolidated human services agencies. Of the local health organizations 30 serve fewer than 50,000 people (See Appendix C for a listing of local health departments and the size of population served). DPH officials stated that these small health departments are under-resourced and often cannot hire the people they need. N.C. Sess. Laws, 2012-126 provides incentives to counties interested in creating a regional health department serving at least 75,000 people. However, no state funds were set aside for these incentives. There has been some interest in creating regional health districts, but no counties have started the process of merging with other counties.

Another strategy for creating a regional approach to public health is to create regional councils for local health departments to come together to address public health issues. New York, which also has a decentralized public health system, has created regional councils for multiple counties to work together to determine the best approaches to dealing with public health issues. The regions bring together public health staff and other stakeholders such as representatives from economic development, business, and other state agencies to discuss public health issues, pool resources, and determine the best course of action.

North Carolina has made several efforts to implement regional strategies. First, there are six multi-county health districts that serve 21 counties. However, the number of multi-county districts has decreased over the last 35 years when there were 17. The General Assembly provided incentive funding to multi-county districts, but when the funding was eliminated the regions started coming apart.

Second, the University of North Carolina at Chapel Hill School of Public Health helped counties across the state establish incubators to improve public health outcomes. These regional partnerships work to build capacity through efforts such as contracting with grant writers, group purchasing, and enhancing knowledge through shared trainings, experiences, and expertise of participating health directors. There are currently six incubators that cover 77 counties.

Third, DPH received a Community Transformation Grant from the U.S. Department of Health and Human Services to address tobacco-free living, healthy eating, physical activity, and evidence-based preventive services. DPH and local health departments have established ten multi-county collaboratives to develop regional plans and implement strategies. This five-year grant does not include any state funding. In addition to continuing to encourage multi-county health districts North Carolina could build on the work of this grant to sustain regional approaches.

**Another strategy to help improve health outcomes is using data to focus resources.** Georgia used data and mapping techniques to develop a statewide picture of infant mortality rates. State health officials used sub-county areas such as zip codes and census tracts to determine where clusters of higher rates exist. This analysis revealed clusters that would have been masked if the analysis was only done at the district or county level. Once Georgia identified these clusters, health officials analyzed socio-economic data and determined that high infant mortality rates were

highest in areas with high poverty and low educational attainment. Understanding these characteristics helped Georgia use targeted interventions in high rate areas to reduce infant mortality in these areas and overall in state as well. One local area was able to reduce infant mortality by half because of these focused efforts.

Texas analyzed data to determine that if they focused resources to improve health outcomes their efforts would result in cost savings. The Texas public health department calculated that Medicaid expenditures would decrease by $6.9 million over two years if preterm births were lowered by 8%. The Texas Legislature endorsed an initiative to help reduce preterm births and provided $4.2 million. Texas is beginning to see cost savings to its Medicaid program.

**Quality improvement training is another strategy for strengthening North Carolina's public health system.** There has been growing momentum for local health departments to implement quality improvement programs which aim to improve the performance and functioning of local health departments. Quality improvement is defined by the American Public Health Association as

> *the use of a deliberate and defined improvement process which is focused on activities that are responsive to community needs and improving population health. It refers to a continuous and ongoing effort to achieve measurable improvements in the efficiency, effectiveness, performance, accountability, outcomes, and other indicators of quality in services or processes which achieve equity and improve the health of the community.*

Quality improvement programs all include the basic steps of collecting baseline data, implementing an intervention, and collecting and analyzing post-intervention data to measure how much improvement has been attained.

DPH, through grants from the federal government and private funding, has implemented a quality improvement program housed at the Center for Public Health Quality. The center has provided support and training for 13 DPH services as well as for 48 of 85 local health departments. The program works to lower costs, improve health outcomes, and find more efficient processes with a focus on patient satisfaction. Through quality improvement efforts, local health departments have been able to increase the number of appointments and reduce the number of nurses at the same time. This program has no state funding, but is showing measurable results. The return on investments is estimated at 2-to-1, saving communities more than $962,000 annually. Additional resources could increase the number of local health departments that can participate and increase savings across the state. DPH estimates an investment of $480,000 could realize savings of approximately $1.8 million annually.

One tool to assure that every health department uses quality improvement processes is the North Carolina Local Health Department Accreditation Program. As stated in Finding 3, North Carolina is a national leader in accreditation and each local health department is required by state law to be accredited. Initially, the General Assembly provided funding for the

accreditation program.[19] Over the last several years the funding was reduced, and eventually, eliminated in Fiscal Year 2012-13. The North Carolina Local Health Directors Association decided to maintain a commitment to the accreditation program and has provided funding from its reserves. Local health departments also have contributed resources to fund the program. However, some counties cannot pay and others will not. As a result, accreditation may not be fully implemented across the state.

In summary, DPH has a model public health system, but there are strategies that could further strengthen the system. Regionalization, using data to focus resources, and quality improvement programs are three ideas that public health experts stated North Carolina could focus on to be at the forefront of public health programs nation-wide.

[19] The program received $485,000 in state appropriations in Fiscal Year 2005-06.

