Chapter Three

Safety Net Programs in North Carolina

On the surface, North Carolina appears to have many safety net organizations with a mission to provide services to the uninsured. While safety net organizations exist throughout the state, they do not exist in every community, and many provide a limited array of services. Thus, these institutions are not always able to meet the full healthcare needs of the growing uninsured population.

This chapter provides an overview of the major safety net organizations in the state, including federally qualified health centers, rural health clinics, state-funded rural health centers, local health departments, free clinics, Project Access, school-based and school-linked health centers, private practitioners, Area Health Education Centers (AHEC) teaching clinics, hospital outpatient clinics, and emergency departments (A county-based list of safety net organizations is included in Appendix A). An overview of each of the safety net providers is given along with more detailed information on services offered, the number of uninsured patients served, patient eligibility requirements for the services (if any), financing, and current challenges the safety net organizations are facing in providing care to underserved populations. State-level information is provided as well as a national comparison, when available.

Federally Qualified Health Centers (FQHCs)

Overview: The federal health center program began in 1965 as a demonstration project from the Office of Economic Opportunity. The program has grown nationally from 150 centers in 1973 to 890 centers, which provided services to 12.4 million people in 2003. These centers served approximately 4.8 million uninsured users (11% of the nation's uninsured) in 2003.[1]

Federally qualified health centers are public or private non-profit organizations that receive funds from the Bureau of Primary Health Care in the Health Resources and Services Administration of the US Department of Health and Human Services. FQHCs are authorized under Section 330 of the Public Health Service Act and include the following type of organizations:

- Community health centers (CHCs),
- Migrant health centers,
- Health Care for the Homeless,
- Public Housing Primary Care, and
- Healthy Schools, Healthy Communities.[i]

In 2003, there were 24 FQHC grantees with a total of 74 service delivery sites serving patients in 54 NC counties. These centers employed more than 1,200 full-time employees, including physicians, nurse practitioners, physician assistants, dentists, nurses, and other medical staff. While most grantees are traditional community health centers, there are also eight migrant health centers, two Health Care for the Homeless programs, and four Healthy Schools, Healthy Communities programs (including one that is a school-based subrecipient of a community health center). In addition, the NC Farmworker Health program, operated through the Office of Research, Demonstrations and Rural Health Development (ORDRHD) also receives federal funding under this program.[ii] Most of the FQHCs in North Carolina are stand alone centers, but there are six grantees that have five or more service delivery sites. FQHCs are spread geographically throughout the state; however, there are lower concentrations of centers in the eastern and western portions of the state.

Health centers must satisfy certain basic criteria in

i Section 330 Health Center Programs include: Community Health Centers (CHC)(Sec. 330(e)), Migrant Health Centers (MHC)(Sec. 330(g)); Health Care for the Homeless (HCH)(Sec. 330(h)); Public Housing Primary Care (PHPC)(Sec. 330(i)); and Healthy Schools, Healthy Communities (HSHC) (Consolidated Health Centers Act of 1996).

ii The Farmworker Health Program is a voucher (contracted fee-for-service) program and does not provide any direct services.

order to be designated as a FQHC and receive federal funding. Health centers must:

- Serve a medically underserved area or population based on poverty and population health indicators;
- Provide comprehensive primary and preventive healthcare services, either directly or by contract, regardless of ability to pay;
- Provide enabling and support services to facilitate access to health and social services (e.g., case management, outreach, transportation, and interpreters);
- Have a schedule of charges consistent with locally prevailing rates;
- Apply a sliding-fee scale based on a patient's income and family size; and
- Have a community-based board of directors where the majority of the board are active users of the center services.[2]

Health centers that do not receive federal grant funding can be designated as an FQHC look-alike, if they demonstrate that they are serving those most in need within their service area; and meet other Section 330 program requirements. There were two FQHC look-alikes in 2003, located in Asheville and Reidsville. While FQHC look-alikes do not receive federal funds, they do receive some other benefits from that designation (discussed below).

Services: FQHCs must provide comprehensive primary care services as well as health education, preventive care, chronic disease management, oral health, and behavioral health services. If the health center lacks the capacity to provide the services, then it must assure that quality specialty medical, diagnostic, and therapeutic services are available to patients through organized referral arrangements. Health centers must coordinate and oversee the care provided to patients, whether provided directly or through referrals. To make services more accessible, health centers must have a system for 24 hours a day, 7 days a week coverage, as well as offer clinic hours outside the normal 9:00 am-5:00 pm work schedule.

Specifically, health centers must provide in-house or through referrals, the following services:

- Preventive services;
- Immunizations;
- Primary medical care;
- Diagnostic laboratory;
- Prenatal, perinatal, and well-child services (including eye, ear, and dental screenings for children);
- Cancer and other disease screenings;
- Screening for elevated blood lead levels;
- Diagnosis and treatment of communicable diseases;
- Family planning services;
- Preventive dental services;
- Emergency medical and dental service;
- Pharmacy services;
- Substance abuse and mental health services;
- Enabling services including outreach, transportation, interpreters, and case management services;
- Services to help the health center's patients gain financial support for health and social services; and
- Referrals to other providers of medical and health-related services.

North Carolina health centers are slightly less likely to directly provide prenatal care, mental health services, substance abuse treatment, and a pharmacy with a registered pharmacist than are other centers throughout the country (Table 3.1). However, they are more likely to provide other services, such as: hospital care, dental care, lab services, and a pharmacy with a dispensing physician.

Historically, enabling services have set community

Table 3.1.
Services Provided by North Carolina Health Centers[3]

Direct Services	Primary Care	Follow Hospitalized Patients	Prenatal Care	Dental Services	Mental Health Services	Substance Abuse Treatment	Pharmacy with Registered Pharmacist	Pharmacy with Dispensing MD	Lab Services
NC FQHC	100%	88%	48%	80%	64%	48%	32%	64%	96%
US FQHC	99%	79%	72%	74%	70%	50%	34%	62%	82%

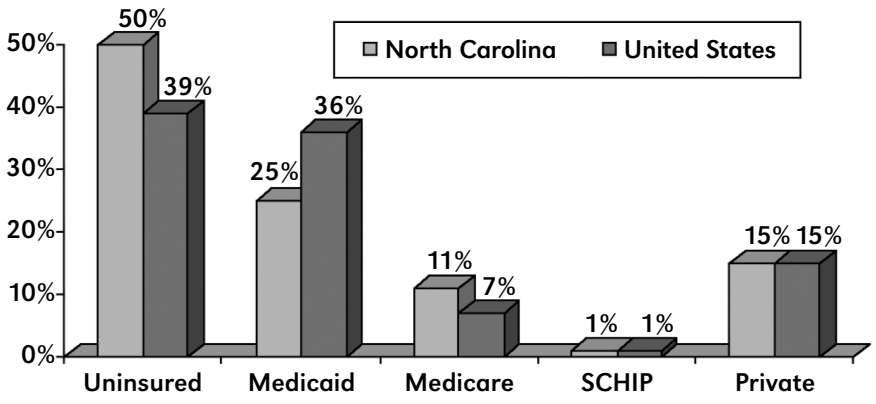
Table 3.2
Enabling Services of North Carolina Health Centers[5]

Enabling Services	Case Management	Eligibility Assistance	Interpreter Services	Outreach	Transportation	WIC Services
NC FQHC	92%	80%	96%	88%	60%	20%
US FQHC	90%	87%	85%	91%	57%	29%

health centers apart from other types of healthcare providers. These services—including case management, transportation services, outreach, and interpreter services—facilitate access to health and social services, particularly among low-income, chronically ill, and/or immigrant populations. North Carolina health centers spent $7.7 million on enabling services in 2003, accounting for 10% of FQHC costs. In North Carolina, all of the health centers provided some level of enabling services.[4] (see Table 3.2)

Centers have many different methods to meet the medication needs of their patients. Ten of the centers participate in 340B discount drug program (either through an in-house pharmacy or contracting with a community pharmacy) (See Chapter 5). Some FQHCs provide samples, participate in the pharmaceutical manufacturers' pharmacy assistance programs, have in-house pharmacies that offer medications on a sliding scale, or have other arrangements with community pharmacists.

Chart 3.1.
Insurance Coverage of Patients (NC, US, 2003)[6]



Patient population: Although the health centers in North Carolina all have their unique characteristics, the users of health centers share several attributes. Health center patients tend to be low-income, ethnic minorities, and uninsured or covered by Medicaid. In 2003, these centers served 272,314 users including 122,457 uninsured patients, 34,862 migrant or seasonal farmworkers, 2,063 homeless individuals, 5,799 prenatal patients, 7,044 children under age two years, and 75,142 Latinos. Patients make, on average, 3.2 visits per year to their health centers.

Compared to other community health centers in the country, NC health centers cared for more uninsured and fewer Medicaid patients in 2003. Fifty percent of NC health center users were uninsured compared with 39% in other US health centers (See Chart 3.1 below). Twenty five percent were Medicaid recipients compared with 36% nationally. Eleven percent were covered by Medicare, 15% by private insurance, and 1% by NC Health Choice (the State Children's Health Insurance Program, or SCHIP). The larger proportion of uninsured and the smaller percentage of Medicaid users have important financial implications for NC health centers. As will be discussed later, Medicaid is the most important non-grant financing mechanism for health centers. Because they serve a larger proportion of uninsured patients and fewer Medicaid recipients, NC health centers must rely more heavily on grant sources and collection from self-pay users.

Over the last five years, the number of community health center patients in North Carolina increased by 22% and the number of visits increased by 27%. There was an even larger increase in the number of uninsured patients (32% increase).

The average income level of NC health center patients is similar to other US health centers. Ninety percent of users had incomes below 200% of the federal poverty guidelines (FPG) ($36,800 a year for a family of four in 2004); and 70% had incomes below 100% of the federal poverty guidelines ($18,400/year for a family of four in 2004).[7]

Like other US health centers, the majority of NC health center users (73%) are from racial and ethnic minorities. North Carolina health centers, however, have a slightly different mix of patients than do other centers nationally; NC users are more likely to be African American (41% vs. 24%), and less likely to be white (26% vs. 36%) or Latino (28% vs. 35%) than other centers nationally. While Latinos are a smaller percentage of the NC FQHC patient population than in other centers nationally, the number of Latino users is growing rapidly. North Carolina health centers have seen a 25% increase in Latino users since 2000. This growth has required centers to provide translation services now that 26% of users are best served in a language other than English. Language and cultural barriers also pose a challenge in coordination of care and case management.

While most of the users of health centers in North Carolina are young, there is a trend toward serving an increasing number of older adults. Thirty three percent of users were under age 20 years, 59% were working age adults, and 8% were over age 65 years.[8] The age and gender of users in North Carolina are similar to users in other US health centers. The elderly comprise an increasing proportion of health center users. From 1990 to 2000, elderly users of health centers grew by 55% nationally.[9] Elderly patients tend to have more chronic medical problems and often require more intensive services.

The most common presenting diagnoses at health centers include: hypertension (39%), diabetes (27%), mental disorders (13%), and asthma (10%). Other diagnoses include heart disease (7%) and HIV/AIDS (2%).

