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Executive Summary

Health care access, simply put, is getting needed services. But, access can be conceptualized and measured in various ways. Common measures of access include whether people have a usual source of primary care, and whether they experience difficulties in receiving needed services. Access also can be measured by how much care people actually receive, relative to objective measures of need. Nationally, access has declined slightly over time, and is substantially worse for uninsured people and disadvantaged socio-economic groups.

Nationally, it is no surprise the lack of insurance is the largest financial barrier to care. In fact, insurance is the major driven of disparities in access observed for racial/ethnic groups. Therefore, many communities focus access efforts on enrolling people in coverage programs for which they might be eligible, and they support alternative programs that coordinate a full range of providers who are willing to accept low-income uninsured patients for free or nominal amounts. Although insurance and costs (i.e., “Affordability”) are the largest barriers to access, non-financial barriers also are substantial. Categorized in terms of the “5 A’s” of Availability, Accessibility, Acceptability, and Accommodation, these barriers include such things as whether sufficient providers of various types are conveniently located, whether providers have sufficient capacity, and whether providers relate well to a patient’s culture and language. Given the bidirectional nature of health care relationships, the current research team added a “6th A” of patient Accountability, which reflects the concept of patients’ responsibilities to seek care when needed, to keep appointments, and to discuss with their providers when they are unable to follow treatment recommendations.

The national Patient Protection and Affordable Care Act (ACA) will not solve financial access barriers. Even if and when fully implemented, the ACA will reduce the number of uninsured only by half, and many people with insurance will still have difficulty affording their out-of-pocket payments. But, the ACA will change considerably the composition of the uninsured. Most low-income uninsured citizens will became eligible for Medicaid or highly subsidized insurance. The remaining uninsured will consist in large measure of recent immigrants (most of whom are low income), and middle-income citizens for whom insurance remains unaffordable.

Beyond financial barriers, research shows that it is critical for both uninsured and insured people to have a primary care medical home, or a place that provides a full range of commonly-needed basic services. Medical homes also coordinate and manage care and they make referrals for specialist services as needed. For low-income patients who face transportation and other access barriers, it helps a great deal for their primary care home to include basic behavioral and oral health. Also important is availability and receipt of those clinical preventive services that are most cost-effective.

Community health centers have been leaders in developing this medical home model nationally. Mobile health clinics are another way to deliver more limited, but essential primary care and preventive services to hard-to-reach populations. Other innovations in service delivery currently receiving attention include performance-based payment methods and accountable care organizations.

Access is not determined solely by having good sources of payment and places for care. There are significant social determinants to health care access such as attitudes, norms, understandings, patterns of behavior, neighborhood conditions and the like. Thus, it is no surprise to find significant socio-economic and ethnic disparities in access. In addition to the access improvement measures noted so far, disparities also can be lessened to some extent by the use of community health workers (also known as “lay health workers”), improvements in health literacy, and cultural competency among providers.

Nationally, other local foundations have improved access by funding or supporting each of the strategies mentioned above. However, no single strategy, or set of strategies, emerges as ideal from a national review. Instead, each foundation adapts its funding to its assessment of particular local needs and barriers, compared to other available resources and competing needs within their differing missions.

There are several strengths in Greensboro related to health care access. The HealthServe community health center and the “Orange Card” referral program in particular stand out as models that are comparable to the best community-based
safety net systems nationally. However, various data sources, including local surveys and focus groups conducted for this report, show that we continue to have significant work to do related to addressing access deficits, barriers, and disparities in all of the dimensions noted so far. For instance, at least once a year about 15% of Greensboro residents are unable to see a doctor due to cost, and about 20% lack a usual source of care. Also, use of emergency services for non-emergency care remains high despite care management efforts. For the most part, these indicators are similar to those elsewhere in North Carolina and the nation and are tending to worsen over time, particularly for minority populations, who exhibit access deficits that are two or three-fold greater.

With regard to provider availability, the closure of one of the city’s two community health centers and freezing of new enrollment of uninsured patients foretells a critical shortage of capacity to care for the uninsured. There also are gaps in the number of specialists willing to accept referrals from these clinics or under the “Orange Card” program for the uninsured, with a particular shortage of dentists available and willing to treat Medicaid or low-income uninsured patients. And, experts forecast shortages in primary care providers and some specialties, especially once the ACA expands insurance coverage.

The Cone Health Foundation has played a prominent and substantial role to date in addressing access issues locally. Various programs it has funded improve access and reduce barriers to care in both financial and non-financial dimensions. Of particular note is the Foundation’s support of Triad Adult and Pediatric Medicine, Guilford Community Care Network, the Congregational Nursing Program, and various programs that address disparities.

Based on a review and synthesis of the national literature on the state of health care access and the local data described in this report, recommendations are provided to the Foundation to target its efforts to improve access at individual, community, and social levels, as follows:

A. **Individual-Level Recommendations**
   1. Invest in screening and enrolling people in insurance for which they are eligible.
   2. Continue to support primary care medical homes and medication assistance, and prioritize funding toward programs that demonstrate integration of comprehensive care, including behavioral health and dental care.
   3. Support efforts to coordinate referrals to specialists and other non-primary care services.
   4. Support programs that provide community-based services such as congregational nursing, Lay Health Navigators (also known as community health workers), and home-based programs like Adopt-a-Mom.
   5. Support hospital liaisons who attempt to reduce the inappropriate use of emergency services.
   6. Target resources to programs that reach areas with the highest levels of health disparities.
   7. Pilot a patient-accountability program that uses patient incentives to improve compliance healthy behaviors.

B. **Community-Level Recommendations**
   1. Partner to implement a mobile health care unit for high-need communities.
   2. Increase health literacy by encouraging adoption of the Ask Me 3 Campaign.
   3. Promote cost-effective clinical preventive services through education and outreach.
   4. Develop a health care access task force examining the needs of underserved populations that have not yet been well studied, especially immigrant/refugee populations.

C. **Systems-Level Recommendations**
   1. Lead development or study of ways to subsidize medical fees, co-payments and deductibles for underinsured patients, on a sliding-scale basis.
   2. Promote cross-system collaboration, awareness, and community mobilization
      a. Lead community-wide planning for the implementation of the Affordable Care Act.
      b. Convene a working group to examine school health programs.
      c. Partner with United Way to integrate health care-related resources in United Way’s 2-1-1 directory.
      d. Spark community dialogue that will mobilize the community around the issue of health care access.
   3. Leverage area schools and universities to help meet health service needs through training placements and internships.
Each recommendation is described in more detail within this report. Furthermore, across these areas, the Foundation should monitor results and measure return on investment by prioritizing funding to programs that include regularly tracked performance and access measures. In addition to continuing to support current programs that incorporate elements of the individual, community, and system recommendations described above, the Foundation should invest in the development of the organizational capacities and effectiveness of their grantees.
I. National Perspectives on Health Care Access

A. What Is Access and How Is It Measured?

Health care access, simply put, is getting needed services. According to the Institute of Medicine (1993), access is “the timely use of personal health services to achieve the best possible health outcomes.” Broadly speaking, access to care can be thought of in two ways: potential access, and realized (or actual) access (Davidson, Andersen, Wyn, & Brown, 2004). Potential access refers to the capacity and structure of a delivery system, to determine if there are sufficient numbers and types of providers and programs available to treat a population’s health needs. Although availability of treatment is necessary for adequate access, it is not necessarily sufficient if additional barriers stand in the way of actual access. Therefore, it also is important to observe a population’s actual use of services, to determine if potential access is being realized.

Both measures – capacity and use – require comparison to norms of adequacy. How many providers of each type must be available to be adequate? And how much use is thought to be sufficient? What wait-times for appointments of various types are acceptable? Because there are no gold standards for these objective metrics (Blewett, Ward, & Bebee, 2006; Davidson et al., 2004; Ricketts & Goldsmith, 2005), those who study access also rely substantially on more subjective assessments of access adequacy. They do so by asking members of the relevant population whether they think they have adequate access or whether they experience difficulties receiving needed care, but this approach assumes that people understand the full extent of their health care needs, which often is not the case. Because each concept and measure of adequacy provides important insights yet has obvious limitations, programs that focus on access should consider each of them as ways to assess performance and target areas of greatest need.

Common Metrics

The most common survey questions directly measuring access to care ask people whether they have a usual source of care (a place they usually go when they are sick or need treatment), and whether they have any difficulty obtaining needed care (of various kinds). Table 1 shows access measures from one well-regarded national survey among both insured and uninsured people. Estimates of unmet need and delayed care were based on the following two questions: (1) “During the past 12 months, was there any time when you didn't get the medical care you needed?” and (2) “Was there any time during the past 12 months when you put off or postponed getting medical care that you thought you needed?” (Boukus & Cunningham, 2011). Table 2 shows national data based on the reported number of visits for medical care.

It is important to note, however, that the levels of access measured with these surveys vary considerably among different surveys and across locales within the same survey (Cunningham & Kemper, 1998; Hoffman & Paradise, 2008; State Health Access Data Assistance Center, 2006). One study compared four different versions of asking the uninsured if they had difficulty getting needed care, and found more than a seven-fold variation in responses (6% to 45%) (Whitmore, 1997). Within the same survey, one study based on the National Health Interview Survey found roughly three-to-four-fold variations across 29 communities in the percentage of low-income people (both with and without insurance) who reported no usual source of care, no medical visit the previous year, and having delayed receiving needed care that year (Brown et al., 2004). Similar differences appear even in statewide averages. McCarthy and colleagues (2009) show two-to-three fold differences between the top five and bottom five states in responses to various access questions in the CDC’s Behavioral Risk Factor Surveillance System (BRFSS) survey.

Accordingly, it is exceedingly difficult to identify a consensus gold standard to measure access. However, it is quite feasible to observe trends in various access measures taken consistently over time, and to compare responses to identical questions asked in different locations.
Table 1. Access Measures from a National Survey.

<table>
<thead>
<tr>
<th>All People</th>
<th>1997</th>
<th>1999</th>
<th>2001</th>
<th>2003</th>
<th>2007</th>
<th>2010</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unmet Need</td>
<td>5.2%</td>
<td>5.6%</td>
<td>5.7%</td>
<td>5.2%</td>
<td>7.8%</td>
<td>6.5%</td>
</tr>
<tr>
<td>Delayed Care</td>
<td>9.8%</td>
<td>8.5%</td>
<td>9.5%</td>
<td>8.4%</td>
<td>12.1%</td>
<td>10.7%</td>
</tr>
</tbody>
</table>

| Insured People | | | | | | |
| Unmet Need | 3.9% | 4.3% | 4.4% | 3.9% | 6.2% | 4.5% |
| Delayed Care | 8.7% | 7.6% | 8.6% | 7.2% | 10.7% | 9.6% |

| Uninsured People | | | | | | |
| Unmet Need | 13.5% | 14.2% | 15.0% | 13.2% | 17.5% | 16.6% |
| Delayed Care | 17.1% | 14.1% | 15.7% | 16.1% | 20.5% | 16.4% |

Source. Community Tracking Study Household Survey, 1997-2010

Table 2. Utilization Measures from Two National Surveys.

<table>
<thead>
<tr>
<th></th>
<th>Average annual visits per person to:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Any Dr. office</td>
</tr>
<tr>
<td><strong>National Health Interview Survey, 2007</strong></td>
<td></td>
</tr>
<tr>
<td>Adults Overall</td>
<td>3.2</td>
</tr>
</tbody>
</table>

| **National Ambulatory Medical Care Survey, 2006** | | | |
| Privately Insured | 3.9 | 1.7 | 0.25 |
| Medicaid | 3.6 | 2.7 | 0.53 |
| Adults | 2.9 | 1.5 | 0.37 |
| Overall | 3.1 | 1.8 | 0.41 |

Source. Hall, 2011a
B. Barriers to Access: The “Five A’s”

In identifying barriers to access that might be reduced, it also is helpful to focus on different dimensions or components of access. One accepted formulation is known as the “5 A’s” of access, as follows (Penchansky & Thomas, 1981; Ricketts & Goldsmith, 2005):

- **Availability**: presence of enough providers willing to accept patients
- **Affordability**: insurance and out-of-pocket costs in relationship to patients’ income/assets and their perceived value of the service
- **Accessibility**: location of services and transportation
- **Accommodation**: available hours, waiting time, ability to schedule or make time for appointments
- **Acceptability**: whether providers relate well a patient’s socio-economics and culture

Table 3 shows the frequency with which people reported these different access barriers in a 2007 national survey of adults (Kullgren et al., 2012). Not surprisingly, affordability was the most frequently cited reason (by 18.5% of adults who reported one or more access problems), but adults cited one or more of the nonfinancial barriers somewhat more often (21%) – with accommodation barriers being the most frequent of these (17.5%). Among those who cited a financial barrier, two thirds also cited a nonfinancial barrier. These are results for the population as a whole. For those without insurance, financial barriers were cited twice as often (36%), but accommodation (17%) and one or more other nonfinancial barriers (21%) were just as frequent as for the general population.

**Table 3: Estimated Unadjusted Prevalence of Barriers That Led to Unmet Need or Delayed Care among U.S. Adults, 2007**

<table>
<thead>
<tr>
<th>Access Dimension</th>
<th>All Adults (n = 15,197)</th>
<th>Adults with an Affordability Barrier (n = 2,169)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Affordability</td>
<td>18.5 %</td>
<td>54.3 %</td>
</tr>
<tr>
<td>Accommodation</td>
<td>17.5 %</td>
<td>28.6 %</td>
</tr>
<tr>
<td>Availability</td>
<td>8.4 %</td>
<td>15.6 %</td>
</tr>
<tr>
<td>Accessibility</td>
<td>4.4 %</td>
<td>8.6</td>
</tr>
<tr>
<td>Acceptability</td>
<td>4.0 %</td>
<td>66.8 %</td>
</tr>
<tr>
<td>Any Nonfinancial</td>
<td>21.0 %</td>
<td></td>
</tr>
</tbody>
</table>

To this classic list of five A’s, we add a sixth dimension of access: **Accountability**. Patients themselves have a role in gaining adequate access. They have a responsibility to seek out care when needed, to make reasonable efforts to keep appointments, and to discuss with their care providers or managers if they are having difficulty complying with treatment recommendations.

It is important to realize that these categories of access barriers are not mutually exclusive. Instead, there is likely a large degree of interdependence among them. People without health insurance may have greater difficulty finding an available provider willing to accept them. People with lower income may have insurance (such as Medicaid), but they may live in parts of the community where there are fewer providers or they may face greater transportation problems.

C. Lack of Insurance

Because affordability is the largest barrier to access, especially for the uninsured, enrolling people in insurance is probably the single most helpful measure to increase access. Multiple studies show that people with insurance – either private or public – receive much better access than those without insurance (Freeman et al., 2008; Hoffman & Paradise, 2008; Williams, 2002). In what will likely become the definitive study because of its randomized controlled design,
Harvard researchers reported that uninsured people enrolled in Oregon’s Medicaid program received substantially more medical care in the first year than statistically matched people who remained uninsured, as follows (Baicker & Finkelstein, 2011). Medicaid patients: were 70% more likely to have a usual source of care; had 60% more mammograms and 45% more pap tests; 35% more outpatient care; 30% more hospital care; 15% more use prescription drugs; 20% more cholesterol checks; and 15% more blood sugar tests. As a result, Medicaid enrollees were 25% percent more likely than the uninsured to report themselves in “good” or “excellent” health – again, after only one year of new enrollment.

About a quarter of all uninsured people are eligible for Medicaid but simply have not yet enrolled, and some other uninsured people decline employer-sponsored insurance. Therefore, community foundations and other safety net programs use a variety of methods to help increase enrollment of eligible people in public or private health insurance (Grant Makers in Health, 2006; Grossmann et al., 2012). For private insurance, a major barrier to enrollment in employer-sponsored insurance is the incremental cost to the worker of the share of the premium the employer does not pay, either for the worker or his/her family. Therefore, some access programs subsidize the worker’s cost of enrollment through innovative structures known as “three-share” programs, which combine employer and employee financing with community or foundation funding of premiums for low-wage workers (Blewett et al., 2008).