## Recommendations

The Division of Public Health (DPH) should remain in the Department of Health and Human Services and not be transferred to either the University of North Carolina (UNC) Health Care System or UNC School of Public Health. As stated in Finding 2, DPH should not be transferred for the following reasons

- public health is a police power function under the 10th amendment and is reserved for the State;
- North Carolina's public health agency needs direct contact with the governor to communicate effectively and respond quickly during health and environmental crises;
- the missions of UNC Health Care and UNC School of Public Health do not match the work of DPH;
- moving DPH to UNC Health Care or UNC School of Public Health could provide an unfair competitive advantage;
- leadership at UNC Health Care and UNC School of Public Health, local health directors, and other stakeholders do not support the transfer; and
- transferring DPH functions may adversely affect recent changes to the public health system.

**Recommendation 1. The General Assembly should establish the North Carolina Public Health Council to develop a government-wide action plan for improving the overall health in North Carolina and direct state agencies to participate in developing and implementing the plan.**

As stated in Finding 3, North Carolina is seen as a model state for public health, but it ranks 32nd in the country for overall health. Social determinants of health such as poverty, income, and education affect the State's overall health. These factors require the attention of the Division of Public Health in collaboration with other state agencies to make improvements in the State's overall health. A National Prevention Council has been established at the federal level to bring coordination and leadership to prevention, health, and wellness. The General Assembly should establish the North Carolina Public Health Council based on the federal model.

Council membership should include the Secretary, or designee, of each state agency that has a role in the State's health and wellness including, but not limited to:

- Department of Agriculture and Consumer Science;
- Department of Commerce;
- Department of Environment and Natural Resources;
- Department of Health and Human Services;
- Department of Insurance;
- Department of Justice;
- Department of Labor;
- Department of Public Instruction;
- Department of Public Safety;

- Department of Transportation; and
- University of North Carolina System.

The State Health Director should be designated as the chair of the council.

The North Carolina Public Health Council should be directed to develop a government-wide action plan for improving the State's health. The General Assembly should direct the council to work together to achieve the health objectives identified in the Division of Public Health's *Healthy North Carolina 2020*. The council should be directed to identify the agencies that play a role in each objective. Once agencies have been tasked with objectives, each agency should develop an agency-specific action agenda in conjunction with DPH to meet the goal by 2020. Each agency action agenda should include for each objective

- description of the objective;
- baseline data;
- current status;
- target for 2020;
- activities for addressing the objective and reaching the target;
- description of how the agency will work with other agencies if more than one agency is tasked with the objective; and
- cost of implementing the plan.

The Division of Public Health in conjunction with the North Carolina Public Health Council should be directed to create a dashboard on the division's website that shows the State's progress in meeting the objectives in *Healthy North Carolina 2020*. The dashboard should provide the baseline, current level, target goal, and the agencies working towards achieving the goal. Each agency should be required to report to the Division of Public Health annually on the actions it has taken and progress made.

The North Carolina Public Health Council should meet twice yearly through 2020 for each agency to report on their action plans and progress toward achieving the goals identified. The Division of Public Health should staff the council.

The General Assembly should direct the agencies listed above to participate in the North Carolina Public Health Council. Each agency should assist in the development of the government-wide action plan, develop and implement an agency-specific action agenda in conjunction with DPH, provide information to DPH on actions taken and progress made, and participate in council meetings.

The North Carolina Public Health Council should present each agency's action plan to the House Appropriations Subcommittee on Health and Human Services, House Health and Human Services Committee, Senate Appropriations on Health and Human Services, and Senate Health Care committees by March 31, 2014. DPH should present the dashboard to House Appropriations Subcommittee on Health and Human Services, House Health and Human Services Committee, Senate Appropriations on Health and Human Services, and Senate Health Care committees by June 30, 2014 and annually on progress towards improving health outcomes.

**Recommendation 2. The General Assembly should direct the Division of Public Health in the Department of Health and Human Services to explore ways to increase regionalization, increase the use of data, and strengthen quality improvement activities and determine how to apply them to North Carolina.**

North Carolina is recognized as having a strong public health system and is seen as a model decentralized system, but still ranks in the bottom half of states for overall health. Finding 4 identifies three strategies that could put North Carolina in the forefront of public health with the goal of improving health outcomes: strengthening regional activities, using data to focus public health efforts and resources, and continuing quality improvement efforts.

The General Assembly should direct the Division of Public Health to determine how to

- increase regionalization in the state through incentives, creating regional councils, building on the work of the incubators and Community Transformation Grant, or exploring other regional strategies;
- increase the use of data to focus public health efforts and resources including but not limited to using cluster analysis, mapping software, and analyzing potential cost savings due to implementation of programs; and
- continue quality improvement activities by identifying resources to expand the work of the Center for Public Health Quality.

The General Assembly should direct the Division of Public Health to work in conjunction with UNC School of Public Health, local health departments, and other stakeholders to create an action plan that

- identifies strategies,
- develops an implementation timeline,
- estimates costs, and
- identifies resources to fund these activities.

The Division of Public Health should present the plan to the House Appropriations Subcommittee on Health and Human Services, House Health and Human Services Committee, Senate Appropriations on Health and Human Services, and Senate Health Care committees by March 31, 2014.

## Appendices

Appendix A: Division of Public Health Services

Appendix B: Health Objectives from *Healthy North Carolina 2020*

Appendix C: Population Size of Local Health Departments

## Agency Responses

A draft of this report was submitted to the Department of Health and Human Services, University of North Carolina Health Care System, and University of North Carolina at Chapel Hill School of Public Health to review and respond. Their responses are provided following the appendices.

## Program Evaluation Division Contact and Acknowledgments

For more information on this report, please contact the lead evaluator, Catherine Moga Bryant, at catherine.mogabryant@ncleg.net.