Special funding rules: In addition to the federal grants that FQHC receive to support the costs of uncompensated primary and preventive healthcare, FQHC qualify for other special benefits. For example, FQHC can obtain federal grants to plan and develop networks and federal loan guarantees. Grantees are protected by the Federal Tort Claims Act, which provides coverage for most malpractice claims—thereby reducing their need to purchase private malpractice insurance coverage. Both FQHC and FQHC look-alikes can participate in the Section 340B drug pricing discounts (see Chapter 5 on Medication Assistance), receive no-cost vaccines for children, and have access to medical providers through National Health Service Corps (if located in a Health Professional Shortage Area). In addition, FQHC, FQHC look-alikes, and rural health centers (RHCs) receive special Medicaid and Medicare reimbursement. Congress, as part of the Benefits Improvement and Protection Act of 2000 (BIPA), changed Medicaid reimbursement to RHCs and FQHCs to a prospective payment system (PPS). A base rate per visit is calculated for each center (using the center's state fiscal year (SFY) 1999 and 2000 costs), which is then inflated each year using the primary care component of the Medicare Economic Index. The per visit rate may be adjusted based on changes in covered services. Under BIPA, states have the authority to use a different payment methodology, as long as it is agreed to by the FQHCs and RHCs and provides as much or more reimbursement than under the PPS system. Currently, North Carolina offers each center the option of using the PPS system or the Medicare "cost-based system" that was in effect prior to BIPA.[iii]

Piedmont Health System: Serving the Growing Latino Community

Serving the growing Latino population has created new challenges for health centers. In some clinical sites, Latinos account for 50-75% of the patients served. Almost three-quarters of the patients (70%) in the Siler City office of Piedmont Health System are Latino. A majority of the Latino population is uninsured; and many have limited English proficiency.

In order to serve this population, health centers are reaching out to hire bilingual providers. About half of the providers and 25% of the administrative staff at Piedmont Health System can speak Spanish. Piedmont is one of the state's leaders in ensuring that its staff can meet the cultural and linguistic needs of the patients and many other centers are also making great strides.

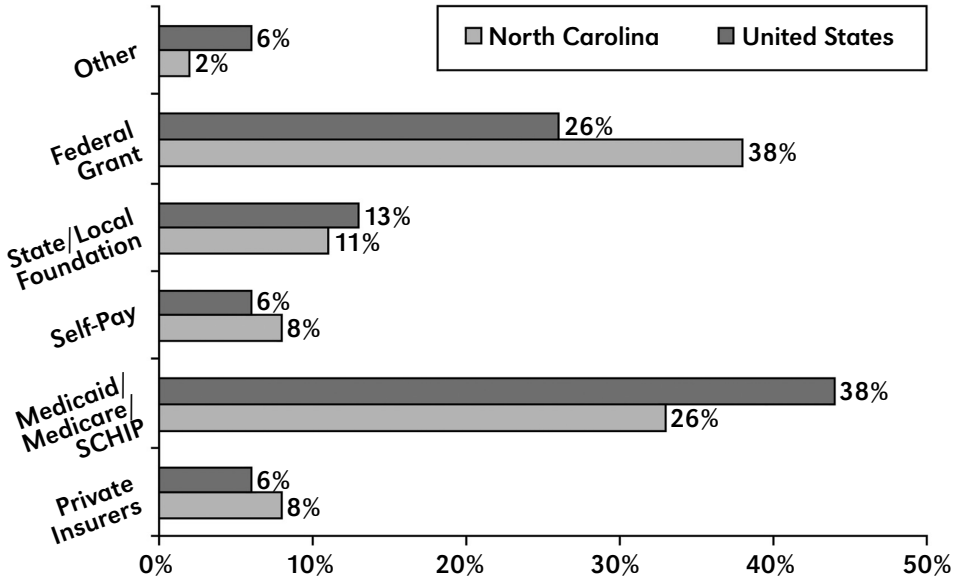
iii The old cost-based reimbursement system was subject to a federal cap; in calendar year 2004, the rate could not exceed $68.65 for RHCs, $91.64 in rural FQHCs, and $106.58 in urban FQHCs. The caps are adjusted annually based on the Medicare Economic Index (MEI).

Revenues: Community health centers in North Carolina are funded through a combination of Bureau of Primary Health Care grants; state, local, and foundation funds; public and private insurance payments; and patient payments. Aggregate fiscal data from 2003 showed a $2.5 million profit (3%) for NC health centers, which compared to an aggregate 0% profit for US health centers.[iv,10] While there was an aggregate profit for health centers in North Carolina, their financial strength varies widely. The surplus or deficit as a percentage of total costs ranged from an 11% deficit in one center to a 13% profit in another.

Important differences in the revenue mix of NC health centers may help to explain why some centers are experiencing financial stress. Health centers with more Medicaid, Medicare, and private insurance users tend to be financially stronger than those serving larger percentages of uninsured people. A 2000 analysis of national Uniform Data System data indicated that centers that cared for larger shares of uninsured patients had larger revenue deficits and tended to be worse off.[11] Health centers that serve a higher proportion of uninsured tend to be more reliant on sliding scale payments (self-pay collections). Typically, these payments do not cover the full costs of care. Thus, these centers must rely more heavily on federal grants and other revenues to make up the difference, and federal grants are not adjusted to adequately reflect differences among centers in the proportion of the patient population that is uninsured. On average, half (50%) of NC health centers' patients are uninsured, but this varies widely by center. In some centers, more than 70% of their patient population is uninsured, while in others, fewer than 25% of the patients are uninsured. The percentage of a health center's patients who are on Medicaid varies from a high of 52% in some centers to a low of 9%.

In the past, NC health centers received proportionately less revenue from state and local sources than other health centers in the United States and more from the Bureau of Primary Health Care (BPHC) grants (Chart 3.2).[v] Other states tended to receive more from state indigent care programs and other revenue including fund raising and interest income.[vi] However, the NC General Assembly recently appropriated $5.0 million in non-recurring funding (SFY 2005)

Chart 3.2.
Revenue Sources of FQHC (NC, US, 2003)[12]



iv FQHC profits go into reserves to cover unforeseen shortfalls and/or growth and expansion of programs and services.

v In the past, FQHCs received state funding to perform specific services (for example, some FQHCs received funds from the Division of Public Health to operate WIC programs or adult health screening programs). Until the recent $5 million appropriation in SFY 2005, the only state "grants" received were to newly established FQHCs transitioning from the state MAP program (see Section on Rural Health Centers) or participating in the Farmworker Health program (fee-for-service voucher program). FQHCs did not receive general state support until the recent state appropriations.

vi State indigent care programs subsidize care to the uninsured through various funding sources other than state budgetary appropriations directed to health centers. If the state appropriates funds directly to health centers it is considered a state grant.

to help support and expand the services provided by FQHCs. This non-federal grant revenue is especially important when North Carolina grantees are applying for BPHC funding (see Chapter 7 on Financing). In order to be competitive for BPHC grants, health centers must demonstrate an ability to match federal grant funds with state and local funding.

Quality: National studies of Medicaid patients served by FQHCs have found that Medicaid patients served by health centers are less likely to use the emergency room, have fewer preventable hospitalizations (i.e., for ambulatory sensitive conditions such as asthma or diabetes), and cost less than Medicaid patients receiving care elsewhere.[13,14,15,16] While North Carolina-specific data on health outcomes are not available, other quality indicators are. Currently, nine of the 25 centers are accredited by the Joint Commission on Accreditation of Healthcare Organizations, and more are likely to become accredited in the future, as the BPHC encourages accreditation. In addition, 13 centers in North Carolina are participating in the National Health Disparities Collaborative; and 14 centers participate as primary care providers in the Community Care of North Carolina program. Both of these initiatives focus on providing disease management and care coordination to chronically ill patients.

Challenges: While community health centers can provide quality primary care services to the uninsured, there are still major barriers to obtaining specialty care, diagnostic tests, behavioral health services, and prescription drugs. In a 2002 national survey, medical directors and executive directors of community health centers reported that they could address the primary healthcare needs of their patient population, but had a harder time ensuring access to services such as specialty care, diagnostic tests, and behavioral health services.[17] Medical directors stated that while insurance status did not affect the quality of care that patients received on site, lack of insurance was a problem when they tried to arrange referrals for other health services, which many patients were unable to access because of their costs. Poor access to specialty care was also emphasized in a 2002 evaluation of the safety net in five medium-sized cities.[18] Respondents reported that patients often had to wait for months for appointments and only some of the services were provided for reduced fees. Poor access to behavioral health services and to prescription drugs has also been well documented for community health center patients across the country and anecdotal evidence indicates similar problems exist in NC centers.

In addition, there is quantitative and anecdotal evidence that FQHCs in NC are under significant financial stress, perhaps more than other centers in the Southeast. With increasing health insurance premiums, significant erosion of employer-based insurance, and job losses in the manufacturing industries, many health centers are caring for more uninsured and disadvantaged populations than ever, without a commensurate increase in federal grants to pay for the additional costs of caring for the uninsured. The new one-time state appropriation will help; but funds need to be reallocated in following years. Furthermore, while the funds will help centers provide care to *additional* uninsured users, these funds were not intended to help centers serve their existing uninsured population. As noted previously, some centers serve a much higher proportion of uninsured than others; and federal grants are not always sufficient to meet the costs of serving these uninsured patients. The new state funds do not directly address this issue.

Rural Health Centers (RHCs)

Overview: Since 1973, the NC Office of Research, Demonstrations, and Rural Health Development (ORDRHD, formerly the Office of Rural Health) helped establish 81 rural health centers throughout the state. These centers are private not-for-profit organizations. The ORDRHD worked to develop these resources in geographic areas that lacked primary care resources, but had a community committed to supporting a center. Local communities had to match state capital funds on a five-to-one state-to-local community match. The ORDRHD's goal was to provide initial program funding for three-to-five years until the centers could become self-sufficient.

Over the years, the state's rural health center program has been augmented by two developments: the creation of the federal Rural Health Clinics Act and state-funding of certain rural health centers for the provision of indigent care. In 1977, Congress created the Rural Health Clinics Act, P.L. 95-210, as a means of expanding care into rural underserved areas through the use of physician extenders.[19] Nationally in 1999, there were nearly 3,500 federally-designated rural health clinics; 97% were located in health professional shortage areas. Most (53%) were independent practices

and 47% were provider based (i.e., owned by a hospital or nursing facility).

There are currently 108 *federally-certified rural health clinics* in North Carolina. Most, but not all, of the 81 state-established rural health centers also qualify as federally-certified rural health clinics. Federally-certified RHCs receive cost-based reimbursement from Medicare and Medicaid (described in more detail in Chapter 7). In return, federally-certified RHCs must provide care to Medicaid and Medicare recipients. There are no federal requirements regarding care provided to the uninsured.

Some of the conditions that rural health clinics must meet to be federally certified include:[20]

- Exist in a Health Professional Shortage Area or Medically Underserved Area (this requirement can be fulfilled by Governor's designation);
- Employ a physician assistant, nurse practitioner, or certified nurse midwife at least 50% of the time the clinic is open;
- Be under the medical direction of a physician;
- Provide primary care;
- Provide commonly furnished diagnostic and therapeutic services, including basic laboratory services;
- Meet Medicare and Medicaid regulations on health and safety requirements;
- Have arrangements with providers and suppliers participating in the Medicare and Medicaid programs to furnish medically necessary services such as inpatient hospital care, physician services, and additional or specialized laboratory services not available at the clinic; and
- Comply with all applicable state, local, and federal requirements.

While most rural health centers established with assistance from the ORDRHD have become self-sufficient (through enhanced Medicare and Medicaid reimbursement, and/or other third-party reimbursement), there have been a subset of centers that has needed ongoing state support. These centers typically serve a higher proportion of uninsured patients, and therefore have more difficulty covering operational costs. The ORDRHD helps fund 32 of the 81 state-established rural health centers on an ongoing basis ("*state-funded rural health centers*"). The state-funded rural health centers tend to be located in the eastern and far western parts of the state, and range from single nurse practitioner sites in very remote areas to multiple practitioner sites serving multiple counties. Some, but not all, of these centers are federally-certified rural health clinics.