It is uncertain whether these efforts will continue, however, once the Affordable Care Act (ACA) is implemented. Starting in 2014, lower-income people will become eligible for “premium tax credits” in the new insurance exchanges, which may cause their employers to drop coverage entirely. However, doing so will require larger employers to pay a tax penalty. For small employers, those who continue (or start) to offer coverage will also be eligible for tax credits. Therefore, there may be some continuing need to encourage enrollment by low-wage workers in the employer-sponsored plans that remain. This need may be especially evident considering that enforcement of the ACA’s “individual mandate” depends on a person’s income level, such that lower-wage workers will face smaller (or no) penalties for failing to enroll themselves or their dependents in employer-sponsored coverage.

For public insurance, safety net programs often target Medicaid/Children’s Health Insurance Plan (CHIP) enrollment efforts to uninsured patients who present themselves for treatment. (By “safety net,” we refer to those programs that seek to provide access or care to low-income uninsured people.) Rather than simply referring people to possible coverage, it is best to screen first to determine eligibility. Better yet is enrolling them on the spot. That is often difficult to accomplish under existing information and enrollment systems, but major improvements in these systems are underway as part of implementing the ACA. The mantra of ACA implementation is “no wrong door,” meaning that improved systems should be able to enroll people for whatever type of insurance they are eligible, regardless of where they are screened.

The ACA underscores the need to assist eligible uninsured people with enrollment by providing funding for “navigators” who are trained to help people find their way through an increasingly complex eligibility system. Safety net programs are well situated to take on this enrollment navigation function for the disadvantaged populations they traditionally serve (Hall, 2011b). More than simply assisting uninsured people who request help or present themselves for treatment, some innovative outreach programs have proactively entered neighborhoods or community events to identify and assist people who are eligible for enrollment without their seeking this out – sometimes going as far as knocking door to door to canvass neighborhoods, not unlike voter registration drives (Coye et al., 2000). This is one of several useful functions that community health workers can serve to improve access (Blewett et al., 2006).

Finally, it should be noted (but will not be discussed in depth), that having private insurance does not solve affordability problems for many people. Private insurance requires patients to pay an increasing share of not only the premiums, but also of the actual costs of treatment, through deductibles and co-payments. The ACA will implement standardized benefit plans labeled as Bronze, Silver, Gold and Platinum. Although each benefit plan will cover medical care comprehensively, with no exclusions for pre-existing conditions or life-time or annual limits, each plan type requires patients to pay for part of their costs of care. These “metal levels” are defined according to what portion of covered care patients must pay for on average. Bronze plans, which are expected to be the most popular for individuals and small employers, will require insurers to pay for only 60% of care costs, on average. Therefore, insured people will still bear substantial out-of-pocket costs that will deter access for many. Recognizing this, the ACA provides cost-sharing subsidies for lower-income people – those below 250% of the federal poverty level (FPL) –
designed to keep total health care costs within roughly 10-20% of household income. But, those amounts are still enough of a strain on budgets to deter adequate access for many people (Garrett et al., 2009).

D. Cost-Effective Models of Care

Primary Care Medical Homes

For most people, insurance is necessary to have adequate access to care, but for many people insurance is not enough. Ability to pay does not help someone who is not able to find an available place of care that is sufficiently convenient and accommodating to meet their needs. Accordingly, many insured people lack a usual source of care – defined as a doctor, clinic or other provider they usually go to when they are sick or in need of treatment. Having an ongoing relationship with a health care provider is important in many critical ways, including continuity of care, consolidated medical records, and obtaining referrals to specialists as needed.

For these reasons, the second most critical gateway (or bottleneck) to adequate access is having a usual source of primary or routine care (DeVoe et al., 2008; Ku et al., 2011). Beyond this, there are great benefits to this place of care having the attributes of a “medical home” (Grumbach & Grundy, 2010; Iglehart, 2008; Rosenthal, 2008; Starfield & Shi, 2004). Patient-centered medical homes are multi-disciplinary primary care practices that strategically target the major barriers to access noted above. They make a range of primary care services available in ways that are convenient, accessible, and accommodating -- considering the health and the social and cultural characteristics of their patient populations. Rather than merely responding to specific ailments, they actively manage chronic disease and employ the recommended panoply of preventive measures (Vest et al., 2010). They also often include some elements of behavioral health and dental care. For additional information, see U.S. Agency for Healthcare Research and Quality, Patient Centered Medical Home Resource Center, www.pcmh.ahrq.gov/; American College of Physicians, Patient-Centered Medical Home, http://www.acponline.org/running_practice/pcmh/; Commonwealth Fund, Patient Centered Care, http://www.commonwealthfund.org/Topics/Patient-Centered-Care.aspx; Patient-Centered Primary Care Collaborative, http://www.pcpcc.net/.

Importantly, community health centers that serve uninsured and low-income populations have emerged as impressive leaders in the movement toward patient-centered medical homes. Several studies have demonstrated that community health centers already have many or most of the attributes that the health policy community believes are sorely missing from more conventional physician practices – leading to much improved access, as well as to better health outcomes and lower costs (Friedberg et al., 2010; National Association of Community Health Centers, 2008; National Association of Community Health Centers, 2009; National Association of Community Health Centers & The Robert Graham Center and Capital Link, 2007; Shi et al., 2007; Stanek et al. 2012). Therefore, continued support for and expansion of community health centers is a centerpiece of the ACA’s efforts to improve both health care access and quality, and to reduce the costs of care.

Mobile Health Clinics

Mobile health clinics provide access to care for people who are in a geographical area that lacks primary care facilities and have identified transportation as a barrier to health care. Founded in 2005, the Mobile Health Clinics Network (MHCN) is a national trade association spearheading efforts to assess and communicate the benefit and impact of mobile health in the United States (US). Mobile health clinics cost in the range of $375,000 to $500,000 to operate successfully.

According to one comprehensive (but not peer-reviewed) study: “The efficacy of mobile health units appears to be generally accepted though few reports of evaluation studies were found in the literature. . . . In spite of the paucity of published literature on the efficacy of mobile health units, the available literature provides sufficient information to conclude that such service delivery models . . . [have] the potential to increase the availability of services to underserved populations where access to care is perceived to be one reason for under use of available services” (Hawkins, 2007, p. 8). More recently, two studies conclude that mobile health units are a cost effective way to deliver care to underserved populations, finding returns on investment of 6-to-1 and 36-to-1 in terms of the value of health improvement they provide (Lynch, 2011; Oriol et al., 2009).
Table 4: Priorities Among Effective Clinical Preventive Services.

<table>
<thead>
<tr>
<th>Services</th>
<th>Description</th>
<th>Cost-Effectiveness Score (10-1 = best - worst)</th>
<th>Currently receiving services nationally</th>
<th>Additional QALYs saved if those receiving services increased to 90%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspirin chemoprophylaxis</td>
<td>Discuss the benefits/harms of daily aspirin use for the prevention of cardiovascular events with men &gt;40, women &gt;50, and others at increased risk.</td>
<td>10</td>
<td>50%</td>
<td>590,000</td>
</tr>
<tr>
<td>Childhood immunization series</td>
<td>Immunize children: diphtheria, tetanus, pertussis, measles, mumps, rubella, inactivated polio virus, Haemophilus influenzae type b, hepatitis B, varicella, pneumococcal conjugate, influenza.</td>
<td>10</td>
<td>Not available</td>
<td>Not available</td>
</tr>
<tr>
<td>Tobacco-use screening and brief intervention</td>
<td>Screen adults for tobacco use, provide brief counseling, and offer pharmacotherapy.</td>
<td>10</td>
<td>35%</td>
<td>1,300,000</td>
</tr>
<tr>
<td>Colorectal cancer screening</td>
<td>Screen adults aged ≥50 years routinely with FOBT, sigmoidoscopy, or colonoscopy.</td>
<td>8</td>
<td>Not available</td>
<td>Not available</td>
</tr>
<tr>
<td>Hypertension screening</td>
<td>Measure blood pressure routinely in all adults and treat with antihypertensive medication to prevent incidence of cardiovascular disease.</td>
<td>8</td>
<td>90%</td>
<td>0</td>
</tr>
<tr>
<td>Influenza immunization</td>
<td>Immunize adults aged &gt;50 against influenza annually.</td>
<td>8</td>
<td>36%, adults aged 50-64</td>
<td>110,000</td>
</tr>
<tr>
<td>Pneumococcal immunization</td>
<td>Immunize adults aged &gt;65 against pneumococcal disease with one dose for most in this population.</td>
<td>8</td>
<td>56%</td>
<td>16,000</td>
</tr>
<tr>
<td>Problem drinking screening and brief counseling</td>
<td>Screen adults routinely to identify those whose alcohol use places them at increased risk and provide brief counseling with follow-up.</td>
<td>8</td>
<td>50%</td>
<td>71,000</td>
</tr>
<tr>
<td>Vision screening--adults</td>
<td>Screen adults aged &gt;65 routinely for diminished visual acuity with Snellen visual acuity chart.</td>
<td>8</td>
<td>50%</td>
<td>31,000</td>
</tr>
<tr>
<td>Cervical cancer screening</td>
<td>Screen women who have been sexually active and have a cervix within 3 years of onset of sexual activity or age 21 routinely with cervical cytology (Pap smears).</td>
<td>7</td>
<td>79%</td>
<td>29,000</td>
</tr>
<tr>
<td>Cholesterol screening</td>
<td>Screen routinely for lipid disorders among men aged ≥35 and women aged ≥45 and treat with lipid-lowering drugs to prevent the incidence of cardiovascular disease</td>
<td>7</td>
<td>87%</td>
<td>12,000</td>
</tr>
</tbody>
</table>

Source. Maciosek et al., 2006
Clinical Preventive Services

Preventive services are a particular concern for those who face access barriers. Patients usually are convinced to seek treatment when they are suffering from sickness or injury. Their perception of the need for preventive services is not as great as the actual documented benefits they receive from these services. Therefore, the health policy community understands well that there is a special need to encourage the use of clinical preventive services and to remove barriers that prevent access. For these reasons, it is important to know which preventive services are considered to be the most important, so that their rate of provision among various populations can be monitored, and efforts targeted to improving access where the need is greatest (Cohen & Neumann, 2009; Maciosek et al., 2006; Maciosek et al., 2009).

Table 4 presents a prioritization of clinical preventive services, conducted by one respected research team based on a comprehensive analysis (Maciosek et al., 2006). The table is ranked according to the overall cost-effectiveness of the service in terms of how many quality-adjusted live-years (QALYs) are potentially saved compared with the cost of the service. That is a good indicator of where best to invest for a population that currently receives none of the services. Since most of these services are provided to a substantial number of people (as of 2006), the additional columns indicate the greatest QALY gains that remain to be achieved by increasing service coverage to 90% of the recommended population.

Services that received lower cost-effectiveness rankings were (listed from higher to lowest): breast cancer or chlamydia screening, calcium and folic acid chemoprophylaxis, pediatric vision screening, screening for obesity, depression, hearing, osteoporosis, cholesterol, or diabetes, injury prevention or diet counseling, and tetanus-diphtheria booster.

Integration of Behavioral Health and Dental Care

Also pressing is the national call to integrate behavioral health with other aspects of primary care (Grantmakers in Health (GIH), 2008). Previous White Papers presented to the Foundation review best practices and provide recommendations for improving access to mental health and substance abuse treatment (Graves et al., 2010; Wolfson et al., 2010). The Behavioral Health/Primary Care Integration Models Competencies and Infrastructures workgroup (NCSMHP, 2005) offers a helpful framework to consider the integration of these two areas by providing a “Four Quadrant Clinical Integration Model”.

Expanded from the 1998 consensus document for mental health (MH) and substance abuse (SA) service integration through the National Association of State Mental Health Program Directors, this model assumes that differing types of services and organizational models of integration are needed depending on the needs of the population in each quadrant. Each Quadrant considers the behavioral health and physical health risk and complexity of the population subset.
and suggests the major system elements that would be utilized to meet the needs of the individuals within that subset of the population.

- Quadrant I: Low MH-low SA, served in primary care
- Quadrant II: High MH-low SA, served in the MH system by staff who have SA competency
- Quadrant III: Low MH- high SA, served in the SA system by staff who have MH competency
- Quadrant IV: High MH-high SA, served by a fully integrated MH/SA program

Although the model was developed with adult populations, it can equally be applied to children and adolescents. The MacArthur Foundation’s work with the 3 Component Model (3CM) of primary care and depression integration is also an example of this type of programming (http://www.depression-primarycare.org/).

In addition to integrating behavioral health, research supports the integration of dental care into primary care medical homes, in order to facilitate ease of access and coordination of services. Considering the chronic shortage of dentists, especially those willing to serve low-income Medicaid and uninsured patients, efforts have shifted in many locations to integrate oral health into primary care settings, especially for children (Cantrell, 2009; Center for Health Care Strategies, 2006; Essary, 2011).

**Accountable Care and Performance-Based Payment**

Critical to better coordination of care through medical homes or other provider settings is reform of fee-for-service payment systems that, for too long, have rewarded fragmented care. It is for this reason that ACA stresses the need to develop “accountable care organizations” that receive bundled payments for episodes of care (American Hospital Association, 2010a). Rather than reimbursing providers for each discrete item of service, bundling payment based on a patient’s condition encourages providers to collectively assume responsibility for achieving optimal outcomes through well-coordinated use of the most effective services (American Hospital Association, 2010b; Miller, 2009).

**Best Implementation Strategies**

While improved models of care are easy enough to spot, it is a monumental endeavor to decide how best to disseminate and implement them. A recent comprehensive literature review identified 68 different implementation strategies for various evidence-based clinical innovations (Powell et al., 2012). Far from finding any best implementation practices, the best these authors could do was to gather the 68 practices into the following six groups, for consideration:

- **Plan** strategies (n = 17) can help stakeholders gather data, select strategies, build buy-in, initiate leadership, and develop the relationships necessary for successful implementation.

- The **educate** (n = 16) category includes strategies of various levels of intensity that can be used to inform a range of stakeholders about the innovation and/or implementation effort.

- A number of **finance** strategies (n = 9) can be leveraged to incentivize the use of clinical innovations and provide resources for training and ongoing support.

- Strategies to **restructure** (n = 7) facilitate implementation by altering staffing, professional roles, physical structures, equipment, and data systems.

- **Quality management** strategies (n = 16) can be adopted to put data systems and support networks in place to continually evaluate and enhance quality of care, and ensure that clinical innovations are delivered with fidelity.

- Finally, strategies that **attend to the policy context** (n = 3) can encourage the promotion of clinical innovations through accrediting bodies, licensing boards, and legal systems.

**E. Coordinated Care Programs for the Uninsured**

When people do not qualify for insurance, their access to care can still be greatly improved by structuring coordinated care and referral programs in which they are enrolled. Specialist physician care is the component of the safety net with the most gaping holes (Fairbrother et al., 2003; Felt-Lisk et al., 2002; Felt-Lisk et al., 2004; Gusmano et al., 2002; Stanley et al., 2008; Weissman et al., 2003). But, what is generally true for the uninsured nationwide is not necessarily true for each community. Some communities have gone to considerable lengths to improve access to care for the
uninsured (Blewett et al., 2008; Chazin et al., 2010; Isaacs & Jellinek, 2007; Community Coverage Initiatives (2006) 2006). In various ways, they have constructed and funded programs that provide a primary care home and coordinate access as needed to prescription drugs, specialist referrals and hospital services.

Model safety net programs screen members for eligibility, assign them a place to receive primary care that has some attributes of a “medical home,” and provide an identification card that demonstrates their eligibility to receive other services. They also employ care managers to help coordinate care and educate patients who have chronic illness or recurring treatment needs. The care managers also serve patient navigation functions. In addition, model programs arrange access to hospital services, specialists, and prescription medications. Some coordinated safety net programs rely on hospitals to provide inpatient and outpatient services without compensation, under the hospitals’ charity care policies that, for the most part, regard program members as pre-qualified for charity care. For expensive prescription drugs that are under patent, model programs devote significant staff resources to helping patients enroll with the prescription access programs offered to low-income uninsured patients by most major pharmaceutical companies.

Of particular note, several dozen communities around the US – some large, and some quite small – have organized programs that recruit office-based physicians, including specialists, to accept a fixed number of low-income uninsured referrals for free, or for only a modest copayment (Andrulis & Gusmano, 2000; Barnhill et al., 2001; Blewett et al., 2008; Cofer, 2008; Geletko et al., 2009; Isaacs & Jellinek, 2006; Scott et al., 2000). Most such programs focus on specialist physicians because of their greater need. They coordinate with local community health centers (CHCs) or clinics for primary care and with hospitals for facility-based services. The most sophisticated versions use electronic referrals or remote consultations.