Staff members who made key contributions to this report include Jim Horne, Carol Ripple, and Pamela L. Taylor. John W. Turcotte is the director of the Program Evaluation Division.

## Appendix A: Division of Public Health Services FY 2011-2012

| Service | Description | Total Requirements | Total Receipts | General Fund Appropriations | FTE |
|---|---|---|---|---|---|
| Asbestos and Lead Based Paint Hazard Management | Ensures materials containing asbestos or lead-based paint are handled properly during construction activities. | $2,152,755 | $1,757,688 | $395,067 | 24 |
| Asthma | Strives to reduce the impact of asthma upon state residents. | 421,195 | 399,098 | 22,097 | 5 |
| Best Practices in Children's Health | Provides child health data, consumer survey data, and research for all child health programs. | 2,611,771 | 1,634,985 | 976,786 | 15 |
| Breast and Cervical Cancer Control | Pays for screening to detect breast and cervical cancer in women who are low-income, uninsured or underinsured, and between the ages of 40 and 64. | 4,955,093 | 3,345,645 | 1,609,448 | 10 |
| Building Capacity for Service Delivery | Provides funding and technical assistance, which enables local health departments to carry out their essential functions that meet community needs. This service includes accrediting and maintaining accreditation on a four-year cycle and non-categorical funding for the local health departments. | 25,007,624 | 12,676,833 | 12,330,791 | 5 |
| Child and Adult Care Food (CACFP) | Ensures children and adults who attend nonresidential care facilities receive nutritious meals. | 82,196,581 | 82,196,273 | 308 | 27 |
| Child and Family Support Team | Teams find and coordinate services and supports for those students who are most at risk of school failure or being placed in foster care because of academic, health, and mental health, social or legal barriers. | 298,822 | 0 | 298,822 | 2 |
| Child Fatality Prevention Team | Investigates the deaths of children from injury or neglect. | 213,418 | 0 | 213,418 | 2 |
| Child Maltreatment Prevention | Leads the implementation of the comprehensive statewide child maltreatment prevention plan. | 101,214 | 0 | 101,214 | 1 |

| | | | | | |
|---|---|---|---|---|---|
| Children's Preventive Health Services | Supports initiatives addressing availability, accessibility and utilization of health services for children from birth to 21 years of age. | 13,308,174 | 8,363,916 | 4,944,258 | 20 |
| Communicable Disease Surveillance and Control | Detects and tracks the spread of diseases. | 4,652,497 | 2,881,002 | 1,771,495 | 15 |
| Community Capacity Building to Eliminate Health Disparities | Works with faith-based organizations, local nonprofits, tribes, health departments and other organizations to reduce barriers to health care and other health gaps in their communities. | 3,508,770 | 326,437 | 3,182,333 | 7 |
| Community Focus Infant Mortality | Provides services for women and their infants with a specific focus on African-American and Native American families in certain North Carolina counties and communities. | 3,655,952 | 3,212,101 | 443,851 | 6 |
| Comprehensive Cancer | Works to reduce the incidence and mortality of cancers by the development and implementation of effective strategies to prevent, detect, and promote activities that enhance comprehensive initiatives. | 1,081,143 | 850,822 | 230,321 | 7 |
| Diabetes Awareness, Education & Health Care Delivery | Addresses diabetes at a public health rather than individual level. Services take place at the policy, health care systems, and community levels. | 1,134,635 | 751,622 | 383,013 | 7 |
| Early Intervention | Serves children from birth to age 3 with or at risk for developmental delays or developmental disabilities, and their families. | 80,857,236 | 46,516,845 | 34,340,391 | 858 |
| Family Planning | Provides family planning services and other preventive care to low-income women and men by funding clinics in local health departments and other community-based providers. | 37,572,889 | 32,963,050 | 4,609,839 | 18 |

| | | | | | |
|---|---|---|---|---|---|
| Farmer's Market Nutrition | Issues coupons through local WIC agencies so eligible women and children can buy fruits and vegetables at participating farmers markets. The benefit is better nutrition for low-income pregnant women, nursing mothers and children up to age four. | 578,647 | 511,908 | 66,739 | 0 |
| Forensic Tests for Alcohol | Works to reduce deaths, injuries and public health care costs related to impaired driving. | 2,490,910 | 2,465,942 | 24,968 | 29 |
| Genetics and Newborn Screening | Provides follow-up for newborns screened for problems that are not apparent at birth so that they can receive early diagnosis, treatment and follow-up. This service includes inherited diseases, metabolic disorders and hearing loss. | 7,030,438 | 3,351,916 | 3,678,522 | 26 |
| Healthy Carolinians and Health Education | Helps communities improve the health of their citizens. A statewide network of local partnerships addresses health and safety issues at the community level. | 407,567 | 373,660 | 33,907 | 1 |
| Heart Disease and Stroke Prevention | Works to prevent heart disease and stroke among North Carolinians. | 3,052,152 | 2,101,233 | 950,919 | 12 |
| HIV/AIDS Care Services | Provides care to people living with HIV or AIDS. | 67,333,449 | 38,653,416 | 28,680,033 | 56 |
| HIV/STD Prevention Activities | Conducts activities to prevent the spread of HIV and STDs. | 20,749,932 | 16,820,275 | 3,929,657 | 79 |
| Industrial Hygiene Consultation | Evaluates biological, chemical and physical hazards, primarily in the workplace, and recommends ways to control them. | 175,381 | 0 | 175,381 | 2 |
| Injury and Violence Prevention | Implements the six components of the statewide strategic plan for injury and violence prevention. | 2,617,981 | 2,472,923 | 145,048 | 14 |