State-funded rural health centers must be non-profit, 501(c)(3) organizations, with a local board of directors (i.e., community residents). These centers do not have the same requirement as FQHCs for board composition (i.e., the boards do not need to comprise 51% consumers/users of the centers). State funding is provided as a last resort to offset operational shortfalls and costs for care to the uninsured. In the past, the state awarded centers money solely to underwrite their operational budget. However, by the end of the 1990s, the ORDRHD shifted its funding process so that centers had to "earn" their state funds by seeing indigent patients. This new funding process is called the Medical Access Plan, or MAP program. Today, more than two-thirds of the state funding is used to support care to uninsured patients who meet the MAP eligibility requirements. MAP eligibility requires that patients are NC residents, uninsured, under 200% of the federal poverty level, and not eligible for Medicaid or NC Health Choice. Patients are required to pay a copay, ranging from $5-$20 per visit, based on their family income. Centers are paid $68 each visit, which is roughly the Medicare rural health clinic cost-based reimbursement rate, less the copayment.

Most centers receive a combination of MAP funds and some ongoing non-targeted operational funds. However, the ORDRHD is moving more of the state funds into the MAP program. Currently 68.5% of the state funds are distributed through MAP, and the goal is to increase this level to 85%. The remaining 15% would be held for new developments and to address crisis situations.

Services: As noted previously, both federally certified rural health clinics and state-established rural health centers must provide primary care services and must have the capacity to arrange for inpatient care and specialty referrals. However, these RHCs are not required to provide dental, behavioral health, or enabling services, which are required of FQHCs.

While not legally obligated to do so, some of the state-funded RHCs provide supplemental services in addition to primary care. For example, three have dental clinics and others provide assistance for their uninsured patients in accessing pharmaceutical company prescription assistance plans. None of the rural health centers have in-house pharmacies with a pharmacist. One grantee has a full-time clinical social worker who provides

some behavioral health services, but most of the RHCs refer patients with behavioral health problems to other providers or agencies.

Patients: The state does not collect data on the number of patients seen by all of the federally-certified rural health clinics in the state. They must submit cost-reports to Medicare and Medicaid to obtain their cost-based reimbursement, but are not required to collect data on the numbers of uninsured they treat or the services provided. Therefore, there is no information on the number or type of patients served or the utilization of services. However, a national survey of rural health clinics in 1999 showed that approximately 56% of patient visits were attributable to Medicaid and Medicare patients.[21] Federally-certified rural health clinics are not legally obligated to serve the uninsured, but many choose to do so. Uninsured patients receiving services on a sliding-fee scale accounted for 8% of all visits to federally-certified rural health clinics nationwide.[22]

While data are not available for *all* of the federally-certified rural health clinics in North Carolina, the state does collect data for the 32 state-funded RHCs. Of the 101,648 total users seen by state-funded RHCs in SFY 2003:

- 21,252 (21%) were uninsured (7,963 participated in MAP)
- 21,820 (21%) were on Medicaid
- 28,165 (28%) were receiving Medicare
- 30,411 (30%) had other forms of insurance

The percentage of uninsured users seen by health centers varies from approximately 65% in one center to approximately 7% in another.

Revenues: Nationally, in 1999, 54% of the patient revenues of federally-certified rural health clinics were from Medicare and Medicaid. Thirty percent of the revenues were from commercial or private insurance, 15% from self-pay, and 4% from other sources. Information limited to NC federally-certified rural health clinics is not available.

The ORDRHD collects more information about state-funded rural health centers. In SFY 2004, 32 centers received state funding. The state funds ($2,359,673) represent 8.5% of the centers' combined annual operational budgets ($27.68 million). The majority of a center's revenue is derived from Medicare, Medicaid, and commercial insurance.

Challenges: RHCs, like other safety net organizations, are facing financial pressures in trying to serve the uninsured. There are more uninsured seeking care and not enough funds to help underwrite the costs. Many of the centers have aging facilities and infrastructure because they were built in the 1970s or 1980s. Few sources of capital funding exist to replace equipment and most centers lack sufficient revenues to cover the costs of capital improvements. On average, rural practices are behind their urban counterparts with information technology and the ability to tap into evidence-based medicine through personal digital assistants. Some also have problems recruiting and retaining skilled managers/administrators. There are four NC RHCs in serious financial distress, and the problems seem to be getting worse rather than better.

Public Health

Overview: The NC General Assembly created the first state board of health in 1877. Two years later, local boards of health were developed throughout the state, and the first local health department was established in Guilford County in 1911. By 1950, all 100 counties were covered by health departments. This year (2004), there are currently 85 local health departments—79 single-county health departments and six district health departments.[vii] In North Carolina, most health departments are units of local government and are governed by 11-member boards of health appointed by the county commissioners.[viii]

Over the last century, public health has played a significant role in improving the public's well-being and reducing morbidity and mortality rates across the country. While public health cannot be credited with all of this improvement, it has played a major role through provision of services and raising public awareness of health-related issues. Between 1950 and 2002, the national infant mortality rate dropped from 29.2 per 1,000 to 7.0 per 1,000; and life expectancy grew from 47 years to 77 years.[23] The federal and state

vii There are a few variations on the single-county health department model. There is one public health authority (Hertford County), one hospital authority (Cabarrus County), and one consolidated human services agency (Wake County).

governments are critical components of the nation's public health system, but much of the responsibility for the delivery of public health services rests with the local health departments. The first local health departments were initially created to control outbreaks of disease and to collect health-related data. Now, there are approximately 2,500 local health departments throughout the country,[24] and they offer a wide range of public health and personal healthcare services.

Over the years, NC public health has expanded its mission from the fundamental responsibilities of infectious disease control and data gathering to include a variety of programs and initiatives such as maternal and child health programs, universal childhood immunizations, family planning, environmental sanitation, water and food safety, fluoridation of drinking water, and injury prevention and workplace safety. Over this century of public health development, the infant mortality rate in North Carolina dropped from 78.7 per 1,000 in 1925 to 8.2 in 2003; and life expectancy grew from 55 years in 1925 to 76 years in 2000. Recently, public health has dedicated more resources to health promotion and disease prevention activities to reduce the incidence of certain chronic diseases, including asthma, diabetes, hypertension, heart disease, and stroke. For example, state and local public health officials have engaged in public education campaigns to increase exercise and to reduce obesity and tobacco use.

With the exception of prenatal and child health services, many local health departments throughout the country do not offer personal healthcare services. However, health departments in the southeastern United States generally play a larger role in the delivery of personal healthcare services than others around the country. This is certainly the case in North Carolina where the rural nature of the state and other barriers to care make local health departments an integral source of access in many communities.

Services provided: Local health departments can provide a wide range of services. They are required by state law to provide certain categories of core public health services, including communicable disease control (including sexually transmitted disease (STD) testing and treatment), environmental health services, and vital records registration. Local health departments are also required to either provide or contract for certain clinical safety net services if the services are not otherwise available in the jurisdiction.[25] These clinical services include:

- Child health (including immunizations and well-child care)
- Adult health (including chronic disease prevention and detection)
- Maternal health (including pregnancy testing and prenatal care)
- Family planning (including provision of information on contraceptives)
- Home health

In addition to these mandated services, some health departments offer other clinical services, including the full range of primary care services and dental health services. Health departments typically serve as providers of last resort for these services, meaning that they provide services only if residents are unable to access them elsewhere. Therefore, the array of services varies by community, depending on local needs and the availability of other community resources.

Many local health departments provide valuable care for the uninsured through the provision of clinical safety net services. Some health departments have full-time providers on staff who provide check-ups, health maintenance, prenatal care, dental care, and sick visits for patients. Other health departments offer few clinical services other than immunizations, flu shots, and testing and counseling for sexually transmitted diseases, tuberculosis, and HIV/AIDS. Most health departments fall somewhere in between; offering some but not all of the available services, such as primary care for children (but not adults) or dental care to children with Medicaid or who are uninsured. However, all local health departments provide health education and promotion programs for individuals needing disease management and healthy living services.

As public policies and the market environment have changed over time, some of the clinical services tradi-

viii Local boards must have 11 members, eight of which are designated slots (a medical doctor, dentist, registered nurse (RN), optometrist, veterinarian, pharmacist, engineer, and county commissioner) and three at large community members. N.C.G.S. §130A et. seq.

tionally offered by local health departments, such as childhood immunizations, well-child visits, and care for Medicaid recipients, have shifted in whole or in part from health departments to the private sector. In other cases, clinical services have moved from private providers back to public health. For example, when private providers leave the community or decide to stop providing care to a subset of the population.

Compared to other health departments across the country, local health departments in North Carolina provide more clinical services, making them an essential part of the safety net. (Table 3.3).

Table 3.3.
Services Provided by Health Departments (NC, US)[26,27]

Services	Percent of Health Departments Providing Services: NC (2003)	Percent of Health Departments Providing Services: US (2000)
School health	68%	46%
Home health	43%	36%
Primary care	58%	18%
Dental treatment	50%	30%
Case management	100%	67%
Prenatal care	92%	41%
Family planning	100%	58%
Nutrition	94%	NA
HIV/AIDS testing and counseling	100%	64%
STD testing and counseling	100%	65%
Diabetes screening	87%	57%
Well child care	93%	59%
TB testing	100%	88%
Adult influenza vaccines	100%	91%
Childhood immunizations	100%	89%

The breadth of health department responsibilities and services require local health departments to employ many types of professional staff, including health professionals (physicians, nurses, nurse practitioners, physician assistants, dentists, and pharmacists), epidemiologists, social workers, engineers, veterinarians, and professional administrators. The NC public health system statewide currently employs approximately 10,000 full-time equivalent staff, including 2,300 registered nurses, 900 environmental health specialists, 600 social workers, and 400 nutritionists.

Numbers of uninsured patients served: Local health departments are required to report the number of patients seen in each public health clinic and the source of payment. Using these data, it was determined that health departments provided services to 641,601 unduplicated patients in SFY 2003 (Appendix B). Of these, 260,603 (41%) were uninsured. Specifically, health departments provided services to the uninsured in the following clinical settings:

- **Adult health clinics:** 36,657 uninsured patients (54% of all patients seen in adult health clinics). Adult health clinics provide a variety of screening tests (e.g., Pap smears and cholesterol screening), as well as monitoring and managing chronic diseases. Some, but not all health departments also provide comprehensive primary care services to adults in their adult health clinics;
- **Child health clinics:** 27,745 uninsured patients (23% of all patients). Child health clinics provide well-child services, developmental evaluations, child health coordination, and treatment of minor acute illnesses such as otitis media and upper respiratory infections. Some, but not all, health departments provide comprehensive primary care services to children in their child health clinics;
- **Maternity health clinics:** 21,126 uninsured patients (31% of all patients). Maternity clinics provide prenatal care, maternity care coordination, and a few provide prenatal care for high-risk women. Many local health departments provide the initial comprehensive prenatal services and routine care up to a specific point in the pregnancy and then refer to a private provider in the community at an agreed upon time (e.g., seven months). Health departments served approximately 40% of the pregnant women enrolled in Medicaid and 40% of all pregnant Latinos in 2002.[28] Some also provide primary care

services to the women they are treating in their maternity care clinics;

- **Dental clinics:** 2,364 uninsured patients (5% of all patients). Dental services vary by health departments. Some are limited to routine check-ups, cleanings, x-rays, and fillings, while others provide comprehensive dental services (including extractions, root canals, etc.);
- **Epidemiology:** 60,849 uninsured patients (56% of all patients). State law requires health departments to collect data on approximately 65 reportable diseases and conditions. Last year, local health departments investigated 6,500 cases of gonorrhea, 3,000 cases of foodborne illnesses, more than 1,000 cases of hepatitis B, and 125 cases of hepatitis A. Health departments are required to conduct investigations and intervene when necessary to assure compliance with control measures, even if treatment and/or coverage is provided in the private sector;
- **Family planning:** 66,259 uninsured patients (50% of all patients);
- **Immunizations:** 81,053 uninsured patients (42% of all patients). Immunizations include both childhood immunizations as well as immunizations provided to adults (such as flu shots or pneumococcal vaccinations); and
- **Nutrition:** The Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) served an average of 210,000 clients per month.