Where they exist, these coordinated programs have the potential to overcome several key barriers to providing safety net access to the uninsured. By screening and allocating patients, they can address physicians’ concerns about patient neediness and the fairness of volunteer distribution. By recruiting broadly from the local medical community, they are able to capitalize on professional peer pressure to encourage broad participation – often including well over half of area physicians (Isaacs & Jellinek, 2006; 2007). Critically, these referral programs usually include nearly a full range of specialists. Many also include laboratory and diagnostic testing, prescription drug access, and medical equipment. Owing to their organizational flexibility, these referral programs are able to, and usually do, coordinate with other safety net providers in the area, so that qualified patients receive most necessary services.

The organizational support for these programs varies, but typically they are founded by a local medical society, a hospital, or a community group. Comprehensive statistics are lacking, but program sizes range from only a few hundred patients annually in many locations to 1,000 or more in Dallas and Wichita (Isaacs & Jellinek, 2006), to 3,000 annually in Asheville, North Carolina (NC). For these services, some programs charge patients essentially nothing other than minimal copayments ($1-5$) for prescription drugs or office visits. Other programs, however, have a sliding fee scale, for some or all segments of care (primary, specialist, hospitalization, etc.).

Even the best safety net programs exclude or limit some medical services. Very few, if any, have substantial coverage of long-term-care facilities or future home care. Specialized or intensive behavioral health services often are handled through separate programs. Some programs exclude much or all medical equipment, orthotics and prosthetics. Otherwise, model programs cover a fairly full range of medical services, similar to what conventional insurance covers.

Considering all available quantitative and qualitative measures, it appears that coordinated safety net access programs have the capability to meet the needs of low-income uninsured residents at a level that is similar to access for people with insurance (Hall, 2011a). From a structural perspective, these programs offer the basic range of services and providers that one expects from insurance, including primary care, hospital care, prescription drugs, and most specialist services. Rough equivalence of access also is seen in objective measures of “realized access” for members of these model safety net programs. Few comparisons rigorously adjust or sort for demographic and health status factors that determine service need, but the available studies that make these adjustments indicate levels of physician use by safety net program members that are similar to insured groups (Hall, 2011a).
F. Health Disparities and Social Determinants of Access and Accountability

Access measures also vary noticeably among socio-demographic and ethnic groups (AHRQ, 2009). As shown in Figures 1-3, Native Americans report somewhat less access, and Hispanics report substantially less, in terms of a usual source of care, and ability to get needed care. Access levels reported by African Americans are very similar to that reported by Whites, nationally. As shown in Figure 3, being uninsured is a much stronger driver of access than is ethnicity. Because more minorities are uninsured, they tend to report worse access, but holding insurance status constant, minorities report similar access measures to Whites.

Figure 1: People With a Usual Source of Care, 2007


Figure 2: People Who Were Unable To Get Needed Medical or Dental Care in The Last 12 Months, 2006

Access is not determined solely by having good sources of payment and places for care. Access also is determined socially, by conditions, attitudes, norms, shared understandings and patterns of behavior. Thus, for instance, adults with less than a high school education are 50% less likely to visit a doctor each year than those with at least a college degree (Ramirez et al., 2008). For these reasons, access can be substantially improved through various initiatives in the community that reach beyond the clinical setting.

Community Health Workers

Community health workers (CHWs) are a prime example that has emerged recently. Also sometimes called “lay health navigators”, they “assist individuals and communities to adopt healthy behaviors while helping to conduct outreach and advocate for individuals and community health needs” (Martinez, J, et al., 2011). Some CHW activities include: education, guidance, and outreach to ameliorate health problems in underserved communities, education and outreach regarding health insurance, enrollment of residents into appropriate health care and community programs, and eliminating duplicative health care services. CHWs are most effective if they are trusted members of the communities they serve and share their clients’ racial and ethnic backgrounds, culture, language, and life experiences. The US Agency for Healthcare Research and Quality (AHRQ) conducted a systematic review of CHW studies focusing on cost effectiveness. The agency concluded that CHWs can improve the outcomes for vulnerable populations for some conditions and that CHWs have documented notable cost reductions (Martinez et al., 2011).

Improving Health Literacy

Health Literacy -- the “ability to read, understand and act on health information -- is an emerging public health issue that affects all age, race and income levels” (National Patient Safety Foundation, http://www.npsf.org/wp-content/uploads/2011/12/AskMe3_Stats_English.pdf) Limited health literacy increases the disparity in access to

Source. Centers for Disease Control and Prevention, National Center for Health Statistics, National Health Interview Survey, 2005. Note: Percents shown are from a statistical model that adjusts for race/ethnicity, family income, education, health insurance, and residence location.
health care among vulnerable populations such as racial and ethnic minorities. According to the Center for Health Care Strategies (http://www.chcs.org/usr_doc/Health_Literacy_Fact_Sheets.pdf), a disproportionate number of minorities and immigrants are estimated to have literacy problems: 50% of Hispanics and 40% of African Americans. Patients with low health literacy and chronic diseases, such as diabetes and hypertension, have less knowledge of their disease and treatment; therefore, it becomes increasingly challenging to self-manage the disease and be compliant with treatment regimens. Patients with low literacy also have a 50% increased risk of hospitalizations.

Therefore, efforts to improve health literacy have received attention as a means to improve access and outcomes. Unfortunately, studies currently are insufficient to draw strong conclusions about what interventions work best (Pignone et al., 2005). However, one promising initiative, from the National Patient Safety Foundation, is its “Ask Me 3” Campaign (http://www.npsf.org/for-healthcare-professionals/programs/ask-me-3/). This is a patient education program designed to promote communication between health care providers and patients by encouraging patients to understand the answers to three questions: 1) What is my main problem? 2) What do I need to do? 3) Why is it important for me to do this?

**Patient Accountability**

In the mix of social determinants that affect access is patients’ understandings and habits of behavior regarding their own responsibilities in seeking and receiving adequate care. These responsibilities include keeping appointments and following treatment recommendations, or discussing with providers when they are having difficulty doing so. Rather than preach responsibility to patients, or punish them for noncompliance, a number of programs have experimented with using financial or non-financial incentives to reward patients for being better partners in the treatment relationship. Patient incentives have not been thoroughly tested, but those that have been shown to hold some promise include financial gifts as small as $5-$10, a lottery for a larger more appealing prize, a voucher for groceries, and a reward system that accumulates points towards a larger financial sum but only if the program is completed (Oliver & Brown, 2012). The magnitude of behavior improvements shown from modest incentives is from moderate to substantial, but tends not to be permanent, and varies based on the particular setting, population and program of treatment (Lutge et al., 2012).

Incentive programs may work to some extent, but they also might be considered objectionable, both by those to whom they might seem to pander, and to those who feel that it is unfair to reward people for doing what they should (Oliver & Brown, 2012). Aside from fairness, also to be considered is whether people’s behaviors and expectations will become dependent on a program of steady rewards, such that they quickly regress, or resent, when the program is ceased (Lutge et al., 2012). Ideal would be an incentive program that teaches people the value of accountable partnerships in treatment, such that they are motivated to maintain that behavior once the incentive ceases.

**Reducing Disparities**

Literature reviews have found no magic silver bullets that reduce or eliminate disparities. The strategies reviewed so far also are likely to be helpful in reducing racial and ethnic disparities in access to care. The starting point of access remains financial: minorities are more likely to be uninsured, and so enrollment in insurance, or in a coordinated safety net program, is a first essential step towards access. But while coverage is necessary, it is not sufficient to eliminate disparities (Escarce, 2007; Lurie & Dubowitz, 2007). The barriers of availability, acceptability, and accommodation remain.

Just as important as asking what to do to reduce disparities in access is asking how to go about doing it. Instead, studies emphasize the need to adopt multiple intervention strategies that lay careful groundwork and have thorough community involvement (Chin et al., 2007). Studies also emphasize the importance of cultural competence and leadership by key stakeholders (Cooper et al., 2002). These include patient navigation (Natale-Pereira et al., 2011), preventive services (Beach et al., 2006), and community health workers (Grossmann et al., 2012).
G. The Role of Foundations in Improving Access

Foundations have been major players in developing and sustaining many of the clinical models, programs and policies described in the preceding sections. At the national level, foundations such as Robert Wood Johnson Foundation (RWJF), Commonwealth Fund, the Henry J. Kaiser Family Foundation, Pew Charitable Trusts, and Kellogg Foundation have been working actively for decades to reform public policy governing health care financing and to increase the supply of health care services to underserved rural and urban communities (GIH, 2006). Much of this effort has been directed at changing federal policy in ways that reduce the proportion of Americans who lack health insurance. Through strategies such as policy analysis, awareness-raising campaigns, monitoring and publicizing access issues, and advocacy with policy makers, RWJF and Kaiser helped establish the groundwork for health care reform in the 1990s and later played a crucial role in building political support for ACA.

Beyond their work to change health care policy, national funders have been critical in the development of some of the care models that many communities now rely on to ensure that local residents have access to needed services. For example, the medical-home model has been refined through demonstration projects such as The Safety Net Medical Home Initiative sponsored by Commonwealth, Qualis Health and the MacColl Center for Health Care Innovation (GIH, 2012). National foundations also support the implementation of models that improve access. For example, in Community Voices (Silow-Carroll, Anthony, Sacks & Meyer, 2002) and the Community Care Network demonstration project (Hasnain-Wynia, 2003), Kellogg and RWJF provided funding, content expertise, and technical assistance to communities for the purpose of expanding and improving the safety net system.

While RWJF, Kellogg, Kaiser and Commonwealth have been the highest profile funders in the access area, much of the most important work has been driven by state and regional health foundations. With the introduction of new health conversion foundations, states such as California, Colorado, Idaho, Maine, Massachusetts, Missouri, New Jersey, New York and Virginia have seen large philanthropic investments in strategies to improve access. As with national health foundations, state foundations have directed their grantmaking and leadership work along two distinct pathways.

The first pathway is policy change. For example, Blue Cross Blue Shield of Massachusetts Foundation funded analysis, public education, and advocacy efforts to support the passage of the state’s health care reform bill under Governor Romney. State policy also has been influenced by the Maine Health Access Foundation and the Colorado Health Institute (funded by the Colorado Health Foundation, Rose Community Foundation and the Colorado Trust).

The second pathway that state foundations have used to improve access is to support communities across the state in developing and implementing key components of a safety net system. For example, the California Endowment, the Missouri Foundation for Health and the Sunflower Foundation in Kansas have instituted request-for-proposal initiatives that allow communities to establish and strengthen patient-centered medical homes for uninsured and under-insured patients (GIH, 2012). Likewise, the California HealthCare Foundation and the Maine Health Access Foundation have made available significant grant funds to support the improvement of health information systems that are used to manage medical records for the uninsured (GIH, 2012).

Moving to the local and regional level, health foundations have been much more scattershot in their approaches to improving access. These foundations tend to develop idiosyncratic strategies based on the specific needs and resources of the specific community, as well as the distinct perspective and interests of the foundation’s staff and board (GIH, 2006). These efforts focus on any of a myriad of leverage points, such as making residents aware of available insurance programs, enrollment, recruiting providers to offer services at reduced or nominal cost, creating information systems to manage appointments and medical records, or addressing patients’ specific barriers such as transportation, language differences and health literacy.

In many instances, foundations focus their resources on a few key organizations that offer medical services to residents who are uninsured or have limited financial resources. This support can be in the form of subsidies for individual patients (e.g., emergency funds), operating grants, and grants for program expansion. For grantees that are particularly crucial to a community’s safety net system, foundations also may offer capacity-building assistance, either directly through training and technical assistance or through capacity grants that allow the organization to develop its own approach.
One of the most important ways that local health foundations distinguish themselves is the degree to which they involve themselves in determining what the safety net system should look like. Most local health foundations focus their monetary and staff resources on supporting existing programs and organizations: single-year or multi-year grants are made to cover the operating expenses associated with meeting the health care needs of uninsured and underinsured residents. In contrast to this responsive approach, a few local health foundations have played a leadership role in changing the safety net system to expand and improve access. Two notable examples are the Health Foundation of Greater Cincinnati and the Quantum Foundation serving Palm Beach County in Florida. Both foundations have directed resources at expanding and building the capacity of key primary care clinics, as well as adding new school-based clinics to better serve children throughout the community (GIH, 2006; 2012).

Summing things up, a recent comprehensive analysis by the RWJF selected these “examples of programs and policies that have been shown to be effective in addressing” access to care issues (http://www.countyhealthrankings.org/take-action/find-programs-and-policies-work):

- Provide health insurance coverage for all and encourage enrollment in existing programs such as Medicaid via outreach/education and expedited enrollment.
- Expand scope of practice for dental hygienists and nurse practitioners, i.e., expand the types of settings where they may practice independently.
- Expand use of community health workers by improving role definition and education curricula and increasing funding.
- Recruit health care professionals from minority groups and require provider training in cultural competency.
- Establish medical homes, an approach to providing comprehensive primary care.

Against this backdrop, the Cone Health Foundation stands out as particularly strategic with regard to improving access within its funding region. Over its 15 years of existence, the Foundation has launched and incubated a number of programs designed to deliver health care to residents with limited financial means, inadequate insurance, transportation barriers, and other obstacles. The earliest such programs were the Congregational Nursing Program and the Guilford School Health Alliance (GSHA). Over time, the Foundation played a leadership role in replicating the Project Access model that was pioneered in Asheville. This led to the creation of the Guilford Community Care Network (GCCN) and the delineation of a comprehensive system for improving access for the uninsured -- a system that now includes the HealthServe clinic, a set of health care providers who offer pro bono specialty care, an “Orange Card” system for enrolling and covering uninsured patients, case management services, a management information system, interpreter services, subsidies for medication, and support for dental services. In our review of the literature, we could find virtually no other health foundation that can take credit for incubating a safety net system this comprehensive.

As we present data below on the nature of access issues in Greensboro, it is important to keep in mind the relative strength of the current safety net system and the high degree of leadership that the foundation consistently brings to this issue. Whereas many communities are struggling to put in place the essential elements of a safety net system, Greensboro already has a highly developed infrastructure. The task in front of the Foundation’s board and staff is less about building a system from scratch than it is about adapting the current system to address unmet needs and the changes that will arise in the coming years, especially with regard to ACA.
II. Integration and Synthesis of Existing Local Data Sources

When looking at health care access, it is essential that a thorough review is conducted that examines readily available data sources, reviews those data sources, and integrates the data sources to understand the “picture” of health care access within a community. Prior to data integration and synthesis, one’s first step is to understand the community and its demographic composition. To that end, a thorough review of the community composition was conducted using available U.S. Census data (2010 State and County QuickFacts) and other demographic data sources. In 2010, Guilford County contained approximately 488,400 people within its 646 square miles. Guilford is a county that is ethnically and socioeconomically diverse. There is a higher population of African Americans (32.5%) compared to the US average (13.6%) and a lower Hispanic population (7.1%) compared to NC (8.4%) and the US overall (16.3%). Over 90% of residents were born in the US. Residents of Guilford are well-educated overall, with 86.3% of residents over the age of 25 having attained at least a high school degree, which is slightly higher than NC (83.0%) and US (85.0%) educational attainment rates. Additionally, 32.2% of Guilford County residents have achieved a graduate or professional degree, higher than the nearly 26% of state residents. Residents’ income averages $44,386 a year per household, with 17.1% of residents and 9.5% of families living below the poverty level (approximately $21,834 per year for a family of four). As of November 2011, the unemployment rate was estimated at 9.8% in Guilford County (retrieved from http://eslmi40.esc.state.nc.us/ThematicLAUS/clfasp/CLFAASY.asp).