| | | | | | |
|---|---|---|---|---|---|
| Maternal Health | Provides a wide range of maternal health services to encourage low-income pregnant women to begin early prenatal care and follow recommended perinatal care guidelines before and after giving birth. | 8,744,444 | 3,585,742 | 5,158,702 | 16 |
| Medical Evaluation and Risk Assessment | Assesses the risks of exposure to air, water, and soil contaminants in the workplace and in the environment. | 945,234 | 357,014 | 588,220 | 8 |
| Medical Examiner System | Investigates deaths resulting from injury or accident; that are sudden, unexpected or suspicious; that occur in jail, prison, correctional institution, police custody or state-operated facility; or that are not attended by a doctor. | 6,105,992 | 2,207,061 | 3,898,931 | 37 |
| National Toxic Substance Incidents | Monitors uncontrolled or illegal acute releases of any toxic substance that can reasonably be expected to cause adverse human health effects. | 165,343 | 165,343 | 0 | 2 |
| Occupational Surveillance | Monitors work-related illnesses and injuries. | 136,139 | 20,424 | 115,715 | 3 |
| Oral Health Preventive Services | Provides preventive services to at-risk groups; dental screening, referral and follow-up of children needing care; and dental health education. | 5,703,500 | 1,778,790 | 3,924,710 | 56 |
| Performance Improvement and Accountability | Monitors the quality of the Public Health system at the state and local levels. It provides technical assistance and training to state and local health departments on improving their performance in clinical and administrative areas. | 1,158,900 | 272,310 | 886,590 | 13 |
| Physical Activity and Nutrition | Helps to make communities, worksites, and schools healthier places to live, earn and learn. | 4,632,760 | 3,068,047 | 1,564,713 | 18 |
| Public Health Preparedness and Response | Increases the public health system's ability to prepare for, detect, respond to and recover from public health emergencies. | 13,432,062 | 12,523,862 | 908,200 | 15 |

| | | | | | |
|---|---|---|---|---|---|
| Public Health Workforce Development | Helps local health departments recruit and train skilled public health workers. | 701,644 | 368,976 | 332,668 | 1 |
| Refugee Health Assessments | Detects and treats any communicable diseases in newly arriving refugees. The health assessment also identifies and treats health problems that could keep the refugee from finding a job and independence. | 96,888 | 96,888 | 0 | 0 |
| School Health Services | Works to promote good health and school success of children and adolescents. | 14,308,226 | 498,791 | 13,809,435 | 12 |
| Sickle Cell Syndrome - Services for Adults | Provides clinical treatment, care coordination and educational services to the adult sickle cell population. | 1,799,852 | 743,572 | 1,056,280 | 4 |
| Sickle Cell Syndrome - Services for Children | Provides clinical care, care coordination and educational services to the pediatric population living with sickle cell disease and other related blood disorders. | 2,981,379 | 227,727 | 2,753,652 | 9 |
| State Center for Health Statistics | Documents the occurrence of disease and disability and their effect on the population. | 5,027,632 | 2,298,441 | 2,729,191 | 57 |
| State Laboratory Services - Testing, Training & Consultation | Provides more than 125 clinical tests and more than 65 environmental tests, as well as training and consultation, for the following groups: local health departments; hospitals and commercial laboratories; private health care professionals; community-based organizations; and, state and regional staff from the Division of Public Health and certain other state and regional agencies. | 21,888,424 | 20,359,412 | 1,529,012 | 215 |
| Summer Food Service | Reimburses sponsors for meals provided to children from low-income families when school is not in session. | 7,638,125 | 7,638,125 | 0 | 1 |
| TB Elimination | Provides financial assistance to local health departments to test for and treat tuberculosis. | 4,591,419 | 1,842,858 | 2,748,561 | 7 |

| | | | | | |
|---|---|---|---|---|---|
| Teen Pregnancy Prevention Initiatives (TPPI) | Works to prevent teen pregnancies by funding projects in local health departments and community-based organizations. | 4,882,748 | 3,344,000 | 1,538,748 | 3 |
| Tobacco Prevention and Control | Works to improve the health of people by reducing tobacco use and exposure to second-hand smoke. | 24,041,610 | 5,922,094 | 18,119,516 | 15 |
| Vaccine Distribution and Administration | Prevents the spread of vaccine preventable diseases. | 9,111,544 | 7,885,367 | 1,226,177 | 53 |
| Vital Records | Collects the records of important human events, including births, deaths, marriages, divorces and fetal deaths, and archives them in a systematic manner so the records can be retrieved as needed. | 2,914,088 | 2,914,088 | 0 | 60 |
| Women, Infants, and Children (WIC) | Provides payments for WIC Supplemental Foods to low-income pregnant women, nursing mothers, postpartum women and children up to 5 years of age. | 282,224,392 | 281,934,406 | 289,986 | 46 |
| WISEWOMAN | Provides medical screenings, referrals, and health education to women who are low-income, uninsured or underinsured, and between the ages of 40 and 64. | 1,234,831 | 1,234,831 | 0 | 5 |
| Women's Health Public Education | Educates residents on maternal and child information | 1,435,036 | 1,026,459 | 408,577 | 0 |
| Services | | $794,068,438 | $626,942,218 | $167,126,222 | 1,903 |
| Administrative | | 42,601,610 | 19,284,586 | 23,317,024 | 140 |
| DPH Totals | | $836,670,048 | $646,226,804 | $190,443,244 | 2,042 |

Note: Environmental Health services are not included in this Appendix since the Division of Environmental Health was being migrated from the Department of Environment and Natural Resources into the Division of Public Health. Health Carolinians and Health Education service has been eliminated.