Aside from the clinical and nutritional services provided by *local* health departments, the *state* Division of Public Health also provides clinical and nutritional services to thousands of North Carolinians. These services are typically, although not exclusively, targeted to low-income populations. For example, the Division operates or has responsibility for:

- The state laboratory, which provides certain clinical laboratory services including newborn screenings, Pap smears, and HIV tests.
- Children's developmental services agencies, which provide early intervention programs to 10,420 infants and toddlers who have or are at risk for developmental delays.
- Child and adult congregate feeding programs, which feed approximately 130,500 people two meals and a snack each day.
- Summer food supplement program, which provides meals to 33,645 children in the summer to replace the free and reduced school lunch program.

The Division of Public Health also purchases certain medical services directly from local health providers for individuals with special health problems (See Table 3.4). All of the clients served in these programs are uninsured or have limited insurance which does not cover the services paid for by this program.

While health departments are a major source of healthcare services to the uninsured, they do not all provide comprehensive primary care. Unfortunately, there are no consistent data indicating whether a health department provides primary care services, or how many uninsured patients are served. For example, in a state survey of local health departments (SFY 2003), health departments covering 60 counties reported providing primary care either to adults, children, or both.[30] However, a more accurate assessment of whether the health department serves as a person's medical home is whether the health department serves as a primary care provider for the Medicaid Carolina Access or Community Care of North Carolina programs. Health departments covering 41 counties participate as primary care providers for these Medicaid programs. Only 39 counties are listed both as primary care providers in the state survey and in the Medicaid database. The confusion about the number of health departments that provide primary

Table 3.4
Public Health Direct Purchase of Services[29]

Program	Total expended	Number clients	Average cost/client
Children with Special Health Services	$2,519,156	2,126	$1,185
Assistive Technology	$423,444	305	$1,388
Cystic Fibrosis	$107,890	18	$5,994
Cancer Diagnosis	$718,968	1,171	$614
Cancer Treatment	$1,304,125	436	$2,991
Kidney	$307,239	1,848	$166
Sickle Cell	$521,019	202	$2,579
HIV-ADAP (AIDS Drug Assistance Program)	$20,584,596	2,899	$7,101

care services may be a definitional one, because to be listed as a primary care provider for the Medicaid program, the health department must commit to providing comprehensive services (preventive and acute or "sick" care), and be available 24 hours a day, 7 days a week (through back-up coverage). No definition of primary care was given in the state survey. Furthermore, data is not available on the number of primary care visits, clients, or payment source for these visits because the state's current Health Services Information System (HSIS) does not gather this information from local health departments.[ix]

In addition to the direct provision of services, public health departments collect and analyze data that are used by safety net and other health providers, local communities, and state and local policy makers, including vital records; birth, cancer and immunization registries; Pregnancy Risk Assessment Monitoring System; the Behavioral Risk Factor Surveillance Survey (BRFSS); the Youth Risk Behavior Survey; and the community diagnosis. The state also maintains a critical alert surveillance system.

Financing: The total budget for state and local public health departments was $593 million in SFY 2004. Federal grants comprise 40% of the funding, local government provides more than one-third (38%), state funds comprise 12%, and other receipts (including Medicaid) account for approximately 10%. The General Assembly appropriates $23 million to local health departments, of which the majority of funds are categorical (i.e., designated for a specific program or purpose). Only about $5 million of state funds are provided in general aid to the counties (i.e., flexible funds to help support health departments).

Challenges: In most communities, an increasing number of uninsured patients are seeking care in local health departments. A 1999 survey of health departments found that 40% reported client overcrowding, with patients waiting and obstructing the hallways.[31] Some of the clients seeking care at health departments need comprehensive primary care services because of a dearth of other safety net providers in the community, while others seek more traditional health department services. Health departments receive some funding for the traditional public health services provided to the uninsured, but this funding is not sufficient to meet growing needs. For example, local health departments receive Medicaid reimbursement (for Medicaid-eligible pregnant women), and can use Maternal and Child Health (MCH) block grant funds to help pay for prenatal care services to the uninsured. However, Medicaid reimbursement does not cover the full costs of treating Medicaid patients (See Financing chapter, 7), and the federal MCH funds are insufficient to cover the healthcare needs of all uninsured women and children accessing health department services. The funding gap forced health departments to provide an estimated $10.3 million in uncompensated prenatal care in 2003 (a 25% increase since 2001). In 2003, uncompensated prenatal care spending in health departments averaged 21% and reached as high as 69% in some counties.

Like FQHCs, local health departments are seeing an increasing number of Latinos. Health departments are trying to respond to this new population by adding bilingual staff, providing educational and informational materials in Spanish, and providing outreach services to the non-English speaking communities. Approximately three-fourths (74%) of health departments have staff-designated interpreters, but more resources are needed to ensure that patients and providers can communicate effectively.

Free Clinics

Overview: The first free clinics in North Carolina began serving patients in 1969, when the Christian Medical Society of Bowman Gray School of Medicine opened four volunteer clinics in Winston-Salem.[32] These clinics closed five years later and there were no free clinics until 1985 when the Open Door Clinic opened in Raleigh as the only free clinic in the state. The number of free clinics has increased rapidly since 1985, and as of 2004, North Carolina had more than 60 clinics and/or pharmacies serving 48 communities. The largest part of the growth was during the mid-to-late 1990s. Nationally, there are 850 free clinics. North Carolina leads the nation in the numbers of free clinics and free pharmacies. Free clinics serve an important function, even in communities with other

ix The state is in the process of updating the HSIS system, the first major update in 30 years. Once the new system is operational, it will collect information about the number of primary care patients and visits, along with insurance coverage (if any).

safety net resources. In a study reviewing the safety net of five major US cities, researchers found that free clinics provided an alternative for patients who are unsuccessful or simply not comfortable seeking care from other providers, including other safety net providers.[33] The study questioned why someone would feel more comfortable at a free clinic and respondents explained that "the large size and busy feel of the major safety net hospital that provides much of the care in that city can be intimidating for some residents... [and] free clinics provide a comfortable environment for undocumented residents."[34] The existence of a free clinic provides an alternative for the uninsured healthcare consumer.

There is not one specific free clinic model, although most follow certain patterns. Free clinics are non-profit, usually 501(c)(3), organizations governed by local boards of directors. They are designed to meet the healthcare needs of the low-income uninsured in their communities by drawing on local healthcare resources and volunteers. Volunteers are the cornerstones of the free clinic movement. Free clinics tap into the willingness of the healthcare community (doctors, nurse practitioners, physician assistants, social workers, pharmacists, dentists, mental health, and chiropractors), and other members of the community to volunteer their time. In 2003, more than 8,000 volunteers helped staff the NC free clinics, including 2,000 physicians, 1,500 nurses, 350 dentists, 325 pharmacists, and 3,000 lay people. Thirty NC hospitals provide financial support and in-kind services. The use of volunteers and donated materials lowers the free clinics' overhead.

While the majority of free clinics rely heavily on volunteers, many have some paid staff. The average clinic has two full-time employees and 150 volunteers, but this varies from 0-12 full-time and part-time employees. Free clinic budgets range from $5,000 to $850,000 a year.

Services: Clinic hours and the array of services vary across clinics. Most free clinics are open one or two evenings a week, and serve patients on a first-come, first-serve basis. In addition to conventional community-based primary care and preventive services, some clinics provide a broader spectrum of supportive services, such as health education, case management, and nutrition counseling. The majority of free clinics in North Carolina offer some pharmaceutical services, which are necessary to meet the healthcare needs of an uninsured population. Free clinics provide basic primary care services to their uninsured patients, but they are not always able to guarantee continuous, comprehensive primary care services, including the ability to establish a medical home with a specific provider. Most have very limited hours of operation, and are unable to provide patients with 24 hours a day, 7 days a week coverage.

Depending on the resources in the community, some free clinics are able to provide chronic and specialty care. A few of the larger clinics are able to offer chronic care clinics where patients can establish a relationship with a provider over time. If volunteer providers are willing to take free patients in private practice, then the patient is referred. However, not every clinic has relationships with the specialists in their community.

Free clinics dispensed 450,000 prescription medications in 2003. There are 33 licensed pharmacies operating in NC free clinics (either free standing or in the clinic). Most of the free clinics tap into pharmaceutical assistance programs to meet the prescription drug needs of their low-income uninsured patients. In addition, some clinics provide medications to those on Medicare.

Dental care is one of the most highly demanded services in free clinics. Statewide, 300 dentists volunteer at free clinics. Nonetheless, the availability of dental services is limited. Only 22 of the programs (37%) offer dental services, and the services that are provided are generally limited to extractions. The costs and time involved in restorative care make it prohibitive for most free clinics to offer.

Patients: Free clinics provide services to the uninsured who typically have incomes below 200% of the federal poverty guidelines (although the income eligibility guidelines vary across centers-some are as low as 150% of FPG, and others as high as 225%).[35] Free clinics do not generally provide care to people with insurance—including Medicaid or Medicare—because they can go to other community providers. Patients who might be eligible for Medicaid are referred to the local Departments of Social Services. In 2003, NC free clinics served 69,320 low-income patients: 59,840 patients in clinics providing primary care and medical services and 9,480 in specialized clinics providing only pharmaceutical assistance or behavioral health services.

The typical client served by a free clinic is between 18-64 years old. Most clients are working and many have multiple jobs. The most common diagnoses include diabetes, hypertension, and mental health problems. Free clinics serve few children because most

low-income children are eligible for either Medicaid or NC Health Choice (North Carolina's SCHIP program). Since 2003, free clinics have experienced a rise in the number of college-educated individuals seeking care. Many of these people have been laid off and cannot afford COBRA (Consolidated Omnibus Budget Reconciliation Act, 1986) continuation coverage. The number of uninsured older adults, ages 65 years or older, seeking services in free clinics has also increased. This population is often characterized by immigrants who cannot qualify for Medicare.

Revenues: Clinics raise revenue from individual donations, fundraising events, in-kind donations, foundation grants, faith-based organizations, and businesses. The Duke Endowment and Kate B. Reynolds Charitable Trust have been very supportive of free clinics. Physicians, hospitals, nursing homes, and pharmaceutical companies also support the clinics by donating equipment, medications, and other needed supplies. Unlike free clinics in Virginia, West Virginia, and Vermont, NC clinics do not receive any direct appropriations from the state legislature. However, NC free clinics do occasionally benefit from settlements that the state obtains with pharmaceutical companies. Free clinics do not generally charge for their services, although some clinics accept donations or have an application fee at the first visit. Some pharmacy programs have small copays for prescriptions. In 2003, NC free clinics received $13 million in funding from the private sector, but were able to provide $85 million in healthcare services. Nationally, free clinics delivered over $1 billion in healthcare services in 2002.

Early in 2004, Blue Cross Blue Shield of North Carolina (BCBSNC) Foundation awarded a five year, $10 million grant to the NC Association of Free Clinics to support existing NC free clinics and establish new clinics.[36] Each free clinic received a $15,000 unrestricted base grant and an additional $1,000 for the purchase of influenza vaccines. Free clinics can apply for additional funding for specific needs of up to $40,000; however, these funds are competitive. Other grant funds may be available to support innovation, use of technology, and the elimination of racial/ethnic health disparities.