Uninsured, Now and After National Reform

The NC Institute of Medicine estimates that Guilford County had 77,000 uninsured residents in 2009-2010 (http://www.nciom.org/nc-health-data/uninsured-snapshots/). If the ACA takes full effect, its subsidies and Medicaid expansion will assist over 20 percent of Greensboro residents with obtaining insurance (http://healthreform.kff.org/coverage-expansion-map.aspx). Still, but the number of uninsured will only be cut roughly in half, according to state and national estimates (http://www.ncki.org/nc-health-data/uninsured-snapshots/). Taking population growth into account, this suggests that Guilford County will continue to have 40,000 or more uninsured people. Approximately half of these (according to national estimates http://www.rwjf.org/files/research/71998.pdf) will likely be eligible for Medicaid or subsidized insurance through the new exchange, roughly a quarter may be undocumented immigrants, and roughly 15 percent will be citizens who still lack access to affordable coverage and therefore will be exempt from the new law’s “individual mandate.” Most people in the latter group will be middle income and older (median age of 51), since younger people are charged lower premiums, and lower income people receive more subsidies.

A. Overall Community Picture

To understand and take actions around access issues, multiple data sources must be reviewed and placed in context with other available data sources. The following sections of the paper summarize key studies and reports that document the status of health care access in Guilford County and surrounding areas. Across the integration of these sources, one must regularly scan to ensure that health care is equally accessible across demographic groups. Thus, throughout the review of the data presented in this section, indications of any health disparities are identified and discussed. For the purposes of this paper, health disparities are defined as “differences in health status among distinct segments of the population including differences that occur by gender, race or ethnicity, education and income, disability, or living in various geographic localities” (Healthy Carolinians 2010, North Carolina’s Plan for Health and Safety; accessed February 2012 from www.healthycarolinians.org). Because disparities impact quality and length of life, it is imperative that strategies are developed to decrease or eliminate behaviors that promote these discrepancies (Eliminating Health Disparities in Guilford County 2008/09, Guilford County Department of Public Health). Thus, health disparities are clearly identified within the sections below.

Healthy Carolinians

Background. Guilford is one of 72 counties participating in the Healthy Carolinians effort. This collaborative has existed since 1997, attending to functions like community health assessment, community health improvement and action-planning, and advocacy. Special emphasis is placed upon access to care, chronic and communicable diseases,
cultural competence, and health promotion issues; Guilford County Healthy Carolinians also studies and suggests remedies for health disparities in the community (Healthy Carolinians County Profiles).

**Community study - health issues and disparities.** In its most recent Community Health Assessment (Smith, Mrosla, Hill, & Phillips, 2009), Guilford County Healthy Carolinians researched multiple health-related concerns, the prevalence and degree of these concerns, as well as the presence and potential community resources to attend to these concerns. In terms of access to care, study authors found that, in 2008, 87.9% of Guilford adults had health insurance. However, when considered from a race/ethnicity standpoint, Whites well exceeded coverage rates – as compared to other groups – by a margin of 95.8% to 73.5%. Similarly, when factoring in income level, 95.6% of persons in households earning more than $50,000 indicated having health insurance coverage, whereas only 78.5% of persons in lower-income households did so (Smith et al., 2009).

Notably, this 2009 Community Health Assessment demonstrated that Guilford County fell short of Healthy Carolinians’ 2010 goals of increasing adult health insurance coverage to 100%, and increasing the overall primary source of care figure to 96% (Smith et al.). Furthermore, researchers observed race-related health disparities in several areas. More specifically, Whites did better than other groups on: (a) 5-year overall cancer mortality rates; (b) breast cancer death rates; (c) colorectal cancer death rates; (d) cervical cancer death rates; (e) colorectal and mammogram screenings; (f) 5-year heart disease death rates; (g) 5-year stroke death rates; (h) adolescent pregnancies; (i) engaging in exercise five days or more per week; (j) having leisure-time activity; (k) 5-year infant mortality rates; (l) primary/secondary syphilis, gonorrhea, and HIV rates; and (m) homicide and homicide-by-firearm rates (Smith et al.). In a reversal of these trends, White adults were more likely to smoke cigarettes, were less likely to eat five or more servings of vegetables each day, and were more likely to commit suicide (and have a higher suicide-by-firearm rate).

Moreover, study authors indicated that Guilford County children ages 0-14 years old have substantially more asthma hospitalization episodes than do other age groups in the area (Smith et al.). When considering obesity, Guilford County Healthy Carolinians determined that 60% of adults in the community were overweight or obese. In terms of substance abuse, Guilford County did not meet Health Carolinians’ 2010 goals for reductions in high school adolescents’ past-30-days alcohol and marijuana use; nor did the community meet the target for percentage of current adult smokers (Smith et al.). Other areas where Guilford County needed to improve, vis-à-vis Healthy Carolinians’ 2010 objectives, were infant mortality, numbers of women receiving prenatal care in their first trimester, low birth weight, sexually-transmitted infections (STIs), and rates of fifth-graders with tooth decay (Smith et al.).

As a result of these study findings and not meeting Healthy Carolinian goals, local community leaders identified multiple Guilford County Priority Objectives and associated targets (Smith et al.). These were Healthy Sexuality (e.g., reducing incidence and prevalence of STIs, reducing adolescent pregnancies), and Healthy Birth Outcomes (e.g., decreasing infant mortality rates, increasing percentage of women receiving prenatal care in the first trimester). Others were Healthy Lifestyles (e.g., reducing overweight and obesity, improving rates of physical activity, decreasing adolescent tobacco use, reducing cancer, heart disease, and diabetes mortality rates), and Healthy Homes (e.g., reducing young-child blood lead levels, decreasing asthma hospitalization episodes). In order to effectively address these disparities and other health issues, it is essential that residents have a primary source of health care.

Between 2003 and 2008, Guilford adults with a primary source of health care fell from 84.4% to 76.5% (Smith et al.). Racial and economic disparities likewise appeared in this domain: 78.6% of Whites and 73% of individuals from other races noted having a primary source of care in 2008; moreover, 84.2% of persons in households earning more than $50,000 and 71.7% of persons in lower-income households noted having a primary source of care that same year (Smith et al.).

Because accessing a primary source of care depends strongly on the proximity of those sources to the individuals in need, it is important to understand how medical clinics are spatially distributed throughout the County. Visual displays of the geographic distribution of medical clinics as they relate to poverty rates by census tract are located in the Appendices A-C. Specifically, the geographic distribution of Triad Adult and Pediatric Medicine (TAPMed) facilities in relation to public housing and homeless resources is provided in the Appendices. Formed in 1996, Triad Adult and Pediatric Medicine (formerly Guilford Child Health and HealthServe) creates a medical home for many low income adults and children across Guilford County. The GIS maps (found in Appendix A) indicate that although there is a
large overlap of TAPMed locations with public housing and homelessness resources, there remain some areas of the community that are not closely geographically linked to primary care medical home facilities.

TAPMed facilities have been significant in providing a source of primary care to residents in Guilford County, including the homeless population. This is important because the homeless population has significantly increased in Guilford County. According to the point-in-time count conducted by Partners Ending Homelessness (http://www.partnersendinghomelessness.org/research/documents/2012PITCGuilfordReport.pdf), on any given night there are 1,005 homeless people on the streets of Guilford County. The survey conducted asked respondents how many adults they knew that were discharged from the Behavioral Health System (mental health hospitals or substance abuse treatment programs) and Health Care System (hospitals) within 30 days prior to becoming homeless. Results indicated that 41 adults were discharged from the Behavioral Health System and 21 were discharged from the Health Care System. Homelessness among Guilford county school age children has risen 48% since 2007-2008, with 1,900 children classified as homeless. A majority of these are pre-kindergarten through fifth grade. More information about students experiencing homelessness can be found at: www.partnersendinghomelessness.org/research/documents/2012StudentsExperiencingHomelessnessComparison.pdf.

The services offered by TAPMed are critical for all underserved population groups. However, due to recent changes many individuals may be denied a primary source of care. In February 2012, TAPMed announced significant changes to the organization that will have a major impact on access to care, including, the closing of the Northeast Medical office and the decision to suspend the intake of new patients with the exception of newborns and uninsured inpatients discharged from the hospital. These curtailments add to the access to care problem across other agencies and have a major impact on the community.

Regional and National Comparisons

Many of the health care access patterns reported in the 2009 Guilford County Healthy Carolinians’ Community Health Assessment also appear in the 2010 Behavior Risk Factor Surveillance System (BRFSS) Survey (North Carolina State Center for Health Statistics). The BRFSS is an especially useful survey because of its specificity of questions that are helpful for pinpointing issues of concern. Also, the BRFSS is conducted statewide each year based on questions used nationally. Therefore it permits local, regional, statewide, and US comparisons over time, as shown in Tables 5-6.

It is important to note, however, that, at a county level, the BRFSS is subject to sampling error due to the fairly small number of people surveyed in each location. Thus, annual fluctuation in responses may not reflect actual changes in local conditions, and moderate differences between local and regional responses may not be significant. Nevertheless, it appears from this comparison that access levels in Guilford are similar to those in the Piedmont area, which are slightly better than access levels statewide. Piedmont and NC access measures have worsened slightly over time, but this pattern is less clear in Guilford County (due to small-sample fluctuations): only the first of these two access measures (lacking a personal provider) appears to have worsened in Guilford from eight years ago. Across the US, these access measures have worsened more noticeably, such that the US began this observation period with better or similar measures to those in Guilford and NC, but by 2009 local measures were noticeably better than national.

<table>
<thead>
<tr>
<th>Year</th>
<th>Guilford</th>
<th>Piedmont*</th>
<th>NC</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>2003</td>
<td>15.6</td>
<td>18.4</td>
<td>19.4</td>
<td>20.4</td>
</tr>
<tr>
<td>2004</td>
<td>14.3</td>
<td>17.9</td>
<td>19.2</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>19.2</td>
<td>21.8</td>
<td>22.8</td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>12.2</td>
<td>21.0</td>
<td>21.9</td>
<td>20.0</td>
</tr>
<tr>
<td>2007</td>
<td>20.3</td>
<td>20.5</td>
<td>22.0</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>23.5</td>
<td>20.8</td>
<td>22.0</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>27.9</td>
<td>21.3</td>
<td>22.3</td>
<td>27.4</td>
</tr>
<tr>
<td>2010</td>
<td>19.4</td>
<td>20.0</td>
<td>21.8</td>
<td></td>
</tr>
</tbody>
</table>


* 35 counties in central NC, including Charlotte and the Triangle
The BRFSS also provides useful comparisons locally among demographic groups. Those shown in Table 7 below are of particular significance, from the latest (2010) survey.

**Pediatric access to care.** The *Child Health Assessment and Monitoring Program (CHAMP)* is related to the BRFSS (NC State Center for Health Statistics). Conducted since 2005, CHAMP surveys ask general questions about the health and health care of children ages 0 to 17 in BRFSS families. CHAMP results are collected and analyzed by region, and some of the most recent pediatric health care access and utilization data are shown in Table 8. Figures seem to indicate more widespread insurance coverage for children, and perhaps more connections to primary medical homes. However, there may be opportunities to increase these linkages.

**Findings from the North Carolina Comprehensive Assessment for Tracking Community Health and the Communicable Disease Branch - The North Carolina Comprehensive Assessment for Tracking Community Health (NC-CATCH) Portal.** Although not as current as data found elsewhere, NC-CATCH offers the benefit of peer county and/or regional comparisons, and it provides some insight into chronic disease prevalence. Several major Guilford County – and regional – results, including chronic disease rates and local rates of Sexually Transmitted Infections (STIs) can be found in Appendix F and at the related websites provided below, with some of the most relevant health topics and indicators summarized below in Table 9.

**Related websites:**

Health Care Access and Utilization section, 2010 CHAMP Results, North Carolina State Center for Health Statistics: [http://www.schs.state.nc.us/SCHS/champ/2010/topics.html#hc](http://www.schs.state.nc.us/SCHS/champ/2010/topics.html#hc);

Health Care Access section, 2010 BRFSS Results, North Carolina State Center for Health Statistics: [http://www.schs.state.nc.us/SCHS/brfss/2010/guil/topics.html#hca](http://www.schs.state.nc.us/SCHS/brfss/2010/guil/topics.html#hca);


Mortality, 2012 County Health Databook, North Carolina State Center for Health Statistics: [http://www.epi.state.nc.us/SCHS/data/databook/](http://www.epi.state.nc.us/SCHS/data/databook/)
Table 7: Health Access Indicators for Guilford County Adults, by Select Social Determinants, 2010

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Yes, Results Overall</th>
<th>Yes, Results by Race</th>
<th>Yes, Results by Education</th>
<th>Yes, Results by Household Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any kind of health care coverage (e.g., insurance, HMOs, Medicare)?* (% Adults)</td>
<td>Overall (87.9%)</td>
<td>White (90.6%)</td>
<td>H.S. or Less (80.6%)</td>
<td>Less than $50,000 (80.6%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other (82.2%)</td>
<td>Some College + (90.7%)</td>
<td>$50,000 + (94.9%)</td>
</tr>
<tr>
<td>Health insurance coverage (under age 65)? (%)</td>
<td>Overall (85.4%)</td>
<td>White (88.3%)</td>
<td>H.S. or Less (71.5%)</td>
<td>Less than $50,000 (74.5%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other (79.4%)</td>
<td>Some College + (89.6%)</td>
<td>$50,000 + (94.9%)</td>
</tr>
<tr>
<td>Health insurance coverage for those employed for wages (under age 65)? (%)</td>
<td>Overall (90.7%)</td>
<td>White (93.9%)</td>
<td>H.S. or Less (81.4%)</td>
<td>Less than $50,000 (83.0%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other (83.0%)</td>
<td>Some College + (92.7%)</td>
<td>$50,000 + (95.2%)</td>
</tr>
<tr>
<td>A time during last 12 months you needed to see a doctor but could not because of cost?* (% Adults)</td>
<td>Overall (15%)</td>
<td>White (8.1%)</td>
<td>H.S. or Less (17.1%)</td>
<td>Less than $50,000 (24.6%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other (29.9%)</td>
<td>Some College + (14.1%)</td>
<td>$50,000 + (4.5%)</td>
</tr>
</tbody>
</table>

*An additional disparity occurred by age: 83.4% of persons 18-44 years old answered yes to having any kind of health care coverage, whereas 91.8% of persons 45 years and older answered yes to this question. 22.1% of persons 18-44 years old answered yes to not seeing a doctor due to cost, whereas 9.2% of persons 45 years and older answered yes to this question. Note: Guilford County raw numbers are small, and so results are subject to caution.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>No, Results Overall</th>
<th>No, Results by Race</th>
<th>No, Results by Age</th>
<th>No, Results by Household Income</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do you have one person you think of as your doctor or health care provider? (% Adults)</td>
<td>Overall (19.4%)</td>
<td>White (14.8%)</td>
<td>18-44 (32.6%)</td>
<td>Less than $50,000 (26.3%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other (29.4%)</td>
<td>45 + (8.2%)</td>
<td>$50,000 + (10.4%)</td>
</tr>
<tr>
<td>Reasons people sometimes don't get medications filled/refilled...You could not afford to pay for the medicine?*<strong>/</strong> (% Adults)</td>
<td>Overall (25.3%)</td>
<td>White (19.9%)</td>
<td>18-44 (13.3%)</td>
<td>Less than $50,000 (41.2%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other (42.0%)</td>
<td>45 + (36.9%)</td>
<td>$50,000 + (17.3%)</td>
</tr>
</tbody>
</table>

**For only those respondents who have not filled/refilled a prescription.  ** An additional disparity occurred by gender: 32.9% of women surveyed answered yes to not filling/refilling a prescription due to cost, whereas 13.4% of men surveyed answered yes to this question. Note: Guilford County raw numbers are small, and so results are subject to caution.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Determinant</th>
<th>Within Past Year (&lt; 12 months)</th>
<th>Within Past 2 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td>How long since your last visit to a doctor for a routine checkup (e.g., physical exam), not for an injury, illness, or condition? (% Adults)</td>
<td>Overall</td>
<td>69.6%</td>
<td>15.3%</td>
</tr>
<tr>
<td></td>
<td>Results by Gender</td>
<td>Male (63.4%)</td>
<td>Male (17%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female (74.4%)</td>
<td>Female (14%)</td>
</tr>
<tr>
<td></td>
<td>Results by Race</td>
<td>White (69.7%)</td>
<td>White (12.0%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other (68.8%)</td>
<td>Other (22.4%)</td>
</tr>
<tr>
<td></td>
<td>Results by Age</td>
<td>18-44 (56.3%)</td>
<td>18-44 (20.7%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>45 + (81.5%)</td>
<td>45 + (10.0%)</td>
</tr>
<tr>
<td></td>
<td>Results by Household Income</td>
<td>Less than $50,000 (67.3%)</td>
<td>Less than $50,000 (15.4%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$50,000 + (75.7%)</td>
<td>$50,000 + (11%)</td>
</tr>
</tbody>
</table>
Table 8: Select Health Care Access and Utilization Indicators for Children, Piedmont Results*, 2009-2010