*Source: Program Evaluation Division based on information from the Department of Health and Human Services Open Window.*

## Appendix B: Health Objectives from *Healthy North Carolina 2020*

| Objective | Baseline | Current | 2020 Target |
|---|---|---|---|
| **Tobacco Use** | | | |
| Decrease the percentage of adults who are current smokers | 20.3% | 19.8% | 13.0% |
| Decrease the percentage of high school students reporting current use of any tobacco product | 25.8% | No update | 15.0% |
| Decrease the percentage of people exposed to secondhand smoke in the workplace in the past seven days | 14.6% | 7.8% | 0% |
| **Physical Activity and Nutrition** | | | |
| Increase the percentage of high school students who are neither overweight nor obese | 72.0% | No update | 79.2% |
| Increase the percentage of adults getting the recommended amount of physical activity | 46.4% | No update | 60.6% |
| Increase the percentage of adults who consume five or more servings of fruits and vegetables per day | 20.6% | No update | 29.3% |
| **Injury and Violence** | | | |
| Reduce the unintentional poisoning mortality rate (per 100,000 population) | 11.0 | 9.9 | 9.9 |
| Reduce the unintentional falls mortality rate (per 100,000 population) | 8.1 | 9.0 | 5.3 |
| Reduce the homicide rate (per 100,000 population) | 7.5 | 5.7 | 6.7 |
| **Sexually Transmitted diseases/Unintended Pregnancy** | | | |
| Decrease the percentage of pregnancies that are unintended | 39.8% | 44.6% | 30.9% |
| Reduce the percentage of positive results among individuals aged 15 to 24 tested for Chlamydia | 9.7% | 10.1% | 8.7% |
| Reduce the rate of new HIV infection diagnoses (per 100,000 population) | 24.7 | 19.7 | 22.2 |
| **Maternal and Infant Health** | | | |
| Reduce the infant mortality racial disparity between whites and African Americans | 2.45 | 2.40 | 1.92 |
| Reduce the infant mortality rate (per 1,000 live births) | 8.2 | 7.0 | 6.3 |
| Reduce the percentage of women who smoke during pregnancy | 10.4% | 10.2% | 6.8% |
| **Substance Abuse** | | | |
| Reduce the percentage of high school students who had alcohol on one or more of the past 30 days | 35.0% | No update | 26.4% |
| Reduce the percentage of traffic crashed that are alcohol-related | 5.7% | 5.5% | 4.7% |
| Reduce the percentage of individuals aged 12 years and older reporting any illicit drug use in the past 30 days | 7.8% | 8.15% | 6.6% |
| **Mental Health** | | | |
| Reduce the suicide rate (per 10,000 population) | 12.4 | 11.9 | 8.3 |
| Decrease the average number of poor mental health days among adults in the past 30 days | 3.4 | 3.6 | 2.8 |
| Reduce the rate of mental health-related visits to emergency departments (per 10,000 population) | 92.0 | 99.0 | 82.8 |
| **Infectious Disease/Foodborne Illness** | | | |
| Increase the percentage of children aged 19-35 months who receive the recommended vaccines | 77.3% | 81.6% | 91.3% |
| Reduce the pneumonia and influenza mortality rate (per 100,000 population) | 19.5 | 17.5 | 13.5 |

| | | | |
|---|---|---|---|
| Decease the average number of critical violations per restaurant/food stand | 6.1 | No update | 5.5 |
| **Oral Health** | | | |
| Increase the percentage of children aged 1-5 years enrolled in Medicaid who received any dental service during the previous 12 months | 46.9% | 51.7% | 56.4% |
| Decrease the average number of decayed, missing, or filled teeth among kindergartners | 1.5 | No update | 1.1 |
| Decrease the percentage of adults who had permanent teeth removed due to tooth decay or gum disease | 47.8% | 46.7% | 38.4% |
| **Social Determinants of Health** | | | |
| Decrease the percentage of individuals living in poverty | 16.9% | 17.4% | 12.5% |
| Increase the four-year high school graduation rate | 71.8% | 77.9% | 94.6% |
| Decrease the percentage of people spending more than 30% of their income on rental housing | 41.8% | 45.6% | 36.1% |
| **Environmental Health** | | | |
| Increase the percentage of air monitor sites meeting the current ozone standard of 0.075 ppm | 62.5% | 84.6% | 100.0% |
| Increase the percentage of the population being served by community water system with no maximum containment level violations (among persons on community water systems) | 92.2% | 96.5% | 95.0% |
| Reduce the mortality rate from work-related injuries (per 100,000 population) | 3.9 | 3.3 | 3.5 |
| **Chronic Disease** | | | |
| Reduce the cardiovascular disease mortality rate (per 100,000 population) | 256.6 | 235.8 | 161.5 |
| | | | |
| Decrease the percentage of adults with diabetes | 9.6% | 9.8% | 8.6% |
| Reduce the colorectal cancer mortality rate (per 100,000 population) | 15.7 | 14.7 | 10.1 |
| **Cross-cutting** | | | |
| Increase the average life expectancy (years) | 77.5 | 78.0 | 79.5 |
| Increase the percentage of adults report good, very good, or excellent health | 81.9% | 81.9% | 90.1% |
| Reduce the percentage of non-elderly uninsured individuals (aged less than 65 years) | 20.4% | 19.3% | 8.0% |
| Increase the percentage of adults who are neither overweight nor obese | 34.6% | 34.7% | 38.1% |