Foundation funds are also going to be used to help develop new clinics: up to $5,000 can be awarded for planning grants (for needs assessment, focus groups, surveys of other means of determining the potential success of a new free clinic) and $5,000 can be sought for infrastructure grants (to be used upon completion of the planning process if the decision is made to create a free clinic). The infrastructure grants can also be used to pay for the creation of the non-profit entity, filing for tax-exemption and articles of incorporation, and to purchase office/computer hardware software. New clinics can access $25,000 in start-up funds to begin providing services or to secure a clinic location, hire an executive director, and purchase equipment; and an additional $25,000 is available to match dollars raised in the community in support of the new free clinic. These funds will help ensure the long-term sustainability of new clinics.

Challenges: Free clinics face a number of unique challenges. Free clinics' reliance on volunteer health professionals to deliver services makes it difficult to establish these clinics in health professional shortage areas. Communities need a core of supportive health professionals willing to donate their time in order to establish a free clinic. Even in communities with vibrant free clinics there are challenges meeting the healthcare needs of the uninsured. Since free clinics depend on volunteers who may have irregular schedules, it is more difficult to establish a relationship between the provider and patient. Therefore, free clinics are less able to offer continuity of care since patients are likely to see different providers over time. Furthermore, as with other safety net providers, it is difficult in many communities to find specialists willing to treat the uninsured.

While the use of volunteers dramatically reduces overhead costs, free clinics still need funds to pay for overhead and other expenses. Free clinics need sustainable funding because they receive no third-party reimbursement for their services. Despite the recent BCBSNC Foundation grant, free clinics need to constantly raise more funds to cover operating expenses. Free clinics vary tremendously in the level of support they are able to obtain from their communities. For example, Forsyth County, a relatively affluent county that is rich in healthcare resources, can support a 9,000 square foot free clinic with seventeen exams rooms and a specialty clinic. The clinic pays Novant Health Systems $1 a year to lease the space. In contrast, other communities provide less support to free clinics that are unable to afford stand-alone clinical space. In these communities, free clinics may need to borrow space from other healthcare providers, such as health departments or FQHCs. It is often those communities most in need of safety net resources (i.e., communities

that have been most heavily hit by job losses and a downturn in the economy) that are the least able to provide the financial resources needed to adequately support a free clinic.

Prescription drug costs are the single largest line item in most of the free clinic budgets. While free clinics sometimes receive donated drugs from local physicians or access the pharmaceutical assistance programs offered by manufacturers, they still need to purchase some medications to meet the healthcare needs of their patients. Unfortunately, free clinics do not currently qualify for discounted prices—for example, those offered through the 340B drug discount pricing program (see Chapter 5) or purchased under the state contract. Because of the high pharmaceutical costs, purchasing the full array of needed medications can be cost-prohibitive.

Malpractice coverage is also a problem for some of the volunteer physicians. The NC Good Samaritan Laws were amended to ensure volunteers are protected by the statute, but this only provides protection against monetary liability.[37] The statute does not cover the costs of defending the lawsuit in which the Good Samaritan defense might be asserted. Retired physicians can get volunteer coverage for the costs of the defense for only $100 per year (from NC Medical Mutual), but this limited coverage does not cover physicians in active practice. Some active physicians are discouraged from volunteering at free clinics because their regular malpractice coverage is not portable outside their own offices (or the hospital). Thus far, there has not been a medical malpractice suit against a provider in a NC free clinic; however, the fear of malpractice suits has discouraged some physicians from volunteering.

The influx of Latinos and non-English speaking patients is also challenging. Free clinics have seen a large increase in the percentage of Spanish-speaking patients over the last five years. Patients and providers often struggle to overcome the language barriers. Immigrant care in free clinics has worked better in urban areas because there are more resources to address language problems.

Project Access Systems

Overview: Project Access began in Asheville, NC in 1994 with a grant from The Robert Wood Johnson Foundation. It was designed to help link the services of traditional safety net providers to healthcare services offered by private providers in the community. The result is a community-based healthcare system that is able to provide a continuum of healthcare services, including primary care, specialty referrals, lab and x-ray, medications, and hospital services at reduced or no cost to low-income uninsured.

Historically, the local health department, FQHC look-alike, AHEC teaching clinic, and other non-profit community clinics were able to meet the primary care needs of most of the uninsured in Buncombe County. Each of these clinics provided some medication assistance. Private physicians who wanted to volunteer their time usually did so through free clinics. Few saw significant numbers of uninsured patients in their private offices. Safety net organizations often had difficulty obtaining specialty referrals and providing ancillary care. The uninsured patients who were seen by specialists regularly had problems paying for their prescriptions, and could have difficulties scheduling non-urgent hospital procedures. Those who were hospitalized could be faced with large outstanding bills that negatively impacted their credit ratings.

Project Access helps to address some of these problems, by organizing the private medical community to augment services already being provided by existing safety net organizations. Private providers had been reluctant to offer services to the uninsured because they were afraid that they would be inundated with requests. Some were also concerned that they had no way of knowing which patients needed free or reduced cost services, and which patients could afford to pay. Some providers were hesitant to offer their services because they could not ensure that the uninsured patients would obtain needed medications or diagnostic services. Project Access eases some of these concerns by verifying patient need and distributing patient referrals among many different providers. This helps spread the burden and risks of caring for the uninsured. In addition, Project Access makes reminder phone calls to reduce no-shows and helps ensure that patients can obtain specialty and ancillary services and needed medications.

The Project Access model has been implemented in eight NC communities—Asheville (Buncombe County), Boone (Watauga-Avery Counties), Charlotte (Mecklenburg County), Concord (Cabarrus County), Mitchell-Yancey Counties, Greensboro (Guilford County), Greenville (Pitt County), Henderson (Vance-Warren Counties), and Raleigh (Wake County), although the program varies depending on the community needs and resources.

Five other communities (Sylva, Rutherforton, Winston-Salem, Durham, and Jacksonville) are exploring or are in the process of implementing Project Access models. Project Access models are also operating in other states. There are more than 30 communities in other states that have operational community-based systems modeled after the Buncombe County Medical Society Project Access, with 70 more in the implementation or exploratory stages.

Services: Project Access models help to fill gaps in the healthcare services available to meet the healthcare needs of the uninsured. Access systems involve local physicians, both primary care and specialists, in providing care to the uninsured. Many Access projects also have funds available to help purchase medications when needed medications are not available through the pharmaceutical assistance programs or other sources. Hospitals provide diagnostic services as well as outpatient and inpatient services. While Project Access systems may not be able to provide all needed healthcare services (for example, dental, behavioral health, or therapy services), they do help to provide more comprehensive services than are traditionally available in the community.

Private physicians can participate in one of two ways: (1) they can commit to serve patients at one of the safety net organizations, or (2) agree to see a certain number of patients in their office per year. In Buncombe County, 80% of the physicians in private practice have agreed to participate in the program. Primary care providers agree to see 10 uninsured low-income patients, and specialists agree to see 20 patients per year. Local hospitals donate all lab tests and inpatient and outpatient services. Patients who visit a specialist (or a primary care doctor in their private office) can obtain their medications through a county-funded medication assistance program. All of Buncombe County's 44 pharmacies provide medications at cost, waiving counseling and dispensing fees.

One example of how Project Access helps augment services provided by existing safety net providers is through its specialty referral system. By referring specialty care patients to private physicians, primary care providers spend less time trying to address specialty needs, thereby freeing up time to serve more patients. In Buncombe County, the average number of physician visits at the local health department decreased from 5.0 visits per year per patient in 1995 to 2.5 visits per year per patient in 2003. The average length of each visit also declined from 45 minutes per visit to 20 minutes per visit. During that time frame, the Buncombe County Health Center made major changes in its organization and placed a heavy emphasis on production. However, the improvements could in no way have occurred without the presence of Project Access. Clinicians in the Health Center had previously spent untold minutes and hours seeing the same patients repeatedly for unresolved specialty care needs and trying to make referrals to specialists in the community. Project Access opened the door to those specialty referrals and enabled the Health Department to discontinue handling unresolved specialty care needs and focus on vastly improving its primary care service. The health department is now more able to focus on reducing no-shows and arranging transportation and other ancillary services. In addition, the time donated by private physicians in the clinics also helps expand the number of clients served.

The Buncombe County Medical Society administers Project Access and its role includes recruiting providers to volunteer, enrolling patients, and keeping track of referrals and appointments. The Medical Society makes patient appointment reminder calls 24 hours before each appointment. In addition, the Society processes standard insurance claims forms voluntarily submitted by physicians, hospitals, and pharmacies to document which services were provided and the value of the services.

Patients served: To qualify for Project Access services in Buncombe County, a person must:

- Be between ages 18-64 years
- Not have any medical insurance
- Have a gross household income of less than 200% of the federal poverty guidelines
- Not be receiving Medicaid or Medicare

The health department, community clinics, and private physicians refer patients into the program. Medicaid eligibility workers are outstationed at community clinics and screen individuals for Medicaid eligibility or help them enroll in Project Access. Patients referred by private physicians have their eligibility determined through the Buncombe County Medical Society. The average enrollment is approximately six months, but this varies based on the patient's needs and length of time that he or she is uninsured. Patients are responsible for keeping their appointments. After three missed

appointments patients are dropped from the program.

The number of patients actually seen by Project Access in Buncombe County for specialty care is approximately one-quarter the number seen by safety net providers for primary care. Patients seen exclusively in the safety net clinics continue to receive their care and medications through that system and are not screened or "counted" as Project Access patients. The only patients who are screened for Project Access eligibility are those who are seen by private physicians in their private offices (primary care providers or specialists), or who need hospital services. In 2003, for example, traditional safety net providers saw 20,500 uninsured low-income patients; primary care providers in their private offices treated 1,000 Project Access patients, and 3,500 received specialty referrals (See Table 3.5).

Financing: Project Access models across the state rely on different funding sources to support the systems. The services donated by the private providers and healthcare institutions create the core of the support for Project Access models. In Buncombe County, for example, physicians donated approximately $4 million and hospitals donated approximately $3.2 million in services in 2003. A local durable medical equipment provider donates approximately $100,000 per year of durable medical equipment supplies such as diabetic test strips. Additional funding is needed to support the infrastructure, including eligibility determinations, recruiting providers, purchasing medications, scheduling referrals and tracking the value of donated services. In Buncombe County, local county funds help pay for medications and the Medical Society's administrative costs. Pharmacists accept deeply discounted rates for their medications. Safety net clinics pay the non-federal share (50%) of Medicaid eligibility workers, who are outstationed and help determine eligibility for Medicaid and Project Access.

North Carolina Project Access programs across the state have received funding from a variety of sources, including national, state, and local foundations and charitable organizations; United Way; the federal government (Bureau of Primary Health Care and the Appalachian Regional Commission); county government; and local hospitals. North Carolina Project Access systems have also benefited from settlements that the NC Attorney General reached with vitamin manufacturers.

Challenges: Implementing Project Access models may be challenging in some communities. It is generally easier to create Project Access models in communities with existing primary care safety net capacity. In Buncombe County, for example, there were already several non-profit, faith-based, or governmental organizations that provided primary care services and offered prescription medications to the uninsured. It is more difficult to create a similar system in communities where these safety net resources did not already exist, although the Project Access system in Boone, NC, demonstrates that it is possible.

Project Access models rely on physician and provider volunteers, much like free clinics. Again, this is generally more difficult in rural and medically-underserved communities where there are fewer providers. Additionally, Project Access models are dependent on physician leaders and an "organizing entity." Physician leaders assist by enlisting colleagues and broader provider support, while the "organizing entity" is responsible for making all eligibility determinations and tracking referrals and utilization. One of the reasons for the underlying success in Buncombe County was the leadership shown by the Buncombe County Medical Society and existing physician leaders. This model would be harder to implement without a medical society or other physician-directed organization that had the support of the broader healthcare community.