<table>
<thead>
<tr>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Does CHILD have any kind of health care coverage?</td>
<td>95.7%</td>
<td>4.3%</td>
</tr>
<tr>
<td>During the past 12 months was there any time when s/he was not covered by ANY health insurance?***</td>
<td>5.2%</td>
<td>94.8%</td>
</tr>
<tr>
<td>CHILD was continuously insured over past 12 months</td>
<td>90.7%</td>
<td>9.3%</td>
</tr>
<tr>
<td>Do you have one person you think of as CHILD’s personal doctor or nurse?</td>
<td>84.0%</td>
<td>16.0%</td>
</tr>
<tr>
<td>During the past 12 months has CHILD had a preventive care visit or well-child check-up?</td>
<td>88.5%***</td>
<td>11.5%</td>
</tr>
<tr>
<td>CHILD currently needs/uses more medical care, mental health or educational services than usual for most children of same age due to chronic medical, behavioral, or other health condition.****</td>
<td>9.9%</td>
<td>90.1%</td>
</tr>
</tbody>
</table>

### Table 9: Select Chronic Disease Screening Indicators, Guilford and Piedmont Region, 2004-2010

<table>
<thead>
<tr>
<th>Health Topic and Indicator</th>
<th>Guilford County</th>
<th>Piedmont Region*</th>
<th>Recent Updates (if any)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chronic Disease Screening:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Adults Who Ever Had Either a Sigmoidoscopy or Colonoscopy (respondents age 50 years and older)</td>
<td>65.3%</td>
<td>67.1%</td>
<td>68.6%</td>
</tr>
<tr>
<td>% Males Who Ever Had a Prostate-Specific Antigen (PSA) Test (respondents age 40 years and older)</td>
<td>68.1%</td>
<td>64.5%</td>
<td>58.3%</td>
</tr>
<tr>
<td>% Women Who Had a Pap Smear in the Past 3 Years (respondents age 18 years and older)</td>
<td>--</td>
<td>89.1%</td>
<td>87.0%</td>
</tr>
<tr>
<td>% Women Who Had a Mammogram in Past 2 Years (respondents age 40 years and older)</td>
<td>87.0%</td>
<td>80.1%</td>
<td>81.8%</td>
</tr>
</tbody>
</table>

In looking closer at the data presented above, generally, in Guilford County, rates of sigmoidoscopy and colonoscopy screenings were higher for females, Whites, and persons with higher education levels. Rates of PSA testing were higher for males over age 45, vis-à-vis males ages 18-44. Rates of pap smears were higher for females over age 45, vis-à-vis females ages 18-44, as well as for women in households exceeding $50,000 in income. Additionally, rates of mammogram screenings were higher for females over age 45, vis-à-vis females ages 18-44, women with higher education levels, as well as for women in households above a $50,000 annual income.

**Health Disparities.** It is evident that health disparities exist in Guilford County for populations across the lifespan and for racial and ethnic groups. Partly in response to the health disparities identified above, the NC Racial and Ethnic Disparities Report Card was released in 2003 and 2006, as a collaborative effort between the NC Office of Minority Health and Health Disparities and the NC State Center for Health Statistics (NC Racial and Ethnic Disparities Report Card). This report monitors the state’s progress toward eliminating the health status gap between ethnic groups and the White population. A baseline was established to eliminate racial and ethnic health disparities in NC (Guilford County
Department of Public Health, 2008/2009). The Guilford County Health Disparities Action Team was convened by the Guilford County Department of Public Health in 2007 to collect and synthesize relevant data in Guilford County. Table 10 below identifies key health indicators specific to health care access, but for space reasons, health disparities that were not specifically related to access are provided in table format in Appendix G (e.g., disparities across chronic conditions, cancer, sexually transmitted diseases, and dental health).

<table>
<thead>
<tr>
<th>Table 10: Key Health Indicators for Access to Health in Guilford County</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Healthy People 2010 Goal</strong></td>
</tr>
<tr>
<td>Did not meet goal.</td>
</tr>
<tr>
<td><strong>How Guilford County compares to NC Healthy People 2010 Goal</strong></td>
</tr>
<tr>
<td>Affects races unequally.</td>
</tr>
<tr>
<td><strong>How Guilford County Whites and Other Races compare to NC Whites and Other Races</strong></td>
</tr>
<tr>
<td>Asians were more likely to have insurance than all Other Races, including Whites. American Indians were the least likely to have insurance.</td>
</tr>
</tbody>
</table>

**B. Health Care Utilization and Health Professional Supply**

**Inpatient Hospitalizations.** The NC State Center for Health Statistics recently published data, available by county of residence, on 2009 inpatient hospitalization usage by diagnosis (NC County Health Data Book, 2011). An analysis of this material reveals that in 2009, Guilford County inpatient hospitalization charges for all conditions reached $984,063,614, with a discharge rate of 107.2 per 1,000 population. The average length of stay for all conditions was five days, the average charge per day for all conditions was $3,846, and the average charge per case for all conditions was $19,287 (North Carolina County Health Data Book, 2011). The top three most costly diagnostic categories/subcategories in Guilford County, in descending order of total inpatient charges were: (1) cardiovascular and circulatory diseases; (2) heart disease; and (3) injuries and poisoning. Greater in-depth information on select inpatient hospital utilization and charges data by principal diagnosis and the associated average days of stay (along with discharge rates) for both 2010 and 2002 can be found in Appendix H and at: http://www.epi.state.nc.us/SCHS/data/databook/ (County Health Data Books, NC State Center for Health Statistics).

**Utilization of Health Department Clinic Services.** There were 29,008 unique patients using Health Department clinic services from July 1, 2009 to June 30, 2010. Single patient visits totaled 17,651 and 11,357 patients had 2 or more visits over this same time period, resulting in 81,099 total patient visits. A summary of the total number of unique patient visits to different clinics from July 1, 2009 to June 30, 2010 across departments is available in the Appendix I.

**Coker Assessment, Cone Health System Specialty Analysis Summary.** A specialty analysis assessment was conducted to look at the current physician support for the Cone Health System. The report also gave an analysis of the service areas that will have an additional need in 2016, the immediate, moderate, and long-term needs for physicians, additional needs due to attrition risk, and the anticipated physicians needed by 2016. The report indicated an immediate or moderate need for the following areas: Critical Care, Endocrinology, Family Medicine, Genetics, Geriatric Medicine, Hemotology/Oncology, Internal Medicine, Neurology, Pain Management, and Pediatrics. The specialty analysis summary can be found in table format in Appendix J. There will be a total of 177 physicians needed across specialties for the Cone Health System by 2016, with Internal Medicine, Family Medicine, Pediatrics, Psychiatry, and General Surgery being at the top of that list (Coker Assessment).
The primary care workforce includes different types of providers, specifically, general practitioners, general internal medicine practitioners, and family physicians, as well as physician assistants (PAs), nurse practitioners (NPs), nurses, and care coordinators. On a national level one in five Americans lack adequate access to primary care due to a shortage of primary care physicians in their communities. According to the North Carolina Health Professionals Data System, the primary care workforce in Guilford County is not growing at a rate to meet the projected needs of the population. Table 11 depicts trends in workforce capacity across specialty areas to address a variety of health care needs based on select Guilford County health care provider and vital statistics data from the NC Health Professionals Data System. Where available, 2006 data is juxtaposed with 2010 data. Comparison between the two data points does not necessarily indicate the presence of trends. It is important to note that the need for care also increased in that Guilford County grew roughly 6.0% between 2006 and 2010, and the numbers of Medicaid-eligible persons rose by 7.8% (NC Health Professionals Data System).

Table 11: Guilford County Profile: Select Health Professions and Vital Statistics Data, 2006 and 2010

<table>
<thead>
<tr>
<th>2006</th>
<th>2010</th>
<th>Raw Value or Other Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-federal physicians: 1,107</td>
<td>Non-federal physicians: 1,174</td>
<td>67 raw value increase</td>
</tr>
<tr>
<td>Primary care physicians</td>
<td>Primary care physicians</td>
<td>28 raw value increase</td>
</tr>
<tr>
<td>(includes family practice,</td>
<td>(includes family practice,</td>
<td></td>
</tr>
<tr>
<td>general practice,</td>
<td>general practice,</td>
<td></td>
</tr>
<tr>
<td>internal medicine, OB/GYN,</td>
<td>internal medicine, OB/GYN,</td>
<td></td>
</tr>
<tr>
<td>pediatrics): 473</td>
<td>pediatrics): 501</td>
<td></td>
</tr>
<tr>
<td>Other specialties: 634</td>
<td>Other specialties: 673</td>
<td>39 raw value increase</td>
</tr>
<tr>
<td>Physicians per 10,000 population: 24.7</td>
<td>Physicians per 10,000 population: 23.9</td>
<td>0.8 rate decrease</td>
</tr>
<tr>
<td>Primary care physicians per 10,000 population: 10.5</td>
<td>Primary care physicians per 10,000 population: 10.2</td>
<td>0.3 rate decrease</td>
</tr>
<tr>
<td>Dentists: 244</td>
<td>Dentists: 259</td>
<td>0.1 rate decrease</td>
</tr>
<tr>
<td>Per 10,000 population: 5.4</td>
<td>Per 10,000 population: 5.3</td>
<td></td>
</tr>
<tr>
<td>Dental hygienists: 278</td>
<td>Dental hygienists: 290</td>
<td>0.3 rate decrease</td>
</tr>
<tr>
<td>Per 10,000 population: 6.2</td>
<td>Per 10,000 population: 5.9</td>
<td></td>
</tr>
<tr>
<td>Registered nurses: 5,075</td>
<td>Registered nurses: 5,729</td>
<td>3.8 rate increase</td>
</tr>
<tr>
<td>Per 10,000 population: 113.0</td>
<td>Per 10,000 population: 116.8</td>
<td></td>
</tr>
<tr>
<td>Nurse practitioners: 171</td>
<td>Nurse practitioners: 219</td>
<td>0.7 rate increase</td>
</tr>
<tr>
<td>Per 10,000 population: 3.8</td>
<td>Per 10,000 population: 4.5</td>
<td></td>
</tr>
<tr>
<td>Certified nurse midwives: 14</td>
<td>Certified nurse midwives: 15</td>
<td>No change</td>
</tr>
<tr>
<td>Per 10,000 females ages 15-44:1.4</td>
<td>Per 10,000 females ages 15-44: 1.4</td>
<td></td>
</tr>
<tr>
<td>Licensed practical nurses: 730</td>
<td>Licensed practical nurses: 813</td>
<td>0.3 rate increase</td>
</tr>
<tr>
<td>Per 10,000 population: 16.3</td>
<td>Per 10,000 population: 16.6</td>
<td></td>
</tr>
<tr>
<td>Occupational therapists: 127</td>
<td>Occupational therapists: 144</td>
<td>0.1 rate increase</td>
</tr>
<tr>
<td>Per 10,000 population: 2.8</td>
<td>Per 10,000 population: 2.9</td>
<td></td>
</tr>
<tr>
<td>Pharmacists: 444</td>
<td>Pharmacists: 457</td>
<td>0.6 rate decrease</td>
</tr>
<tr>
<td>Per 10,000 population: 9.9</td>
<td>Per 10,000 population: 9.3</td>
<td></td>
</tr>
<tr>
<td>Physical therapists: 246</td>
<td>Physical therapists: 281</td>
<td>0.2 rate increase</td>
</tr>
<tr>
<td>Per 10,000 population: 5.5</td>
<td>Per 10,000 population: 5.7</td>
<td></td>
</tr>
<tr>
<td>Physician assistants: 193</td>
<td>Physician assistants: 229</td>
<td>0.4 rate increase</td>
</tr>
<tr>
<td>Per 10,000 population: 4.3</td>
<td>Per 10,000 population: 4.7</td>
<td></td>
</tr>
<tr>
<td>Practicing psychologists: 100</td>
<td>Practicing psychologists: 103</td>
<td>0.1 rate decrease</td>
</tr>
<tr>
<td>Per 10,000 population: 2.2</td>
<td>Per 10,000 population: 2.1</td>
<td></td>
</tr>
<tr>
<td>Psychological associates: 55</td>
<td>Psychological associates: 44</td>
<td>0.3 rate decrease</td>
</tr>
<tr>
<td>Per 10,000 population: 1.2</td>
<td>Per 10,000 population: 0.9</td>
<td></td>
</tr>
<tr>
<td>Respiratory therapists: 204</td>
<td>Respiratory therapists: 239</td>
<td>0.36 rate decrease</td>
</tr>
<tr>
<td>Per 10,000 population: 4.54</td>
<td>Per 10,000 population: 4.9</td>
<td></td>
</tr>
<tr>
<td>General hospital beds: 1,109</td>
<td>General hospital beds: 1,068</td>
<td>41 bed loss</td>
</tr>
<tr>
<td>Nursing facility beds: 2,531</td>
<td>Nursing facility beds: 2,357</td>
<td>174 bed loss</td>
</tr>
<tr>
<td>Medicaid eligibles: 78,498</td>
<td>Medicaid eligibles (2009): 84,621</td>
<td>7.8% increase</td>
</tr>
<tr>
<td>County population: 449,071</td>
<td>County population (2009): 476,038</td>
<td>6.0% increase</td>
</tr>
</tbody>
</table>

Practitioner supply. A preliminary review of the data suggests growth in the raw numbers of non-federal physicians (i.e., those not in the armed services, the US Public Health Service, the Indian Health Service, or the Department of Veterans Affairs), primary care physicians, and specialty physicians in the community between 2006 and 2010. However, there were decreases in the rates of all non-federal physicians and also primary care physicians per 10,000 population. Counts and rates climbed during this time period, however, particularly for registered nurses. More modest gains were reported for nurse practitioners, licensed practical nurses, physical therapists, physician assistants, and respiratory therapists.

School nurse to student ratios from the Guilford Local Education Agency (LEA) remained well below national standards promulgated by the American Academy of Pediatrics, the National Association of School Nurses, and the Centers for Disease Control and Prevention (1:750). For the 2006-2007 school year, Guilford LEA’s school nurse to student ratio was 1:2,227; for the 2008-2009 school year, the ratio had fallen to 1:2,241 (NC Annual School Health Services Report, 2006-2007 and 2008-2009; School Health Unit, NC Division of Public Health).

Other health professions appeared to have more complex patterns across 2006 and 2010. In particular, although the rosters of Guilford County dentists, certified nurse midwives, occupational therapists, and practicing psychologists grew, their rates per 10,000 held essentially flat. In different instances, the rates of dental hygienists, pharmacists, and psychological associates declined. Detailed tables providing the breakdown of Guilford County health professionals can be found in Appendix K. Data regarding other practitioners (e.g., podiatrists, optometrists, chiropractors) is not included here, but may be found at the same sources for Table 11.

C. Safety Net Providers

Guilford Community Care Network

Background. Guilford Community Care Network (GCCN) is a diverse local partnership that functions as a safety net for many county residents lacking access to health care – particularly uninsured, economically-disadvantaged populations at or below 225% of the federal poverty level (About GCCN; Duck, Kerr, Gruber & Strait, 2011). Physician/practice affiliation with GCCN is voluntary, and together, GCCN partners serve between 70,000 - 80,000 adults and children annually (see generally GCCN Agency Users and Visits Statistics, 2008-2010).

GCCN gathers safety net utilization and patient characteristic data each year. Select primary care findings from 2008 to 2010 are reported in Tables 12 and 13. Review suggests that although there were within-practice fluctuations, overall, there was substantial growth in unduplicated patients served by (10.7%), and numbers of annual visits to (12.6%), GCCN’s local safety net primary care partners. Moreover, between 2008 and 2010, GCCN’s Health Choice primary care patient count rose by 79.8%, its primary care uninsured/sliding fee scale patient count climbed 18.1%, and its primary care Medicaid patient count rose by 16.2% (this contrasts with a sharp 83.3% decline in the private insurance patient count). These changes may be attributed to deteriorating economic conditions in Guilford County, as well as GCCN’s use of grant monies to: (a) hire more health professionals; (b) grow its patient roster; and (c) connect enrollees to primary care medical homes (Duck et al.).