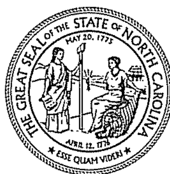
*Source: Program Evaluation Division based on the 2011 Annual Data Update of Healthy North Carolina 2020*

# Appendix C: Population Served by Local Health Departments

| Local Health Department | Population | Type of Agency |
|---|---|---|
| Mecklenburg County | 919,628 | Consolidated human services agency |
| Wake County | 900,993 | Consolidated human services agency |
| Guilford County | 488,406 | Single county |
| Forsyth County | 350,670 | Single county |
| Cumberland County | 319,431 | Single county |
| Durham County | 267,587 | Single county |
| Buncombe County | 238,318 | Single county |
| Gaston County | 206,086 | Single county |
| New Hanover County | 202,667 | Single county |
| Union County | 201,292 | Single county |
| Cabarrus County | 178,011 | Public hospital authority |
| Onslow County | 177,772 | Single county |
| Johnston County | 168,878 | Single county |
| Pitt County | 168,148 | Single county |
| Davidson County | 162,878 | Single county |
| Iredell County | 159,437 | Single county |
| Catawba County | 154,358 | Single county |
| Alamance County | 151,131 | Single county |
| Randolph County | 141,752 | Single county |
| Rowan County | 138,428 | Single county |
| Albemarle District | 135,913 | Multi-county district |
| Robeson County | 134,168 | Single county |
| Orange County | 133,801 | Single county |
| Rutherford-Polk-McDowell District | 133,316 | Multi-county district |
| Wayne County | 122,623 | Single county |
| Harnett County | 114,678 | Single county |
| Brunswick County | 107,431 | Single county |
| Henderson County | 106,740 | Single county |
| Granville-Vance District | 105,338 | Multi-county district |
| Craven County | 103,505 | Single county |
| Cleveland County | 98,078 | Single county |
| Nash County | 95,840 | Single county |
| Rockingham County | 93,643 | Single county |
| Burke County | 90,912 | Single county |
| Appalachian District | 89,515 | Multi-county district |
| Moore County | 88,247 | Single county |
| Caldwell County | 83,029 | Single county |
| Wilson County | 81,234 | Single county |
| Lincoln County | 78,265 | Single county |
| Surry County | 73,673 | Single county |
| Wilkes County | 69,340 | Single county |
| Carteret County | 66,469 | Single county |
| Chatham County | 63,505 | Single county |
| Sampson County | 63,431 | Single county |
| Franklin County | 60,619 | Single county |
| Stanly County | 60,585 | Single county |
| Lenoir County | 59,495 | Single county |
| Haywood County | 59,036 | Single county |
| Duplin County | 58,505 | Single county |
| Columbus County | 58,098 | Single county |

| Local Health Department | Population | Type of Agency |
|---|---|---|
| Lee County | 57,866 | Single county |
| Edgecombe County | 56,552 | Single county |
| Halifax County | 54,691 | Single county |
| Pender County | 52,217 | Single county |
| Toe River District | 51,194 | Multi-county district |
| Beaufort County | 47,759 | Single county |
| Stokes County | 47,401 | Single county |
| Hoke County | 46,952 | Single county |
| Richmond County | 46,639 | Single county |
| Davie County | 41,240 | Single county |
| Jackson County | 40,271 | Single county |
| Person County | 39,464 | Single county |
| Yadkin County | 38,406 | Single county |
| Martin-Tyrell-Washington District | 42,140 | Multi-county district |
| Alexander County | 37,198 | Single county |
| Scotland County | 36,157 | Single county |
| Bladen County | 35,190 | Single county |
| Macon County | 33,922 | Single county |
| Dare County | 33,920 | Single county |
| Transylvania County | 33,090 | Single county |
| Montgomery County | 27,798 | Single county |
| Cherokee County | 27,444 | Single county |
| Anson County | 26,948 | Single county |
| Hertford County | 24,669 | Public health authority |
| Caswell County | 23,719 | Single county |
| Northampton County | 22,099 | Single county |
| Greene County | 21,362 | Single county |
| Warren County | 20,972 | Single county |
| Madison County | 20,764 | Single county |
| Swain County | 13,981 | Single county |
| Pamlico County | 13,144 | Single county |
| Clay County | 10,587 | Single county |
| Jones County | 10,153 | Single county |
| Graham County | 8,861 | Single county |
| Hyde County | 5,810 | Single county |

*Source: Program Evaluation Division based on local health department areas served and 2010 census data.*



**North Carolina Department of Health and Human Services**
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Beverly Eaves Perdue, Governor | Albert A. Delia, Acting Secretary

December 17, 2012

Mr. John W. Turcotte
Director, Program Evaluation Division
North Carolina General Assembly
300 N. Salisbury Street, Suite 100
Raleigh, North Carolina 27603-5925

Dear Mr. Turcotte,

The Department of Health and Human Services (DHHS) values the opportunity to provide a response to the findings and recommendations in the Program Evaluation Division's draft report, *The Division of Public Health Should Remain in the Department of Health and Human Services.*

The Department appreciates your staff's willingness to explore the complexity of our state's public health system and to acknowledge the many public and private partnerships the Division of Public Health (DPH) has developed over time which are integral to improving the health of our citizens. The Department agrees with the finding and justification that DPH should remain within DHHS. Your staff's recognition that the state's public health system is a national model is greatly valued. This model needs many non public health organizations as partners in addressing the state's barriers to good health.