Table 3.5
Buncombe County Integrated Delivery Healthcare System for Uninsured Project Access[38]

	1995	2003
Patient population	190,000	210,000
Uninsured patients (estimate below 200% federal poverty guidelines)	15,000	23,000
Primary care patients served in: -Existing safety net clinics -Private physicians offices -Hospital emergency department	 7,300 ? high-use	 20,500 1,000 low-use
Specialty patients served in private physician offices	?	3,500
Access to pharmacy (specialists)	Low	High
Hospital services billed to patient	Yes	No
Uninsured patient population with primary care	50%	90%

Outcomes: The health of the uninsured in Project Access communities has improved. According to 1998 survey of Buncombe County Project Access enrollees, 80% reported that their health was better or much better after enrolling in Project Access.[39,40] One-quarter (25%) of the patients reported that the healthcare services they received helped them return to work or do a better job. Thirteen percent of patients surveyed reported reduced absenteeism, and 25% reported increased productivity. In addition, local hospitals were able to report a $2-3 million reduction of projected charity care expenses.

School-Based or School-Linked Health Centers

Overview: Children are not always able to access comprehensive, coordinated, and culturally-competent systems of care. Many children are uninsured: 11.9% of children in North Carolina lacked health insurance coverage in 2003.[41] Despite the availability of Medicaid and NC Health Choice, 19% of children with family incomes below 200% of the federal poverty guidelines lacked coverage over a three-year period (SFYs 2001, 2002, and 2003).[42] Lack of insurance makes it difficult for some families to afford needed healthcare services. In addition to financial barriers, other barriers exist which prevent some children from seeking care. Adolescents have the lowest utilization of healthcare services of any age group.[43] Some of the reasons why adolescents do not seek out available care include concern about confidentiality, lack of knowledge of available services, and lack of culturally appropriate services. Another provider-related barrier includes a greater focus on the needs of younger children or adults.[44]

There were approximately 1.3 million children attending 2,158 public schools and 93 charter schools in North Carolina for SFY 2003-2004.[45] Nurses are available in most school districts, albeit on a limited basis. The average school nurse/student ratio was 1:1,897 in North Carolina for SFY 2003-2004, although national standards suggest that there be at least one school nurse for every 750 students. In 2004, the NC State Board of Education adopted the national recommendation to have one school nurse for every 750 students, and the General Assembly appropriated funds to support an additional 80 permanent school nurse positions and 65 time-limited (two-year) positions. This will reduce the nurse-to-student ratio to 1:1,436, assuming no increase in the number of students. Adding the additional school nursing positions will increase the number of school systems meeting the 1:750 ratio from 10 to 24. School nurses provide important health services to children and adolescents at school, including: counseling, chronic disease management, administration of medications or other healthcare procedures, and emergency services for injuries. In addition, school nurses oversee the care provided to medically fragile children who require one-on-one support.

Comprehensive primary care services are provided in school-based or school-linked health centers.

Appalachian Healthcare Project: A Rural Model

While the Project Access model is easier to establish in communities with large provider bases and existing safety net providers, Project Access models have been established in less resource rich environments. The first rural Project Access program, the Appalachian Healthcare Project, serves Watauga and Avery Counties. Watauga County has a population of 42,857 people with 25 primary care providers and 60 specialists. Avery County has a population of 17,610 with 17 primary care providers and two specialists.

In the spring of 2000, the only place for low-income uninsured patients to receive care was the hospital emergency department. There were no safety net organizations or free clinics providing comprehensive primary care. This project was made possible by the commitment of the medical communities in these two counties. Each provider pledged to see anywhere from 12 to 24 patients per year. In addition, the local hospitals offered inpatient, outpatient and diagnostic services to Appalachian Healthcare Project patients. The medical community's commitment allows the patient load to be equitably distributed among the physicians.

Since the project was implemented in April 2001, approximately 600 people have been served. On average, there are about 200 active patients at any time. In 2003, the healthcare community provided more than $2 million in free care and medications to Appalachian Healthcare Project patients.

School-based health centers (SBHCs) bring healthcare services to schools, where young people spend a great deal of their time. School-linked health centers (SLHCs) are located near, but not on, school grounds. SBHCs and SLHCs provide age-appropriate health and mental health services and health education to students with parental consent. They are designed to eliminate or diminish barriers to care for students[46] and to help address the unmet physical and emotional health needs of children and adolescents. In addition, these centers help keep students in school by removing physical and emotional barriers to learning. By providing healthcare services at or near the schools, these centers also provide assistance to working parents who can avoid taking time off from work to take their children to the doctor.

State funds for SFY 2004-2005 help support organizations or providers that sponsor 18 credentialed school-based or school-linked health centers and 16 non-credentialed centers.[47] "Credentialed" centers meet higher standards through an accreditation type review by the Division of Public Health/Women's and Children's Health.[x] Of these sites, 31 are school-based and three are school-linked. All state-funded centers have advisory councils composed of parents, students, providers, business, clergy, and other community leaders. Almost half of the 16 state-funded SBHCs are in middle schools, 38% (14) are in high schools, 3% (1) is in a middle/high school, 3% (1) is in a middle/elementary school, and 3% (1) is in an elementary school. In addition to the school-based or school-linked centers supported by state funds, there are other SBHCs or SLHCs in the state that do not receive state funds. The NC School-Based and School-Linked Health Center Association reported 56 centers statewide, but it is unclear whether each of these centers offer the same array of services as the state-funded centers.

Services: Services offered through school-based or school-linked health centers vary across the state. All state-funded sites offer a comprehensive array of services; other centers may offer fewer services. Services may include: medical care, preventive health services, mental health assessment and treatment, chronic disease management, laboratory testing, health education and promotion, social services, nutritional services, and other specialty services such as dental care and well-baby care for students with children. Services are provided directly at the site or, if not available on-site, through a referral to a local care provider. Most SBHCs are not allowed by local education authorities to offer STD or family planning services.

Staffing at SBHCs and SLHCs may vary, but state-funded credentialed centers are similarly staffed to

Wayne Initiative for School Health

Wayne Initiative for School Health (WISH) is a nonprofit school-based health program providing affordable, accessible physical and mental health services to over 2,000 adolescents in Wayne County. WISH addresses a broad range of needs, such as: basic health care, mental health issues, alcohol/drug use, teen pregnancy, communicable diseases, nutritional education, immunizations and preventive health services. WISH is a community effort with the local hospital, health department, department of social services, public school system, Communities In School, and local physicians.

WISH was founded as a direct result of an identified need for easy access to adolescent health care in this rural and economically depressed county. WISH centers are located in highly populated, low-income areas. WISH has instituted a comprehensive health program with amazing results. In schools that house WISH school-based health centers, pregnancy rates have decreased by 75%, school attendance has increased by 4%, and disciplinary actions have decreased by 5%. There continues to be broad support among diverse groups committed to continuing their support for promoting wellness among Wayne County adolescents.

x Typically, Medicaid recipients must obtain prior approval from their primary care provider (PCP) before seeing another provider. However, Medicaid recipients can obtain care from credentialed school-based health centers without prior approval. To obtain credentialing, SBHCs must communicate with the PCP in a timely manner regarding the care and co-management of those students.

ensure that a comprehensive array of services is available to students. Services may be provided by certified nurse practitioners, physician assistants, physicians, registered nurses, licensed and/or credentialed mental health professionals and registered dietitians. Typically, SBHC staff are employees of sponsoring organizations, such as health departments, community health centers, private not-for-profit agencies, or hospitals, rather than employees of the school district. Sometimes, health professionals from other community agencies and organizations provide services at the centers through an interagency agreement or contract. Pediatricians or other physicians from a community practice, clinic, or from the public health sector frequently serve as medical directors.

Services at state-funded health centers are offered every school day; at other non-state-funded centers, the availability of services may be more limited. In these centers, a local provider office or clinic may visit the school site for a limited time each week. Because SBHCs are located in schools, their hours of operation are limited to the days and hours when schools are open; however, some SBHCs are able to provide 24 hour, 7 days a week coverage through their sponsor organization (i.e., health department, community health center, hospital, non-profit agency or local physicians' office).

Children served: Data are not maintained on the number of children seen in *all* the school-based or school-linked centers throughout the state. However, in 2002-2003, state supported SBHCs and SLHCs provided access to comprehensive services for approximately 28,000 students.

Financing: In general, it takes $150,000-$200,000 per year to run the average SBHC in North Carolina, but budgets vary based on the size of the center and scope of services.[48] Funding for SBHCs comes from a variety of sources, including state general revenues, federal monies, institutional sponsorships, third-party payers, local grant funding, and in-kind support. The state appropriated $1.5 million in SFY 2004-2005 to sponsors of 18 credentialed school-based or school-linked health centers and 16 non-credentialed centers. Other funders have included the Bureau of Primary Health Care, Duke University, First Health of the Carolinas, and the Kate B. Reynolds Foundation. Across the state, local health departments, hospitals, community health centers, physician practices, and non-profit organizations help sponsor school-based health centers. Insurance payments from Medicaid, NC Health Choice, and commercial plans have been a small but growing revenue stream for school-based health centers. In addition, local SBHCs seek grants to supplement their funding.

Outcomes: While state-funded centers are expected to report on selected performance, or outcome, measures in relation to services provided, general data on the health and academic impact of SBHCs on NC students are not available. For example, state-funded SBHCs report on the percentage of students with up-to-date well-child exams and appropriate child immunizations. In addition, centers are required to report the percentage of students who are overweight or at risk for overweight with documentation of their body mass index, risk status, treatment plan and who have participated in counseling, and the percentage of enrolled students with documented communication between staff andparents/guardians. Centers also choose from a list of mental health measures to include in their Continuous Quality Improvement initiative, such as attention-deficit disorder/attention-deficit hyperactivity disorder, depression or anxiety, or students with inappropriate, violent, or aggressive behaviors. Many of these measures are new to the centers, so data about outcomes in this state are not available.

While state-level outcome data are not available, national studies show that the increased access to care for adolescents served by SBHCs leads to higher visit rates (especially among minorities), decreases emergency room visits,[49] and improves utilization of mental health services for hard-to-reach populations.[50]

Challenges: SBHCs have a unique opportunity to meet student needs and an ability to implement broad-based community or school outreach and prevention activities because of their strategic location in schools. However, because of their unique set-up, SBHCs also face challenges not common among traditional healthcare providers. Centers located in schools often have more limited hours of operation; for example, SBHCs may only be open during school hours, and not in the summer or during school breaks. As a result, it is more difficult to assure continuity of care.

Additionally, SBHCs face some of the same challenges as other safety net providers. Most struggle daily with financial sustainability because unstable funding streams make it difficult to sustain these programs. Funding sources are not reliable and state funds have

not been increased for several years. Third party reimbursements make up a small part of revenues, in part because reimbursement rates are low or non-existent for many needed services provided to adolescents. For example, third-party insurers do not usually reimburse for health education, nursing, or case management services. The majority of SBHCs in North Carolina are located in medically underserved areas of the state. It is often difficult to attract health professionals to practice in these areas, which means that staffing for these centers is an ongoing issue.

Private Physicians

Overview: National studies suggest that the uninsured usually obtain health services from private physicians, although care provided through private physicians' offices is not always financially affordable. A 1994 national study found that 82.3% of primary care visits by uninsured patients occurred in physicians offices, 11.8% occurred in hospital outpatient departments, and 10% occur in community health centers.[51] Medicaid patients followed a somewhat similar pattern, although fewer of their primary care visits were in private physicians' offices (69.2%), and more were in hospital outpatient departments (17.3%) and in community health centers (13.5%). A 2001 study of households reported that nearly two-thirds of the uninsured reported a physician was their usual source of care, and half receive care in a physician's office.[52] Some of this care is provided at no charge or at a reduced rate (charity care), and some of this care is provided with the expectation that the uninsured person will ultimately pay for the services. This distinction is important, as people with outstanding medical bills are much more likely to report having an unmet medical need or delaying care because of costs.[53] The uninsured in families with outstanding medical bills are particularly likely to report access barriers: 29.1% reported an unmet medical need in the past year due to cost, 49.1% reported delaying care in the past year due to costs, and 47.5% reported not obtaining filled prescriptions due to costs.