Table 12: Unique Users/Patients Served by Guilford County Safety Net Primary Care Providers, by Payer Characteristics, 2008-2010

<table>
<thead>
<tr>
<th>Year</th>
<th>Medicaid</th>
<th>Medicare</th>
<th>Private Insurance</th>
<th>Health Choice</th>
<th>Uninsured/Sliding Fee Scale</th>
<th>Other (e.g., managed care)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>36,045</td>
<td>6,486</td>
<td>3,188</td>
<td>1,265</td>
<td>21,659</td>
<td>3,953</td>
</tr>
<tr>
<td>2009</td>
<td>38,629</td>
<td>4,467</td>
<td>683</td>
<td>1,720</td>
<td>25,169</td>
<td>6,258</td>
</tr>
<tr>
<td>2010</td>
<td>41,896</td>
<td>5,313</td>
<td>516</td>
<td>2,274</td>
<td>25,576</td>
<td>4,084</td>
</tr>
<tr>
<td>% Change 2008 to 2010</td>
<td>16.2%</td>
<td>-18.1%</td>
<td>-83.8%</td>
<td>79.8%</td>
<td>18.1%</td>
<td>3.3%</td>
</tr>
</tbody>
</table>

## Table 13: GCCN Partner Primary Care Safety Net Providers, 2008-2010

<table>
<thead>
<tr>
<th>Agency and Target Population</th>
<th>Unduplicated Registered Users Patient Counts (3 year use trend end June 2008) Pay methods</th>
<th>Unduplicated Registered Users Patient Counts (3 year use trend end June 2009) Pay methods</th>
<th>Unduplicated Registered Users Patient Counts (3 year use trend end June 2010) Pay methods</th>
<th>#Annual Visits (most recent year complete, 2008)</th>
<th>#Annual Visits (most recent year complete, 2009)</th>
<th>#Annual Visits (most recent year complete, 2010)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guilford Child Health 0-200% FPL*</td>
<td>31,622 86% Medicaid = 27,195 8% Uninsured/SS*** = 2,530 4% Health Choice = 1,265 2% Private Ins = 632</td>
<td>34,399 86% Medicaid = 29,583 9% Uninsured/SS*** = 3,096 5% Health Choice = 1,720</td>
<td>37,901 86% Medicaid = 32,595 7% Uninsured/SS*** = 2,653 6% Health Choice = 2,274 1% Other = 379</td>
<td>50,307</td>
<td>56,181</td>
<td>59,000</td>
</tr>
<tr>
<td>HealthServe Community Health Clinic 0-225% FPL*</td>
<td>12,500 70% Uninsured/SS*** = 8,750 18% Medicaid = 2,250 12% Medicare = 1,500</td>
<td>12,168 75% Uninsured/SS*** = 9,126 15% Medicaid = 1,825 10% Medicare = 1,217</td>
<td>11,946 70% Uninsured/SS*** = 8,362 18% Medicaid = 2,150 12% Medicare = 1,434</td>
<td>22,235</td>
<td>24,398</td>
<td>26,179</td>
</tr>
<tr>
<td>HP Regional Adult Health Center 100-225% FPL***</td>
<td>3,154 46% Uninsured/SS*** = 1,451 28% Medicare = 883 19% Medicaid = 599 7% Other = 220</td>
<td>3,292 48% Uninsured/SS*** = 1,580 24% Other = 790 19% Medicaid = 625 9% Medicare = 296</td>
<td>2,960 Pay methods from different time period</td>
<td>9,441</td>
<td>11,256</td>
<td>11,137</td>
</tr>
<tr>
<td>Community Clinic of HP 0-100% FPL*</td>
<td>2,377 100% Uninsured/SS*** = 2,377</td>
<td>2,265 100% Uninsured/SS*** = 2,265</td>
<td>2,812 100% Uninsured/SS*** = 2,812</td>
<td>6,710</td>
<td>7,247</td>
<td>6,764</td>
</tr>
<tr>
<td>Moses Cone Family Practice 0-125% FPL*</td>
<td>9,574 34% Other = 3,274 29% Medicare = 2,777 22% Medicaid = 2,097 11% Private Ins = 1,005 4% Uninsured/SS*** = 421</td>
<td>7,600 40% Other = 3,054 30% Medicare = 2,248 16% Uninsured/SS*** = 1,253 12% Medicare = 942 1% Private Ins = 102</td>
<td>7,620 37% Medicaid = 2,838 27% Other = 2,042 20% Uninsured/SS*** = 1,543 14% Medicare = 1,044 2% Private Ins = 152</td>
<td>21,000</td>
<td>22,451</td>
<td>21,837</td>
</tr>
<tr>
<td>Moses Cone Internal Medicine Center 0-125% FPL*</td>
<td>5,100 26% Uninsured/SS*** = 1,326 26% Medicare = 1,326 21% Private Ins = 1,071 18% Medicaid = 918 9% Other = 459</td>
<td>7,353 33% Other = 2,413 27% Medicare = 2,011 23% Uninsured/SS*** = 1,680 16% Medicaid = 1,142 1% Private Ins = 107</td>
<td>6,602 40% Medicare = 2,641 26% Uninsured/SS*** = 1,717 17% Medicare = 1,122 16% Other = 1,056 1% Private Ins = 66</td>
<td>13,000</td>
<td>13,000</td>
<td>13,942</td>
</tr>
<tr>
<td>GCDPH Women’s Health (Maternity) Special conditions</td>
<td>1,279 54% Medicaid = 693 43% Uninsured/SS*** = 543 3% Private Ins = 43</td>
<td>1,220 66% Medicaid = 805 31% Uninsured/SS*** = 378 3% Private Ins = 37</td>
<td>991 54% Medicaid = 535 46% Uninsured/SS*** = 455 0.1% Private Ins = 1</td>
<td>7,203</td>
<td>6,778</td>
<td>6,513</td>
</tr>
<tr>
<td>GCDPH Women’s Health (Family Planning) Any NC resident</td>
<td>6,991 61% Uninsured/SS*** = 4,261 33% Medicaid = 2,293 6% Private Ins = 437</td>
<td>7,275 61% Uninsured/SS*** = 4,438 33% = 2,400 6% = 437</td>
<td>7,414 65% Uninsured/SS*** = 4,819 31% Medicaid = 2,298 4% Private Ins = 297</td>
<td>13,048</td>
<td>14,017</td>
<td>13,149</td>
</tr>
<tr>
<td>Guilford Adult Dental Clinic 0-225% FPL*</td>
<td>N/A</td>
<td>1,353 100% Uninsured/SS*** = 1,353</td>
<td>1,838 100% Uninsured/SS*** = 1,838</td>
<td>N/A</td>
<td>2,258</td>
<td>2,031</td>
</tr>
<tr>
<td>Al Aqsa Community Clinic Uninsured</td>
<td>Not yet open</td>
<td>Not yet open</td>
<td>Not yet open</td>
<td>N/A</td>
<td>N/A</td>
<td>377</td>
</tr>
<tr>
<td><strong>Primary Care Totals</strong></td>
<td>72,597</td>
<td>76,925</td>
<td>80,393</td>
<td>142,944</td>
<td>157,586</td>
<td>160,929</td>
</tr>
</tbody>
</table>

*FPL = federal poverty level. **0-225% federal poverty level over age 65 or hospital follow-up. ***SS= sliding fee scale. Examples of “other” payments include managed care coverage.

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**Source.** GCCN, January 29, 2012, personal communication).
**Specialty Care**

**GCCN Efforts**

*Goals of the network, vis-à-vis specialty care.* GCCN projects that, due to current trends, more and more of its patients will need specialty health care services (Duck et al.). Bearing this in mind, GCCN has worked over time to add specialty physicians to its fold, most recently through the employment of a Network Development Specialist. GCCN’s hope is to make specialty care services more accessible and affordable for uninsured individuals, outside of costly treatment settings like the emergency department (Duck et al.; GCCN PowerPoint presentation, 2012).

*Specialty care access complications: patient counts.* GCCN suggests that it is difficult to generate complete and accurate figures for uninsured specialty care referrals. This is because practices have their own methods of making referrals, as well as different ways of recording and disseminating associated data. Such distinct approaches muddy the local picture of specialty care access (Duck et al.). The distribution of specialty care referrals for 2011 is outlined in Appendix M.

*Specialty care access complications: provider issues.* Although significant progress has been made, GCCN has found practitioner recruitment challenging. More specifically, GCCN reports inadequate specialty physician participation in its program, and no involvement at all from certain specialties (e.g., endocrinology, ENT, gastroenterology, orthopedics, rheumatology, urology; GCCN PowerPoint presentation). Moreover, some specialty care physicians have been inclined to reduce the numbers of GCCN patients they see, and some no longer accept Medicaid or Medicare patients (Duck et al.). To help address these service gaps, GCCN has worked with Wake Forest Baptist Medical Center and the UNC-Chapel Hill Hospitals to negotiate referrals into those institutions’ specialty care clinics. GCCN also has adjusted its specialty physician enrollment strategies (Duck et al.). To this issue, Appendix M includes an overview table of the specialty care referrals by source for 2011 and readers are encouraged to scan the Appendix for this more in-depth information.

Related to this context, GCCN has discovered, based upon internal data (comprised of figures from HealthServe/Triad Adult and Pediatric Medicine, Partnership for Health Management/Cone Family Practice, and Cone Internal Medicine [partial counts]), that there are significant community needs for radiology, dental, rehabilitative therapy, ophthalmology, and gastroenterology interventions (GCCN Network Development Specialist, January 20, 2012 personal communication).

GCCN also has concluded that costs of care vary widely by specialty, with some practitioners waiving fees, but others implementing discounts/sliding scales, setting up payment plans for services, or pricing uninsured patients out of treatment (Duck et al.; GCCN PowerPoint presentation). In some cases, too, outside funding may alter the landscape and availability of specialty treatment (e.g., the Lion’s Club’s connection to ophthalmology; Duck et al.).

Important as well, GCCN has determined that access may be problematic for uninsured patients receiving on-call specialty care through the Cone Health System emergency department. Although the system obliges on-call specialists to see emergency department patients for follow-up care once within their practices, patients may find it challenging to get an appointment, and/or they may have to pay for the visit. This situation can, in turn, set up revolving doors in local emergency venues (Duck et al.).

Additional challenges reported by practice managers include issues of noncompliance (e.g., no-shows, nonpayment), lack of awareness about GCCN, substantial existing patient loads and responsibilities, specialty provider shortages and insufficient staffing, influx of on-call follow-up patients from emergency departments, as well as limited abilities to absorb the costs of indigent specialty care (this includes lab work, X-rays, and other procedures) (Duck et al.; GCCN PowerPoint presentation). Others also have shared questions about GCCN referral processes, and they have voiced that there is a strong need for all – not just a few – practitioners to help the underserved.

**Emergency Care**

*Emergency Department Visits and GCCN Community Liaison Contacts*  

*Findings from a 2009 calendar year study of emergency department visits.* Two major emergency departments serve Greater Greensboro: Moses Cone Memorial Hospital and Wesley Long Community Hospital. Each is staffed with GCCN Community Liaisons. These persons assist economically-disadvantaged, uninsured adults in applying for and receiving
Orange Cards, which qualify them for free or reduced-cost, non-urgent, primary medical care (Gruber, Duck, & Ellerby, 2010) and are particularly designed for patients with an income between 0%–200% of the federal poverty level. Community Liaisons also help Orange Card holders visiting emergency departments for non-urgent medical needs to sign up with primary care practitioners.

In a 2010 study (Gruber et al.), researchers found that just over half of admissions to the emergency departments in 2009 were for non-urgent needs (Gruber et al.). More specifically, researchers concluded there were no major distinctions between Orange Card and self-pay patient usage of Moses Cone and Wesley Long emergency departments during the 2009 calendar year. They suggested that non-urgent utilization figures reflected: (a) an insufficient supply of primary care providers addressing the needs of uninsured, underinsured, and other disadvantaged patients; (b) medical issues that are significant to patients; and (c) the need among these patients for follow-up care (Gruber et al.).

Study authors also reported that Orange Card holders had more visits, on average, than self-pay patients in 2009 (Gruber et al.). Roughly 75% of Orange Card visitors went to the emergency department two or more times during the year; approximately 60% of self-pay patients went to the emergency department more than once during the year. First visits for the Orange Card sample were more often for non-urgent needs, as compared to self-pay patients. However, for later visits, the percentage of non-urgent needs appeared to even out among the groups; about half of later visits were for non-urgent needs, regardless of Orange Card or self-pay status. Furthermore, the frequencies of repeat visits and non-urgent visits, as well as peak utilization rates, were about the same for both patient samples (Gruber et al.).

Whether needs were urgent or non-urgent, more than 60% of Orange Card patients were female; self-pay patients were more evenly split between male and female. Orange Card visitors were older on average and also more likely to be racial minorities. Summary data from Gruber et al. are provided in Table 14. About 90% of self-pay and Orange Card patients were treated and released from the emergency departments in 2009. Additionally, both groups had comparable presenting and discharge diagnoses; however, one of the leading (i.e., top 20) reasons Orange Card visitors came to the emergency departments was to follow-up on prior services (Gruber et al.). Importantly, too, dental disorders ranked highly for both groups’ presenting and discharge diagnoses.

Table 14: Discharge Outcomes of Low Income Emergency Department Patients, by Payment Type Group, 2009

<table>
<thead>
<tr>
<th>Patient Outcomes</th>
<th>Self-Pay</th>
<th></th>
<th>GCCN/ Orange Card</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent</td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>Discharged</td>
<td>39,325</td>
<td>90.3</td>
<td>3,650</td>
<td>90.1</td>
</tr>
<tr>
<td>Admissions</td>
<td>2,175</td>
<td>5.0</td>
<td>282</td>
<td>7.0</td>
</tr>
<tr>
<td>Transferred from ED</td>
<td>217</td>
<td>0.6</td>
<td>5</td>
<td>0.1</td>
</tr>
<tr>
<td>Left Before Being Discharged</td>
<td>1,317</td>
<td>3.0</td>
<td>94</td>
<td>2.3</td>
</tr>
<tr>
<td>Expired</td>
<td>51</td>
<td>0.1</td>
<td>4</td>
<td>0.1</td>
</tr>
<tr>
<td>No Data</td>
<td>116</td>
<td>0.3</td>
<td>3</td>
<td>0.1</td>
</tr>
<tr>
<td>Mau Admissions/Transfers</td>
<td>217</td>
<td>0.6</td>
<td>12</td>
<td>0.3</td>
</tr>
<tr>
<td>Total</td>
<td>43,526</td>
<td>100.0</td>
<td>4,050</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source. Adapted from Gruber et al. 2010.

GCCN Community Liaison contacts from October to December 2009. GCCN Community Liaisons at both emergency departments logged their adult patient contacts for a three-month period in the fall of 2009. The summary figures are reported in Table 15 and Appendix N, with federal poverty and self-pay status indicated. Geographic information system maps of emergency room utilization involving community liaisons by month from October to December 2009 are located in Appendix N. A brief analysis suggests that 86.7% of GCCN Community Liaisons’ contacts during this time were with self-paying adult patients below the federal poverty level. Data indicated that the program reduced future emergency department visits by 6.2% (see Table 15).
**Table 15: Community Liaison Contacts with Emergency Department Patients, Moses Cone (MC) and Wesley Long (WL) Hospitals, 2009**

<table>
<thead>
<tr>
<th>Month</th>
<th>MC** Contacts</th>
<th>WL Contacts</th>
<th>Combined MC** and WL Contacts</th>
<th>MC** Contacts with Self-Pay Adults Below FPL***</th>
<th>WL Contacts with Self-Pay Adults Below FPL***</th>
<th>Combined MC** and WL Contacts with Self-Pay Adults Below FPL***</th>
<th>Self-Pay Patient Counts^</th>
</tr>
</thead>
<tbody>
<tr>
<td>October 2009</td>
<td>152</td>
<td>102</td>
<td>254</td>
<td>127</td>
<td>88</td>
<td>215</td>
<td>5,761</td>
</tr>
<tr>
<td>November 2009</td>
<td>69</td>
<td>86</td>
<td>155</td>
<td>55</td>
<td>71</td>
<td>126</td>
<td></td>
</tr>
<tr>
<td>December 2009</td>
<td>107</td>
<td>81</td>
<td>188</td>
<td>91</td>
<td>65</td>
<td>156</td>
<td>1,964</td>
</tr>
<tr>
<td>Totals</td>
<td>312</td>
<td>261</td>
<td>573</td>
<td>273</td>
<td>224</td>
<td>497</td>
<td>5,761</td>
</tr>
</tbody>
</table>


*Contacts occurred between the hours of 8:30 a.m. and 5:00 p.m. **Based on Moses Cone Memorial Hospital Emergency Department. ***FPL = federal poverty level. ^Does not include GCCN patients. ^^Includes all self-pay Moses Cone Memorial Hospital Emergency Department patients.