The recommendations presented in the report along with the creation of a Public Health Council and exploring the idea of regional activities will strengthen county public health efforts. The diversity in current local governance structures, and continuing efforts toward local human services consolidation may impede creation of more regional health departments. State and local public health staffs are actively engaging additional state and local agencies in mutual planning to address barriers to improving the health of North Carolinians.

The Division currently uses data extensively in its overall health objectives for the state, including the use of cluster analysis and GIS mapping to target health conditions as well as focus resources. Expansion of these efforts is vital in moving the needle on our Healthy North Carolina 2020 Objectives. DPH will continue its existing federally-funded quality improvement initiatives and pursue additional federal funds to support new projects.

Again, thank you for the chance to respond to this report and many thanks to your staff for their professionalism during this evaluation process. Their keen interest in understanding our state's complex public health system is appreciated.

Sincerely,

Albert A. Delia

AAD:sr

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*Dean and Alumni Distinguished Professor*

December 17, 2012

Director John Turcotte
Program Evaluation Division
North Carolina General Assembly
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Raleigh, North Carolina 27603-5925

Dear Director Turcotte:

Thank you for the opportunity to review and comment on Program Evaluation Division's report on Division of Public Health (DPH). We found the review process to be extremely thorough, and we appreciate the opportunity to be involved. The final report is both comprehensive and insightful, and provides an excellent assessment of current challenges and opportunities to improve public health in North Carolina. Overall, we fully endorse the findings and conclusions catalogued in the report. Our formal response to the findings and recommendations is detailed below.

Leaders at the UNC Gillings School of Global Public Health (UNC-SPH) concur with **Finding 1,** that NC's public health system is, indeed, an intricate network of partnerships across the Division of Public Health and local health departments, state agencies and universities and other entities. This robust network is a key strength of DPH, allowing it to reach all communities in North Carolina, even as it leverages the expertise of North Carolina's colleges and universities.

Most germane to our response to this report, leaders at the UNC-SPH fully support **Finding 2** that DPH should remain in the Department of Health and Human Services. We have an extensive history of collaborating and partnering with DPH and look forward to continuing to work together towards the goal of making North Carolina the healthiest state in the nation. Furthermore, the authority to enforce public health regulations is a police power reserved for the State. It would be an inappropriate role for the School to assume this responsibility and would be outside the School's mission. Our mission is to improve public health, promote individual well-being, and eliminate health disparities through research, teaching, and service. Our research helps to discover solutions to public health threats. Our teaching educates the next generation of public health leaders. Through our service, we work with citizens and health professionals to apply solutions to public health threats and challenges facing North Carolina. What is more, we consider that the national reputation NC DPH currently has as a model public health system vis-à-vis its decentralized approach to administering services is well deserved.

We concur with **Finding 3,** that DPH's overall current structure is appropriate, that the DPH achieves much with the resources that it has, and that the current structure of the administration should remain in place. NC ranks in the bottom half of states for health outcomes, not because of how the DPH is administered, but because of high risk factors. It's worth noting that researchers and practitioners affiliated with the School are deeply invested in developing effective, scalable ways to improve health outcomes among North Carolinians. But our missions of research and education would detract from key

responsibilities of a very complex organization with mission-critical, time-sensitive, service-delivery functions.

We also concur with **Finding 4,** that there are organizational models that could improve public health delivery in North Carolina, including merging districts to create economies of scale, using data strategically to focus use of resources, and providing training to support continuous quality improvement. We comment on these findings in greater detail in our response to Recommendation 2.

**Recommendation 1** calls for the establishment of a North Carolina Public Health Council to develop a government-wide action plan to improve public health in NC. Leaders at UNC-SPH strongly support this recommendation. Public health outcomes are influenced by major determinants beyond the sphere of influence of a single entity. Through collaborative efforts, with monitoring and accountability, we can improve North Carolina's health outcomes. A good example of how such an effort could be effectively undertaken is visible in the early work of the Governor's Cancer Committee, which produced very credible cancer plans with wide input. Experts at UNC-SPH would willingly participate in such an effort, providing substantive experts for an NC Public Health Council advisory group.

**Recommendation 2** calls for: identification of ways to increase regional strategies to improve public health, increased use of data and strengthened quality improvement activities. Both of these recommendations are important, and the School would welcome the opportunity to partner with DPH for assessment, implementation and evaluation of these strategies, which, obviously, are limited within the bounds of our resources. Examples of ways in which the School might assist DPH are described below:

*Regionalization strategies:* Regionalization strategies are employed in many aspects of NC public health, including through its district health departments, regional technical support services, regional health assessments, and through its implementation of regional interventions and responses to public health concerns. We believe that local health departments could make rapid headway with further regionalization efforts if the NC Legislature provided support for them to do so. HB 438 included provisions for incentives for local health departments interested in coalescing into regions/districts (see Section 3, HB 438, "Incentive Program for Public Health Improvement"), but no funds were appropriated to help with such efforts.