Patients served: Nationally, most *primary care physicians* reported spending approximately two hours per month on charity care in 2001; *other physicians* reported spending about four hours per month on charity care.[54] The amount of charity care reported varies by specialty; the median amount of time spent ranged from a high of five hours per month for surgical specialties and psychiatry to two hours per month for internal medicine and pediatrics. There has not been a formal study of NC practitioners as it relates to uninsured, underinsured, and charity care practices.[xi,55]

In a national study of internists, the median amount of time reported on charity care was four hours per month, approximately three-fourths of which was provided in their private offices.[56] Approximately two-thirds of these internists (65%) reported that they would reduce or waive their fees for patients who were uninsured and had problems paying their bills, but 35% would continue to charge their customary amounts. More than half (55%) required some or all payment at the time of the visit. Slightly more than half of the internists (52%) reported that they limited their provision of charity care to those uninsured who were previous patients, 10% reported treating a mixture of new and old patients, 33% reported that their patients were mostly new, 2% report only seeing uninsured patients referred by their colleagues or uninsured relatives of existing patients, and 3% reported seeing no uninsured patients.

Physicians were less likely to provide charity care in 2001 than they were in 1997.[57] In 1997, approximately 76% of physicians provided charity care; in 2001, that number dropped to 71%. The number of physicians spending a lot of time on charity care (i.e., those that spend 5% or more of their time on charity care) also decreased (from 33.5% to 29.8%). Furthermore, approximately 16% of physicians reported that they would not accept any new uninsured patients, and 21% reported that they would not accept any new Medicaid patients.[58] In contrast, only 3-5% of physicians were no longer accepting new Medicare or privately insured patients.

With the exception of pediatrics, the provision of

xi The NC Medical Society conducted an informal survey of its members in 2003 and found that 60% of physicians reported providing charity care, and that on average, 2% of charges were attributable to indigent or charity care. However, the survey only had a 10% usable response rate, so it is unclear how reflective these responses are for the state's physician population as a whole.

charity care has decreased across all types of physician providers.[59] Pediatrics maintained its level of charity between 1997 and 2001 at approximately 65%. Solo or small group practices were most likely to provide charity care. Medical schools, substantial providers of charity care in the past, have experienced a decline in the provision of charity care. In 1997, 74.1% of medical schools provided charity care, whereas in 2001, the proportion dropped to 63.8%.[60]

Challenges: A number of factors have been suggested as possible reasons for the decline in charity care. These include reduced third-party payments, which reduce physicians' ability to cross-subsidize care they provide to uninsured patients.[61] The change in physician practices, from ownership to employee status, has also been suggested as a reason for the decline in charity care.[62] Physicians in solo or small group practice are more likely to provide charity care than physicians who are employees because the former have more control over decisions such as whether to offer charity care and how much to provide.

The decline in the number of private physicians treating uninsured patients, coupled with the difficulty that the traditional safety net organizations have in meeting the healthcare needs of the growing uninsured, may be leading to increased access barriers for the uninsured. Nationally, the percentage of uninsured individuals with a usual source of care decreased from 68.6% in 1997 to 64.2% in 2001.[63] The uninsured are much less likely than others with insurance to have a usual source of care. For example, 90.6% of Medicaid enrollees reported a usual source of care in 2001, a slight drop from 92.9% in 1997. Furthermore, the percentage of uninsured who reported that they saw a physician in the last year declined from 51.5% (1997) to 46.6% (2001). Uninsured individuals are far less likely to have seen a physician, compared with Medicaid enrollees (83.3% in 2001) or privately insured individuals (80.6% in 2001).

Area Health Education Center Teaching Clinics as Safety Net Providers

Overview: The Area Health Education Centers (AHEC) program began in 1972 at the University of North Carolina (UNC) School of Medicine. Initially, the program was funded with federal AHEC funds to support centers in three regions of the state. By 1974, the NC General Assembly approved and funded a UNC School of Medicine plan to create a statewide network of nine AHEC regions, which were operational by 1975. The legislative plan also called for the establishment of 300 new primary care medical residencies and the regular rotation of health science students to off-campus sites.

AHEC's mission is to meet the state's healthcare and healthcare workforce needs by providing educational programs for healthcare professionals in partnership with academic institutions, healthcare agencies, and other organizations. To accomplish this, AHEC offers academic and teaching programs and services targeted to:

- Improve the distribution and retention of healthcare providers, with a special emphasis on primary care and prevention. For example, AHEC supports clinical rotations for health professional students in hospitals, community health centers, health departments, private practitioners' offices, and other community settings. AHEC also helps support primary care residency training programs in family medicine, pediatrics, internal medicine, and obstetrics/gynecology, as well as in other shortage specialties (such as surgery and general medicine subspecialties).
- Increase the representation of minorities and disadvantaged populations in all health disciplines. AHEC helps to recruit underrepresented youth and adults into health careers, and provides continuing education courses on cultural competency and linguistic accessibility.
- Enhance quality of care and improve healthcare outcomes. AHEC offers continuing education courses for healthcare professionals around a variety of healthcare topics and offers specific coursework on practice improvement, disease prevention, and evidence-based medicine.
- Address the healthcare needs of underserved communities and populations. AHEC residency clinics and clinical training sites provide services to underserved populations as part of their core teaching mission.

Medical center residency and teaching programs provide a significant amount of safety net care throughout the state. AHEC supports five residency programs in family medicine, three in rural family medicine, four in internal medicine, four in obstetrics/gynecology, three in pediatrics, and three in surgery. These programs employ 260 full-time faculty and 285 residents, which is about 12-15% of the total number of residency trainees in the state.

Patients served: Six AHECs have various mixes of primary care residency programs. They are located in Asheville, Charlotte, Greensboro, Wilmington, Raleigh, and Fayetteville.[xii] These programs provided 454,734 outpatient visits and 184,782 inpatient visits in 2003-2004 (Table 3.6). Approximately 98,400 of the outpatient visits were for uninsured (or "self-funded" patients). Other uninsured patients were seen in the rural family medicine programs and in the primary care residency programs in the four teaching hospitals.

AHEC also helps support primary care residencies at the four medical schools (Duke University, University of North Carolina, Wake Forest University, and East Carolina University). In addition AHEC has three rural family medicine programs. These programs are located in Cabarrus, Union, and Henderson Counties.

The payer mix varies among the AHECs. Some of the difference is driven by the specialties provided at each AHEC. For example, family medicine programs are required by their accrediting body to have a broad mix of patients—so these programs typically have a broader payer mix. Seven to 28% of the patients seen in the AHECs are self-pay (i.e., the proxy measure for the uninsured).

Table 3.6
NC AHEC Clinical Services Provided in 2003-2004[xiii]

AHEC site	Outpatient	Inpatient
Asheville (Mountain)	69,868	14,328
Charlotte	203,091	58,099
Fayetteville (Southern Regional)	25,677	1,665
Greensboro	40,223	14,953
Raleigh (Wake)	77,954	65,964
Wilmington (Coastal)	37,921	20,773
Total	454,734	184,782

Challenges: As with other safety net providers, there is an increasing number of uninsured patients seeking care at all the AHEC residencies. Although there has been an increased need for charity care, funding to support it has decreased. The AHEC programs have been affected by state budget cuts over the last four years. The state covers less than 20% of total AHEC costs, and less than 10% of the residency programs. Federal grant support via Health Resources Services Administration's Bureau of Health Professions has also declined in recent years, and has been targeted for elimination by the current administration. To compound the problem, AHECs are spending more money on rising malpractice premiums and hiring teaching faculty. The increase in malpractice premiums has caused problems for some programs, particularly those focusing on obstetrics and surgery. In the past, community physicians have volunteered their time to serve as faculty to the residents; however, private physicians are now less willing to give up their private clinic hours to teach residents and/or to take hospital call coverage for uninsured patients. As a result, AHECs have been forced to hire faculty and/or pay providers higher compensation to serve as teaching faculty.

Recruiting residents into primary care residencies is a growing problem nationally. The interest in primary care has dropped for five years in a row. Pediatrics has held steady, but there have been declines in family medicine, general internal medicine, and obstetrics and gynecology. North Carolina is still able to fill the primary care residencies with high quality physicians, but this is counter to the national trend. If North Carolina starts following the national trend, this may lead to primary care provider shortages. Furthermore, when residency programs lose residents, they also lose federal Medicare Graduate Medical Education

xii Asheville (Mountain AHEC) operates residencies in family medicine and OB/GYN. Charlotte operates residency programs in family medicine, internal medicine, pediatrics, OB/GYN, and surgery. Fayetteville (Southern Regional AHEC) operates a residency program in family medicine only. Greensboro operates residency programs in family medicine and internal medicine. Raleigh (Wake AHEC) is a major site of UNC residency training for internal medicine, pediatrics, OB/GYN and surgery, but does not have its own independent residencies. Wilmington (Coastal AHEC) operates family medicine, internal medicine, OB/GYN and surgery residency programs.

xiii Data reported are from six AHECs and does not include data from the four university medical centers or the rural programs.

funds, which will further reduce support for these teaching clinics.

Table 3.7
Payer Mix among AHECs[64]

	Self-Pay	Medicare	Medicaid	Commercial	Other
Asheville	14%	7%	45%	34%	—
Charlotte	27%*	12%	47%	13%	1%
Fayetteville	7%	13%	19%	60%	1%
Greensboro	13%	24%	31%	28%	4%
Raleigh	28%	12%	29%	29%	2%
Wilmington	13%	15%	49%	23%	—

**Includes self-pay and sliding-fee scale*

Hospitals as Safety Net Providers

Overview: There are 154 hospitals in North Carolina: 130 are general acute care, 15 are psychiatric, seven are specialty, and two are rehabilitation hospitals. Thirty-five of the hospitals are owned by local government, 11 are owned by the state, and nine are federal hospitals. The rest are community hospitals, of which 122 are not-for-profit and eight hospitals are investor owned.

Hospitals are an integral part of the North Carolina's safety net because almost all of them operate emergency departments that provide some services to everyone who comes to their door. The federal Emergency Medical Treatment and Active Labor Act (EMTALA, 1985) requires hospitals that participate in Medicare to screen anyone who requests treatment at the emergency room, regardless of ability to pay. If the person has a medical emergency, the hospital must treat them to stabilize the condition or transfer the patient to another hospital. Emergencies are defined as medical problems with acute, severe conditions that could reasonably place the person's health (or the health of an unborn child) in serious jeopardy if the person does not receive immediate medical attention. A woman who is having contractions is considered to have an emergency if there is not sufficient time to safely transfer her to another hospital before delivery, or if a transfer would pose a danger to the woman or unborn child.

While most of the NC hospitals provide some services to the uninsured, there are some hospitals that serve a higher proportion of the uninsured and/or Medicaid patients. These hospitals tend to share certain characteristics. For example, they:

- Are more likely to be located in low-income areas
- Have a special mission to serve poor and vulnerable populations (e.g., teaching hospitals, public hospitals)
- Have higher than average use of emergency services by the uninsured and higher use of the emergency room for non-emergency care

Services: All of the general acute-care hospitals provide inpatient services, and almost all (109) operate emergency departments. Aside from these similarities, hospitals vary in terms of the level of technology and types of services that are available. For example, smaller rural hospitals have fewer beds, and are less likely to do deliveries or offer intensive care services than larger hospitals. By comparison, larger teaching hospitals are likely to have sophisticated diagnostic equipment and offer a full range of services, including open-heart surgery, transplants, and/or brain surgery. Larger teaching hospitals are also more likely to have trauma units and/or neonatal intensive care units. Some hospitals also provide primary care services through rural health clinics or special clinics created to serve underserved communities.