**Economic Analysis of Case Management**

Ruhm and Brod (2008) conducted a descriptive study of the use of the community health care system based on emergency department data provided by Moses Cone Health System. Service areas for Moses Cone include Guilford County, large areas of Rockingham and Randolph counties, and small pieces of surrounding counties. The report offered the first phase of a research program designed to estimate the extent of potential cost savings in the health system by examining case management’s ability to reduce the health system’s cost through monitoring and advising patients on maintaining good health. The data report analyzed over 26,000 individuals and close to 40,000 emergency departments as well as cases where medical costs were either unpaid or not fully reimbursed. The data compared the top 200 most intensive emergency department users – measured by the number of users and the total charges. Only visits that were either unreimbursed or not fully reimbursed were selected in order to concentrate on care provided to uninsured or underinsured patients. The data compared individual samples with the most frequent users of the emergency department or those that ran up the highest unpaid charges. “High –Frequency” users were defined as having the highest number of visits in one year and “High-Charge” users were those who had the highest emergency department charges during the fiscal year.

The findings from the analysis show that 748 of all emergency department users visited the emergency department five or more times during the FY 2006. One hundred people visited at least 10 times. High frequency users incurred the same costs per visit as all users. However, the “Highest 200” and “Highest 500” users accounted for 5.1% and 9.8% of total charges, respectively. The High-Charge users (top 200) accounted for almost 18% of all emergency department charges and the top 500 High-Charge users accounted for more than 29% of all emergency department costs for the fiscal year. More importantly, High-Charge users visited the emergency department for different reasons than either High-Frequency users or all users. A majority of the High-Charge users entered the emergency department for cardiac issues.

**Oral Health**

**Adult Dental Care**

*Dental Access Program.** Guilford County’s Dental Access Program – the only safety net provider of its kind locally, and coordinated by GCCN – offers a broad range of dental services to the community’s uninsured and economically-disadvantaged adults (between 0-200% of federal poverty level with only a one $20 cash copay; Duck et al.). Patients receive referrals for treatment from primary care practitioners, they must meet certain eligibility requirements, and they are required to supply small co-pays. Patients may be seen in day or evening clinics by paid or volunteer staff.

Of note, most appointments at the Dental Access Program are for cleanings, toothache, and cavities. More than 75% of patients questioned by the program had not had a prior dental visit in more than one year. This data, in turn, illustrates the importance of oral health education in our community.
A 3-year trend as of June 2009 revealed an unduplicated registered Guilford Adult Dental Clinic patient count of 1,353. There were 2,258 annual visits for the most recent year completed. By June 2010, the patient count had risen to 1,838, with annual visits of 2,031 (Agency Users and Visits Statistics, 2009 and also 2010, GCCN, January 29, 2012 personal communication). Although the annual visits were down slightly, this may be accounted for by the fact that clinic patients often have more dental work done at any one time than might be expected in other settings – this is to avoid multiple follow-up visits (Duck et al.).

**Visits to dentists and tooth extractions.** Basic 2006 and 2010 Guilford County dental data – from the BRFSS – is noted in Table 16; these years were selected to coincide with health professionals supply figures appearing above. The numbers seem to suggest that more Guilford County residents have been to a dentist/dental clinic within the past year – as compared to 2006 – but that there is still an opportunity to connect more people to dental homes.

<table>
<thead>
<tr>
<th>Question/Indicator</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>How long has it been since you last visited a dentist or dental clinic for any reason? (% Adults)</strong></td>
<td>1-12 Months</td>
</tr>
<tr>
<td>(65.5%)</td>
<td>(75.7%)</td>
</tr>
<tr>
<td><strong>How long has it been since you had your teeth cleaned by a dentist or dental hygienist?</strong> (% Adults)</td>
<td>2006</td>
</tr>
<tr>
<td>(67.1%)</td>
<td>(75.5%)</td>
</tr>
<tr>
<td><strong>How many of your teeth have been removed because of tooth decay or gum disease?</strong> (% Adults)</td>
<td>1 to 5</td>
</tr>
<tr>
<td>(31.5%)</td>
<td>(28.5%)</td>
</tr>
<tr>
<td><strong>Adults who have visited a dentist, dental hygienist, or dental clinic within the past year (derived variable) (% Adults)</strong></td>
<td>Yes</td>
</tr>
<tr>
<td>2010</td>
<td>2010</td>
</tr>
<tr>
<td>(76.4%)</td>
<td>(23.6%)</td>
</tr>
</tbody>
</table>

Source: BRFSS, NC State Center for Health Statistics (Accessed January 2012, from [http://www.schs.state.nc.us/SCHS/brfss/2010/guil/topics.html](http://www.schs.state.nc.us/SCHS/brfss/2010/guil/topics.html)).

Note: Guilford County raw numbers are small, and so results are subject to caution.

*Dose not include teeth lost for other reasons (e.g., injury). **Results are only for participants who had teeth.

**Challenges to getting care.** There are several difficulties associated with dental care locally. In addition to the unchanging rate of dentists in Guilford County across time (see above discussion of practitioner supply), resources like the Dental Access Program report transportation issues, lack of dental hygiene education, substantial waiting lists, inability to see walk-in appointments, income requirements/restrictions, and patient ineligibility for orthodontic or major restorative interventions as complications affecting access.

**Pediatric Dental Care**

**Regional and county-level findings.** 2009-2010 CHAMP oral health results for the Piedmont appear in Table 17. School-age oral health figures for Guilford County are noted as well. The data suggest more children may need help identifying dental homes. Additionally, children in this geographic area are not seen as often as professional standards suggest (i.e., every six months).
### Table 17: Pediatric Oral Health Indicators, Piedmont Region*, 2009-2010

<table>
<thead>
<tr>
<th>Question</th>
<th>Response Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>How would you rate the condition of CHILD’s teeth?**</td>
<td><strong>Excellent</strong> (47.1%)</td>
</tr>
<tr>
<td></td>
<td><strong>Very Good</strong> (29.8%)</td>
</tr>
<tr>
<td></td>
<td><strong>Good</strong> (18.1%)</td>
</tr>
<tr>
<td></td>
<td><strong>Fair/Poor</strong> (4.9%)</td>
</tr>
<tr>
<td>Does s/he have a dentist or dental clinic where s/he goes regularly?**</td>
<td>Yes (82.5%)</td>
</tr>
<tr>
<td></td>
<td>No (17.5%)</td>
</tr>
<tr>
<td>About how long has it been since CHILD last saw a dentist?***</td>
<td>Never (12.7%)</td>
</tr>
<tr>
<td></td>
<td>6 months or less (73.0%)</td>
</tr>
<tr>
<td></td>
<td>7 months to 1 year (9.1%)</td>
</tr>
<tr>
<td></td>
<td>More than 1 year (5.2%)</td>
</tr>
<tr>
<td>Has CHILD been to a dentist within the past 12 months?***</td>
<td>Yes (82.1%)</td>
</tr>
<tr>
<td></td>
<td>No (17.9%)</td>
</tr>
</tbody>
</table>

**Oral Health Status, Guilford County^**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number and % of children screened, Kindergarten</td>
<td>5,087 (94%)</td>
<td>4,993 (91%)</td>
</tr>
<tr>
<td>% Children screened with decayed primary (baby) teeth, Kindergarten</td>
<td>16% (NC: 21%)</td>
<td>14% (NC: 17%)</td>
</tr>
</tbody>
</table>

*The Piedmont region contains 35 counties, including Durham, Forsyth, Mecklenburg, and Wake. **Questions are asked for children one year and older. ***Dentists include orthodontists, oral surgeons, other dental specialists, and dental hygienists. ^Results for Guilford County 5th graders are not available.

**Into the Mouths of Babes program/Guilford Child Development.** In response to the ongoing oral health needs of its youngest citizens, NC implemented the Into the Mouths of Babes (IMB) initiative. A strong State, provider, academic, and public health partnership, IMB is an early prevention program for children under age three. It trains physicians to identify the signs of oral disease, provide oral health education and preventive services (e.g., fluoride varnish application), and make referrals to dentists for further treatment. The program expanded from a pilot in the Appalachian region to a statewide undertaking with the introduction of Medicaid reimbursement; Medicaid pays for up to six IMB visits, to age three and a half (Andrews, 2009).

The number of children served by IMB has grown from 8,300 in 2001 to more than 57,000 in 2007 (Andrews). Preliminary data shows reductions in treatment-related expenditures (e.g., for front tooth decay) for children receiving four or more IMB visits (details can be found at http://www.ncdhhs.gov/dph/oralhealth/partners/IMB.htm).


**Family Planning Concerns and Sexual and Reproductive Health**

**Smart Girls Life Skills Training Team Study**

**Title X family planning services.** According to the Cecil G. Sheps Center for Health Services Research at the University of NC at Chapel Hill (DeClerque, Shanahan, Schectman, & Perry, 2011), there is a decade-long decline in use of family planning services within the Medicaid community in the southeast region of the US. Accordingly, in 2010, a community needs assessment was conducted to address the reproductive and sexual health concerns of Guilford County’s young adult females, ages 18-25 (Graves et al., 2010). The team administered surveys and conducted focus groups with this population, inquiring about issues like health insurance, the availability of sexual and reproductive health services, and difficulties accessing resources.
Health insurance and access to resources. Researchers reported that 69.1% of survey participants had health insurance, whereas 30.9% did not. Notably, pregnant/parenting young women lacked health insurance more than non-pregnant/non-parenting young women (Graves et al.). 64.5% of survey participants indicated visiting their doctor annually for a pap smear, but 35.5% noted they did not. Additionally, 75.5% of survey takers stated they had access to birth control, 59.9% to STI testing, 56.8% to family planning, 50% to Emergency Contraception (Plan B), and 45.3% to counseling. However, pregnant/parenting respondents reported access to Emergency Contraception and counseling less often than their non-pregnant/non-parenting counterparts (Graves et al.).

Barriers to access. In the course of the study’s survey, providers in the areas of sexual and reproductive health indicated that the most significant challenge to getting care was limited awareness of resources. Other frequently identified difficulties were transportation, cost, time, availability of child care, stigma, and the idea that services are hard to get (Graves et al.). Some providers believed there were enough sexual and reproductive health services in Guilford County, but others did not.

Importantly and similarly, focus group and interview participants stated that access remained the substantive problem in utilizing local sexual and reproductive health services. Study authors found that access concerns centered around: (a) cost/perceived cost and insurance coverage; (b) stigma or fear (e.g., of being labeled promiscuous, of not knowing what to expect during a doctor’s visit); and (c) low health literacy, as well as a related, diminished understanding of fertility and contraception (Graves et al.). Other access-associated difficulties included inaccurate perceptions of poor quality care offered by public entities (e.g., the health department), and the limited usefulness of traditional sex education.

Mental Health and Substance Abuse Services

In 2010, Cone Health Foundation commissioned two white papers, one on addressing substance abuse and the other on the state of mental health in Guilford County (Wolfson, Easterling, & Wagoner, 2010; Graves, Buford, Frison, Ireland, Shelton, 2010). Across the two white papers, similar gaps and challenges were found to exist in both local services systems, resulting in some parallel recommendations. Regarding access to treatment, survey respondents and focus group participants reported severe limits in the availability of inpatient/residential treatment facilities as well as both mental health and substance abuse services for specific groups such as the Hispanic/Latino community, homeless population, immigrant populations, and adolescents. Access to both mental health and substance abuse treatment for adolescents was a key area needing improvement due to service definitions, lack of referrals being made for services, and a limited number of available providers. Additional challenges to accessing services identified by participants included significant waitlists for services, difficulty navigating the service system, and limited space in inpatient/residential treatment facilities. In addition, similar to providing health care, frustration was voiced by local providers with the system of reimbursement and insurance guiding the treatment rather than the needs of the clients in many cases. Among recommendations, a “one-stop” shop that would provide services across the continuum of care was central as it relates to accessing care. Increasing education about mental health and substance abuse among individuals in the community as well as increasing coordination between existing service providers were other key recommendations related to accessing care.

Furthermore, data reported in the NC Division of Mental Health, Developmental Disabilities and Substance Abuse Services 2010-2013 strategic planning report included estimates of the percentage of consumers in need of services that could successfully access behavioral health care. Estimates indicate that 27% of those in need of mental health care, 52% in need of developmental disabilities, and 43% in need of substance abuse services are able to access care.

D. Recent Access Recommendations


Health care access was identified as a major local issue in the 2009-2010 needs assessment conducted by Voices. Choices. In response, the United Way of Greater Greensboro and the Cone Health Foundation convened a group of community leaders to address accessibility, availability, and acceptability/effectiveness dimensions of health care, with the goals of: (a) increasing rates of health insurance or other health care coverage; (b) improving access to primary care, including
services for medical, dental, mental health, substance abuse needs; and (c) eliminating health disparities (United Way of Greater Greensboro, Cone Health Foundation, & Pudlo, 2011).

In its summary report (United Way of Greater Greensboro et al.), task force members expanded on these and key related concerns:

- **Connecting people to resources, particularly:** confusion among patients and providers regarding where and how to get care for an array of health needs, as well as how to successfully navigate referrals and other impediments to treatment. Also, attending to varying degrees of health literacy (see below), knowing, too, that in 2010, Americans with the lowest levels of education were about two times more likely to have delayed medical care for reasons of cost, and they were nearly three times more likely to have not had medical care for reasons of cost than Americans with the highest levels of education (Adams, Martinez, Vickerie, & Kirzinger, 2011).

- **Up-to-date information, especially:** the need for easy-to-find, centralized health care resource data, to include contact and program eligibility details; patients and providers should be able to use and understand this resource.

- **Establishing myriad health care system entry points, specifically:** employing a “no wrong door” strategy whereby community agencies adopt comparable assessment/intake procedures and help patients connect with services; this approach would reduce confusion among patients, it would alleviate the burdens of multiple intakes, and it would increase access to care no matter which portal of entry patients use.

- **Focusing on the quality of patient-provider interactions, principally:** enhancing effective communication between patients and providers by recognizing and nurturing greater respect for personal and cultural dimensions of well-being; acting to remedy poor health literacy (see above).

- **Mitigating disparity-producing conditions, chiefly:** acknowledging the impacts of race on health status, including discrepant access to health care, differential prevalence of health conditions, and varying environmental health inducements (e.g., availability of nutritious foods, discrimination, insurance coverage); helping providers move from culturally-competent to culturally-proficient treatment; remaining aware of the increasing diversity of Greensboro and Guilford County.

- **Evaluating outcomes, notably:** identifying ways to study access to care and its changes; using measures at multiple levels (e.g., individuals, families, agencies/programs, communities) that clearly demonstrate the impact of improvement efforts, apart from confounding influences.

- **Addressing patient accountability, mainly:** investigating issues of patient noncompliance (e.g., no-shows, not following treatment recommendations); seeing these matters in the context of poor health literacy (see above); potentially involving health navigators to assist patients and providers.

**Overarching community action plans.** Subsequently, the Voices. Choices. task force underscored the complicated nature of health care access, and it determined that no one improvement strategy exists. It looked to both consumer-oriented, as well as systems-level, remedies, and it emphasized potential synergy between the two. Moreover, it concluded that Greensboro already possesses the capacity to pursue access remedies, without creating new or different agencies (Voices Choices Health Care Access Task Force et al., 2011). The group explored and set forth the following options:

- **Creating a detailed and navigable health care database** – one that patients, patient advocates, and providers can use. It may or may not be necessary to create a new resource for this purpose; a possible idea is to update the United Way’s 2-1-1 directory. The system might require ongoing testing, revision, translation, and marketing (see below). Notably, database usage figures could highlight areas of need, and callers might be connected to care through this portal of entry.