In terms of how UNC-SPH could support regionalization of local health departments, our staff and faculty members have considerable expertise in developing, implementing and evaluating public health systems and services, with the goal of identifying the most effective approaches to public health delivery. Our faculty members have conducted a number of studies of public health systems and services, including an assessment of the NC Public Health Regional Surveillance Teams (PHRST). The NC Institute for Public Health, the outreach unit for the School, provides technical assistance on community health assessments and implementing health improvement plans and is currently conducting research to identify best processes for hospitals and health departments to partner in conducting community health assessments and developing improvement plans. We would welcome opportunities to collaborate with DPH in identifying areas where regionalization strategies promise to be most effective.

*Increased used of data:* It is critical that public health specialists use data to understand and improve the public's health. Moreover, the availability of data from a number of sources to help support such efforts is growing. Public health informatics, the systematic use of computer science and information technology in public health practice, offers the potential to provide new insights and opportunities to improve public health. The School, along with others at UNC, has expertise in public health informatics

that can be employed to assist DPH in leveraging the power of data to improve public health outcomes. We are increasing the number of educational opportunities in PHI and recently launched a new certificate in this area. The School's faculty members also have expertise in survey design and implementation, both large scale and small area, and complex analytic methodology which could be employed to help collect and analyze data needed to solve public health problems. We would welcome opportunities to collaborate with DPH around issues of public health informatics and other approaches to increase the use of data in NC public health systems. We are pleased that collaborations in these areas are ongoing, even as we recognize that they could be expanded.

*Strengthen quality improvement activities:* Quality improvement offers tools and processes to improve public health practice and outcomes. Accreditation is a recognized approach to facilitate quality improvement. The NC Local Health Department Accreditation Program requires use of quality improvement in the delivery of public health services. Until this past year, DPH contracted with the School (NCIPH) to administer the accreditation program. This program, which is required of local health departments in NC, is viewed as a national model, and in fact, served as a model for the development of a national voluntary accreditation program. Last year, state funding for the NC local accreditation program was eliminated. Through the committed efforts of the NC Local Health Directors Association, the program has continued, with counties paying a fee to support accreditation costs. However, some counties have refused, or been unable to pay for, accreditation. Restoring state support for accreditation would ensure that quality improvement activities would not be "optional" for local health departments.

Thank you again for the opportunity to review and comment on this report. We look forward to continued collaborations with DPH to help improve the health of North Carolinians. We have high regard for past and present leaders and staff of the DPH. Faculty, staff and students across the SPH serve on committees led by the DPH, and our students have been trained in health departments for nearly as long as the SPH has existed. We are proud that the DPH is regarded justifiably as one of the best health departments in the country, and we are confident that leaving the DPH in its current organizational location is the surest way to retain its excellence, along with providing additional resources.

Sincerely,

**Barbara K. Rimer**
Dean
Alumni Distinguished Professor

**Leah Devlin, DDS, MPH**
Professor of the Practice

**Anna P. Schenck, PhD, MSPH**
Professor of the Practice
Associate Dean for Practice
Director, Public Health Leadership Program & North Carolina Institute for Public Health

*BKR/LD/AS:ef*

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WILLIAM L. ROPER, MD, MPH
*Chief Executive Officer*

December 13, 2012

Mr. John Turcotte, Director
Program Evaluation Division
North Carolina General Assembly
300 North Salisbury Street, Suite 100
Raleigh, North Carolina 27603-5925

Dear Mr. Turcotte:

Public health and health care in North Carolina are among the strongest in the nation, and it is and continues to be a large priority for our state. As health care changes nationally, North Carolina's leaders must be prepared to work together for the benefit of our state's citizens.

However, we face significant challenges. High risk factors in our state place us at 32nd in the nation for overall health. A coordinated approach to increased partnerships could be the best way to improve the health of North Carolinians across the state; but to effectively do so, we need strong leadership. We believe retaining the Division of Public Health's status in the Department of Health and Human Services is the best way to meet these goals.

Currently, the public health system is made up of partnerships between the Division of Public Health and local health departments, state agencies and universities, among others. These partners work together to improve the health of North Carolinians. However, there are some roles more appropriately served for state government employees than for private partners. These roles continue to be necessary and outside the realm of activities that could be conducted at a non-state entity.

Additionally, the UNC Health Care System and the UNC-Chapel Hill School of Public Health lack the mission and statewide reach needed to take over the entire state's public health needs. While UNC Health Care and the School of Public Health are committed to continuing to play an important role in the state's efforts to promote public health, neither entity is currently equipped to handle this important task.

Instead, we support working together under the leadership of the Division of Public Health, as a part of the Department of Health and Human Services, to strengthen our state's focus on public health across North Carolina. The Division of Public Health is uniquely equipped to harness expertise in our state to educate, recommend policies, deliver services and conduct research to improve health before patients become ill. Their role should continue to lead these efforts while partnering with public and private agencies, universities and other organizations as is appropriate.

Improving public health means improving overall health for all North Carolinians. This is an important goal, particularly as our state's population continues to grow and the health care challenges we face become more daunting. North Carolina is home to the 7th highest stroke mortality rate in the nation; we are the 14th most obese state in the nation and, in 2010, more than 18,000 of our residents were diagnosed with cancer and more than 17,000 with heart disease.

Efforts being made to prevent these and other health problems are reason to be hopeful about our state's future health. As part of the Department of the Health and Human Services, the Division of Public Health will be on the forefront of these issues in the coming years and will be well-positioned to make positive change for our state.

Sincerely,

William L. Roper

WLR:mm