Hospitals are the providers of last resort in communities where there are not enough other safety net providers to address the primary care or specialty needs of the uninsured. When uninsured or low-income patients are unable to obtain affordable care elsewhere, they sometimes turn to the hospital emergency departments. In fact, some safety net providers refer patients to hospital emergency departments for specialty services when specialists in private practice are unable or unwilling to make these services available in their private practices.

Patient served: On average, Medicare patients accounted for 39.2% of all patient discharges in 2003.[65] Medicaid accounted for 18.6%, commercially insured patients for 30.0%, the uninsured (self-pay) for 5.7%, other government for 3.8% and other categories of patients for 2.7% of patient discharges. The percentage of patient discharges attributable to Medicaid and the uninsured varied widely across general acute hospitals:

- Medicaid: The percent of Medicaid discharges varied from a high of more than 30% in five hospitals to a low of less than 5% in seven hospitals.
- Uninsured (self-pay): The percent of discharges attributable to the uninsured varied from a high of more than 10% in nine hospitals to a low of less than 2% in 14 hospitals.
- Medicaid/Uninsured: Total discharges attributable to both Medicaid and the uninsured varied from a high of more than 35% in nine hospitals to a low of less than 10% in 10 hospitals.

The state does not currently collect data on outpatient visits that do not result in inpatient hospitalizations. However, a 2003 survey of NC Hospital Association members found the uninsured accounted for 10% of outpatient visits (1,234,426 of 12,344,256 visits),[66] and of those, 22% were uninsured patients making emergency room visits (672,799 out of 3,058,176).[67]

National data show a wide variation in the proportion of emergency department patients who are uninsured or on Medicaid.[68] Thirty-six percent of all hospitals had a high safety net burden (defined as having Medicaid patients or uninsured comprise 30% of their emergency department patients separately, or 40% combined). More than half of the patients seen in 13% of hospitals are Medicaid and/or uninsured. High burden emergency departments are more likely to be located in the South and in communities with lower per capita income and higher unemployment.

National data showed a 16% increase in the number of visits to emergency rooms between 1996-97 and 2000-01.[69] Surprisingly, two-thirds of the increase came from privately insured and Medicare beneficiaries. The number of visits by uninsured patients increased only 10%, and visits among Medicaid patients did not change. The increase in emergency room use among the insured and Medicare beneficiaries parallels a general increase in ambulatory care visits to other providers. The percentage of emergency room visits as a proportion of all ambulatory visits remained relatively constant at a little less than 8% for these two groups. However, just the opposite was true for Medicaid patients and the uninsured. While their number of visits did not significantly increase, the reliance on the emergency department as their source of care did. Between 1996-97 and 2000-01,

WakeMed Teaching Clinics

Wake AHEC, located at WakeMed, serves as a training site for residents from UNC, Duke and East Carolina Universities. WakeMed helps train residents in: internal medicine, pediatrics, obstetrics and gynecology, and surgery. Until three years ago, WakeMed also provided clinical ambulatory services in cardiology, neurology, rheumatology, gastrointestinal, and ophthalmology, but those clinics were eliminated due to overwhelming demand for general medical care. WakeMed is also the largest provider of emergency services to community residents in Wake County.

In the past, community physicians volunteered to teach residents. Residents would care for unassigned, generally uninsured, patients. If there were more patients than the residents could treat, the community physicians would share in the call coverage. This is no longer the case. Physicians have pressures to generate income; as a result, fewer community physicians are willing to teach residents or to care for hospitalized patients (either their own or the unassigned patients). As the number of volunteer physicians has decreased, WakeMed has had to increase its own staff to serve as faculty and to hire hospitalists to admit the unassigned patients. Some of the WakeMed residency programs are having problems meeting the needs of a growing uninsured population. The ambulatory indigent adult clinic faces an especially dire situation, operating at a $2 million loss because of a poor payer mix. The clinic has been effectively "closed" to new patients for years, only seeing patients for follow-up care after hospitalization. Other clinics continue to operate and accept new uninsured patients, but costs for these programs have grown because of the need to hire faculty to teach in the clinical programs and staff to help with the overflow of uninsured patients admitted to the hospital.

Including both the AHEC teaching clinics and inpatient services, WakeMed is projected to provide $44 million in charity care to the uninsured in SFY 2004, up from $13.1 million in SFY 2002. The provision of charity care has been achieved through the support of other profitable programs, including its cardiology program. Despite an ongoing commitment to care for the uninsured, there is a question of whether WakeMed will be able to continue to cover these costs in the future. This will depend on the extent of the need, and other sources of revenues to subsidize charity care.

visits to the emergency room as a percentage of all ambulatory visits increased from 15.9% to 17.5% for Medicaid beneficiaries, and from 17.0% to 25.2% for the uninsured. These data indicate that patients had less access to physicians in private offices and became more reliant on emergency departments as their source of care. Thus, it is clear that emergency departments play a significant role in meeting the healthcare needs of both Medicaid and uninsured patients.

A few hospitals in North Carolina have taken a leadership role in trying to provide primary care services to their communities. In rural areas some hospitals have helped establish rural health clinics (see section on rural health centers). Many of these clinics provide services to the uninsured on a sliding-fee scale basis. In addition, some of the teaching hospitals have AHEC residency programs, which serve the uninsured in the outpatient teaching clinics (see AHEC section). A few of the larger hospitals have also created non-teaching primary care clinics for uninsured and/or Medicaid patients.

Financing: Medicare and Medicaid account for 58% of gross revenues for *all* hospital services, including both inpatient and outpatient services. Medicare accounts for almost half (45%) of patient revenues, Medicaid (13%), commercial payers (31%), other (4%), and uninsured (7%).[70] High-burden safety net hospitals treat more Medicaid and uninsured patients.

North Carolina hospitals are dependent on commercial/private payers in order to offset losses from government payers and the uninsured. Medicare and Medicaid are fixed payments that do not pay the full cost of providing care to these patients. Safety net hospitals that are heavily dependent on fixed payment reimbursement (Medicare and Medicaid), and that serve large numbers or percentage of uninsured patients have less ability to cost-shift the costs of covering the uninsured onto other third party payers.

Certain safety net hospitals receive additional funding to help them pay for the care provided to Medicaid patients and the uninsured. These payment mechanisms include the Medicaid and Medicare Disproportionate Share Hospital (DSH) payment systems and cost-based reimbursement available to Critical Access Hospitals under Medicaid and Medicare (See Chapter 7 on Financing).[xiv] In addition, Medicare recently increased reimbursement to rural hospitals. However, while these extra funds generally help cover the full costs of caring for Medicaid and Medicare patients, they are not sufficient in covering all of the care provided to the uninsured.

Duplin General Hospital

Duplin County is primarily agricultural and has a population of 50,000 people. Approximately 19% of the county is Latino, and one-fourth of the population lacks health insurance coverage. Duplin is one of the poorer counties in the state, with a county median income of $28,890 compared to the statewide average median income of $39,184 (1999 US Census data).

Duplin General Hospital is a 101 bed hospital. It performs more than 600 births each year (50% are to Latino mothers), and 48,000 outpatient visits. The uninsured account for approximately one-fourth of the 15,000 emergency department visits per year. Over the last two years, the percentage of commercially insured patients decreased (from 22.7% in 2001 to 20.3% in 2004), while the percentage of Medicaid and uninsured increased (from 23.0% to 24.3% for Medicaid patients, and 6.3% to 9.7% for the uninsured). Covering the costs of services to the uninsured has become a major problem. Duplin General collects, on average, less than 5% of the self-pay charges. The increase in the number of uninsured and decrease in commercially insured populations treated at the hospital has affected the hospital's bottom-line. Duplin General has gone from a $1.6 million profit in 2000, to an estimated deficit of more than $2.2 million in 2004. Bad debt and charity care has increased from $4.2 million in 2000 to a projected $7.0 million or more in 2004.

xiv Congress created the Critical Access Hospital (CAH) program in 1997, to provide financial support for small rural hospitals. To qualify, hospitals may have no more than 25 acute care beds, provide 24-hour emergency room services, have an average length of stay of 96-hours or less, and meet certain other criteria to show that they are a necessary community provider. CAHs receive cost-based reimbursement from Medicare. Some state's Medicaid programs, such as North Carolina, also pay CAHs on a cost-basis.

Challenges: Hospitals have also seen an increase in the numbers of uninsured that they serve. Between 2001-2003, the number of self-pay discharges increased from 52,599 (2001) to 60,308 (2003) or a 15% increase.[71] The amount of hospital inpatient charges attributable to self-pay increased from $435.7 million (2001) to $617.3 million, or a 41.7% increase. This is a particular problem in communities that have large Latino populations because close to 60% of all Latinos in the state are uninsured. Hospitals pay for the care they provide to the uninsured, in part by shifting these costs onto other payer sources. Medicaid payments were frozen in SFY 2003 and 2004,[xv] and the state recently reduced hospital payments under the State Employees Health Plan and the NC Health Choice program. The adequacy of third-party payments, and the continuation of the Medicare and Medicaid special reimbursement mechanisms, has a direct impact on the ability of hospitals to pay for care provided to the uninsured.

While many of the payments to hospitals have remained stagnant; hospital costs have increased. Malpractice premiums, which increased, on average, 181% over the last two years, contributed to rising costs.[72] Increased labor costs have also become a factor. Hospitals must offer higher wages to retain nurses and other staff, and hospitals in many communities are hiring hospitalists to take call coverage for unassigned cases.

Behavioral Health Services for the Uninsured

While not focusing on behavioral health safety net systems, the Task Force recognized that many uninsured or otherwise underserved groups have a critical need for behavioral health services. Lower-income individuals often have a greater need for these services because they more often live with financial stress and may have problems with depression, substance abuse, and/or homelessness. The uninsured and low-income may not have the resources to obtain services from private providers; therefore, the publicly funded behavioral health system is critical to these groups.

The Task Force did not focus on the role of area mental health, developmental disabilities, and substance abuse programs as safety net providers in this report because the state's public behavioral health system is in the midst of a major transformation.[73,74] Area programs will become Local Management Entities, which will contract with private non-profit and for-profit organizations for the delivery of behavioral health services, but will not generally provide clinical services directly. Because the state is in the midst of a comprehensive behavioral health system reform, it was difficult for the Task Force to include these providers as part of its overall analysis of the safety net system. However, the Task Force members recognize the need to examine this issue once the state has completed its restructuring. The Secretary of the NC Department of Health and Human Services is monitoring the implementation of the plan and how well it is meeting the behavioral health needs of all North Carolinians who need services, including, but not limited to, the needs of the uninsured. Therefore, the Task Force recommends:

Rec. 3.1: The Office of the Secretary of the NC Department of Health and Human Services should continue its efforts to monitor access to behavioral health services for the uninsured and other underserved populations. The Office of the Secretary should examine access to services for both the priority (target) populations and for those with less severe behavioral health problems and should seek input from a wide variety of stakeholders including, but not limited to, publicly funded local management entities, children's development services agencies, behavioral health providers, primary care providers, safety net organizations, and representatives of consumer groups.

Rec. 3.2: The Office of the Secretary should work with the NC Pediatric Society, NC Academy of Family Physicians, NC Chapter of the American College of Physicians, NC Psychiatric Association, other interested professional associations, and NC Area Health Education Centers program to examine ways to expand the capacity of primary care providers to address some of the behavioral health needs of the uninsured and/or underserved populations. Information on this initiative should be reported to the NC Commission for Mental Health, Developmental Disabilities and Substance Abuse Services.

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