- **Implementing an exploratory lay health navigators effort in parts of Greensboro significantly impacted by chronic disease** (link to Healthy Carolina 2020 goals). This initiative would likely involve established social service or health care agencies partnering with community institutions (e.g., Congregational Nursing Program, Building Stronger Neighborhoods) to identify, educate, and encourage community health workers. The workers, in turn, would help their neighbors address obstacles to care, establish medical homes, increase health literacy, experience greater self-determination, and enhance treatment compliance, all while exhibiting sensitivity to racial and cultural concerns. This could boost health outcomes and mitigate health disparities; it also might better relationships between patients and providers. (See the Appendix for patient navigation implementation phases.)

- **Growing the numbers of professional patient navigators.** This approach would require capacity-building within some of Greensboro’s health and social service entities (e.g., training existing or adding new staff). Professional navigators – whether social workers, congregational nurses, or case managers – would then collaborate with patients who have
complicated health issues and/or low health literacy (again, with particular attention to racial and cultural factors). Results could include more timely and appropriate use of health care resources, as well as increased patient participation in care. This could bolster wellness. (See the Appendix for patient navigation implementation phases.)

- **Conducting public awareness activities.** Various media-related activities could dovetail with existing and future access improvement strategies. Campaigns might focus attention on the importance of primary medical homes, well-child care, where and how to find health care services, communicating with providers, and the availability of the database referenced above. Other options could include a health disparities/health literacy/patient navigation conference.

- **Increasing health literacy among patients.** To advance patient health comprehension, patient-provider engagement, treatment compliance, and outcomes, it may be helpful to roll out the National Patient Safety Foundation’s (NPSF) “Ask Me 3” model (the three questions are, “What is my main problem?” “What do I need to do?” and “Why is it important for me to do this?”); see generally [http://www.npsf.org/for-healthcare-professionals/programs/ask-me-3/](http://www.npsf.org/for-healthcare-professionals/programs/ask-me-3/): a NPSF patient Checklist for Getting the Right Diagnosis can also be found at: [http://www.npsf.org/for-patients-consumers/tools-and-resources-for-patients-and-consumers/checklist-for-getting-the-right-diagnosis/](http://www.npsf.org/for-patients-consumers/tools-and-resources-for-patients-and-consumers/checklist-for-getting-the-right-diagnosis/). Special efforts could also be made to disseminate easy-to-read health literature in medical offices and other gathering spaces (e.g., churches), and to spread the word regarding the aforementioned resource directory; importantly, this should be done consistently. Additionally, health-related matters could become part of current community- and adult-education curricula. Partners in health literacy endeavors could be providers, as well Reading Connections and AmeriCorps (see [http://www.cdc.gov/healthcommunication/ToolsTemplates/HealthLiteracy.pdf](http://www.cdc.gov/healthcommunication/ToolsTemplates/HealthLiteracy.pdf) for a brief 2009 Centers for Disease Control and Prevention summary report, What We Know About Health Literacy).

- **Enhancing the health care experience.** Related to the points above, providers could participate in the “Ask Me 3” initiative. Local experts might help them draft and use easy-to-read health materials. Significantly, more cultural-proficiency training opportunities could be made available, with an emphasis on institutional- and systems-level change (see [http://www.hrsa.gov/publichealth/healthliteracy/](http://www.hrsa.gov/publichealth/healthliteracy/) for information about a free online training module, Effective Healthcare Communication 101, supported by the Health Resources and Services Administration). Stakeholders in this training area might include medical educators.

### Other Local Groups and Studies

**Specialty Care.** Taking into account the multi-dimensional challenges affecting Guilford County, GCCN has put forth several ideas to increase access to specialty care. These involve asking specialty care physicians to: (a) see certain numbers of patients within their practices, using in-office volunteer and traditional appointment models; (b) see patients in health department-, hospital-, or other community health-clinics; or (c) see certain numbers of patients within their practices, using a clinic model (however, a quota paradigm has not succeeded historically) (Duck et al.; GCCN PowerPoint presentation).

Per GCCN, another option might be to use grant dollars to purchase specialty equipment for after-hours, within-practice clinics; alternatively, a clinic could be established at a Cone Health System hospital, featuring all necessary equipment, with specialty practitioners rotating through on a regular basis (Duck et al.). More suggestions involve streamlining and clarifying specialist referral, as well as case management, processes (and their reporting). It might also be worth exploring ways to link hospital privileges to services for the uninsured, to have hospitalists serve periodically at community health clinics, and to encourage physician-led efforts to address specialty care problems (Duck et al.).

**Oral Health.** Solutions offered up by the Guilford County Dental Access Program involve expanding the range of services available beyond basic dental care, accepting forms of payment other than cash, scheduling regular walk-in times, and seeing patients on occasional Saturdays. Other ideas include allowing patients outside of GCCN access to oral health services, increasing dental hygiene efforts in the community, and making dental care mobile (e.g., using health statistics to target/serve high need areas).

**Family Planning and Sexual and Reproductive Health.** Smart Girls focus group and interview participants emphasized the Guilford County Department of Public Health (including the Smart Girls program), the YWCA, the Women’s Resource Center, Planned Parenthood, Nurse Family Partnership, Guilford Child Development, and major college campuses (e.g., UNCG and NCA&T health centers) as key local care providers. However, participants also proposed enhancements to Guilford County’s continuum of sexual and reproductive health services. In particular, they suggested
employing a parenting curricula focused on young mothers, establishing a multi-faceted teen resource center, providing information and education about positive relationships, helping young parents share with others the challenges of raising children, finding ways to help young mothers finish school, and promulgating peer support networks (Graves et al.). Additionally, survey takers recommended making improvements in school-based sex education, offering sex education in other environments, and pursuing media-based sexual and reproductive health campaigns.

III. Listening to Guilford County Residents: Community Perceptions of Health Care Access

Because health care access is multi-faceted and impacts the community at large, it is important that the voice of the community is heard and integrated into community action plans. Thus, consistent with a participatory action framework and to solicit community input and information about health care access in our community, six focus groups, 26 key informant interviews, and an online and paper-based community survey were completed in January-February 2012. With various audiences in mind, the team developed semi-structured interview protocols for key informant interviews and focus groups, as well as survey questions that were guided by the Institute of Medicine’s (IOM) Committee on Monitoring Access to Personal Health Services’ definition of health care access (Milliman, 1993, as cited in Gold, 1998). In addition, the interview, focus group, and survey questions reflected the domains of Availability, Accessibility, Accommodation, Affordability, and Acceptability, as outlined in section I.B. above. Notably, the team generated one additional access-associated dimension for the protocols – patient Accountability – to reflect the bidirectional nature of health care relationships.

The interview and focus group questions, the survey, as well as all associated administrative activities (e.g., recruitment procedures, incentives, and confidentiality protections) went through multiple rounds of consideration and review. The interview and survey instruments also were vetted by a health literacy expert prior to distribution to ensure respondent comprehension. All protocols and instruments were reviewed and approved by the NC A&T State University Institutional Review Board (IRB) prior to beginning the study.
A. Quantitative Findings

Survey Instrument. The NC A&T research team assembled a health care access survey using the available literature on health care access and guided by previous surveys on this issue, such as the Centers for Disease Control and Prevention’s National Center for Health Statistics. The survey integrated the aforementioned “5 A’s of access” constructs, and it touched on other access-related considerations (e.g., preventive health services, dental health, satisfaction with care) that typically appear in large-scale, population-based surveys like the Medical Expenditure Panel Survey, the Medicare Current Beneficiary Survey, and the Survey of Family Health Experiences (see generally Eden, 1998; see also Kasper, 1998, and Miller, 1998). Importantly, the team’s adapted instrument also featured a Parenting Section, prompting respondents to answer access questions on behalf of their children and families. The focus group and interview questions and research documents can be found in Appendices O & P.

The survey was available in paper-and-pencil, as well as electronic, formats; it also was translated into Spanish (time and resources did not allow although for translation into other languages). The survey was posted online to SurveyMonkey, and the research team shared the relevant link with a large e-mail distribution list. Recipients were asked to forward the link, per a convenience (i.e., snowball) sampling model. A GIS map of survey respondents below shows that the city was broadly represented across zip codes.

A total of 440 individuals completed the survey. Participants were diverse in terms of gender, ethnicity/race, and role (provider, family member, faith community, etc.). 80.3% were female, 19.2% were male, .5% were transgendered. Approximately 48.8% were White, non-Hispanic, 42.7% were African-American, 2.8% were Biracial/Multiracial, 2.1% were Hispanic, 1.2% were Asian, .9% were American Indian or Alaskan Native, and 1.4% reported ‘other ethnicity’. The average age of respondents was 43.25-years-old (range of 18-years-old to 81-years-old). Approximately 97.6% spoke English as their primary language, 1.9% spoke Spanish as their primary language, .2% spoke French as their primary language, and .2 spoke ‘other’ languages that they did not identify. Approximately 47.6% were married, 32.6% were single, never married, 11% were divorced, 4.8% were separated, 2.9% were widowed, and 1.2% indicated ‘other’. Approximately 34.2% of respondents indicated an annual income under $19,999, 21.8% reported annual income of $20,000-$39,999, 12.5% reported annual income of $40,000-$49,999, 19.6% reported annual income of $50,000-$75,000, and 12% reported annual income of greater than $75,000. A total of 59.2% of respondents did not have children; 40.8% reported having at least one child under the age of 18-years-old in their home. A total of 25.4% of respondents worked in the health care field in one area or another (e.g., nurse practitioner, mental health professional, physician, etc), and 74.6% were not in the health care field. Only those respondents who worked or lived in Guilford County were included in the analysis.

General Snapshot. 20% of respondents reported that they had problems getting the health care that they needed in the past 12 months. There were no differences based on gender or ethnicity, but there were differences in these responses based on health insurance status in that if respondents reported having health insurance, they were less likely to report that they had problems getting the health care that they needed, χ² (1, N = 422) = 48.85, p < .001. The primary barriers cited by those who reported difficulties included, “I do not have health insurance” (7.3%), “I cannot afford the costs” (10.5%), “My insurance does not cover what I need” (4/1%), “My deductible/co-pay is too high” (4.3%), “I do not know where to go” (1.6%), and “I cannot get an appointment” (2.5%). Among those that reported these barriers, 78.3% reported that they kept them from getting the health care they needed.

Respondents answered a series of questions on a 4-point scale, with “1” equating to less agreement and “4” equating to more agreement, which assessed their opinions on a series of statements. The responses are summarized in Table 18.
Table 18: Opinions on Health Care Access in Greensboro, 2012

<table>
<thead>
<tr>
<th>Questions</th>
<th>Average Score (1-4, 4=Strongly Agree)</th>
<th>Differences Noted</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am happy with the care I receive.</td>
<td>3.07</td>
<td>Ethnic difference; Gender Difference; Age Difference; Health Insurance Difference</td>
</tr>
<tr>
<td>I am happy with my ability to get an appointment for my health care.</td>
<td>3.07</td>
<td>Ethnic difference; Gender Difference; Age Difference</td>
</tr>
<tr>
<td>It is easy for me to get transportation to my appointments.</td>
<td>3.32</td>
<td>Ethnic difference; Health Insurance Difference</td>
</tr>
<tr>
<td>I am satisfied with the cost of my medical care.</td>
<td>2.48</td>
<td>Health Insurance Difference</td>
</tr>
<tr>
<td>I can afford the medical care that I receive.</td>
<td>2.65</td>
<td>Health Insurance Difference</td>
</tr>
<tr>
<td>I feel that I have a choice in choosing my healthcare provider.</td>
<td>3.00</td>
<td>Ethnic difference; Gender Difference; Age Difference; Health Insurance Difference</td>
</tr>
<tr>
<td>I am happy with my health care insurance.</td>
<td>2.69</td>
<td>Health Insurance Difference</td>
</tr>
</tbody>
</table>

Post hoc analyses indicated that there were significant differences in responses based on ethnicity (see the variables that say “Ethnic Difference”), with White respondents reporting higher levels compared to African American respondents on those items. In addition, on the variables that are noted as having “Gender Difference”, female respondents reported higher levels compared to males. Finally, on the variables that say “Age Difference”, older respondents reported higher levels compared to males. Independent-samples t-tests indicated that across all of these items, those who reported that they had health insurance reported higher scores for each item, indicating that those who have health insurance are more pleased with their access to health care.

Table 19: Opinions on Barriers to Health Care in Greensboro, 2012

<table>
<thead>
<tr>
<th>Answer Options</th>
<th>First Ranked Barrier</th>
<th>Second Ranked Barrier</th>
<th>Third Ranked Barrier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of insurance</td>
<td>266</td>
<td>29</td>
<td>22</td>
</tr>
<tr>
<td>Insurance doesn’t cover what is needed</td>
<td>24</td>
<td>106</td>
<td>39</td>
</tr>
<tr>
<td>Deductible/co-pays too high</td>
<td>42</td>
<td>89</td>
<td>86</td>
</tr>
<tr>
<td>Doctor or health care provider do not take many insurances or Medicaid/Medicare</td>
<td>12</td>
<td>40</td>
<td>54</td>
</tr>
<tr>
<td>Time off from work</td>
<td>12</td>
<td>24</td>
<td>39</td>
</tr>
<tr>
<td>Transportation</td>
<td>13</td>
<td>35</td>
<td>44</td>
</tr>
<tr>
<td>Not knowing where to go</td>
<td>5</td>
<td>18</td>
<td>27</td>
</tr>
<tr>
<td>Language-Doctor or health care provider does not speak my language</td>
<td>0</td>
<td>4</td>
<td>14</td>
</tr>
<tr>
<td>Lack of understanding of need to go</td>
<td>7</td>
<td>22</td>
<td>36</td>
</tr>
<tr>
<td>Can’t get an appointment because of wait times</td>
<td>9</td>
<td>28</td>
<td>25</td>
</tr>
<tr>
<td>Other</td>
<td>10</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>Other (please specify)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Respondents were asked to rank the top three barriers to getting medical and dental care in our community. The ranked responses are provided below in Table 19. The top barriers were the same for those with insurance and without insurance, indicating that insurance status did not impact the people’s opinions on health care access in our community (note, the question asks about general community access, not individual access).

Insurance Coverage. Approximately 86.9% indicated that they had health insurance. Females were more likely to have health insurance than males, $\chi^2 (2, N = 398) = 28.51, p < .001$, and African American, White, Biracial, and American Indian/Alaskan Native respondents were more likely to report having health insurance than were Hispanic or Asian respondents, $\chi^2 (6, N = 399) = 42.45, p < .001$. Respondents who reported being either married or divorced were more
likely to indicate that they have health insurance compared to respondents who were single, never married, separated, or widowed, \( \chi^2 (5, N = 397) = 18.97, p < .01 \). Those with annual income levels of $30,000 or more were more likely to have insurance than those with incomes below $30,000, \( \chi^2 (7, N = 401) = 47.70, p < .001 \). Respondents who indicated that they worked in the health care profession were more likely to report having health insurance than those not in the health care profession, \( \chi^2 (1, N = 400) = 12.07, p < .001 \). The presence of a child under the age of 18-years-old in the home was not associated with whether respondents indicated they had health insurance. **Those with health insurance were significantly more likely to report that they had a family doctor, \( \chi^2 (1, N = 400) = 121.62, p < .001 \), across all ages, genders, ethnicities, and income levels.** Of those that have health insurance, the majority indicated that their “employer provides insurance” (58.6%), “Medicaid” (10.9%), “Medicare” (9.8%), “I buy my own insurance” (8.6%), or “Other” (19%). Eight total respondents indicated that they have an “Orange Card”. Of those who do not have insurance, the primary reasons cited for the lack of insurance include “I can’t afford to buy health insurance” (54.9%), “My employer does not provide health insurance” (15.7%), and “I don’t think that I need it” (2%). Additional reasons cited include being “unemployed and unable to access” and “having a pre-existing disease”.

**Transportation.** In terms of getting to the health care facility, the majority of respondents indicated that they drive their own car to their appointments (82%), followed by city bus (7.5%), Medicaid transportation (2.9%), and/or ask a friend or family member (3.9%). On average, respondents reported that they had visited a doctor 3.73 times over the past 12 months (range: 0-30 times). In most cases, respondents reported that a “medical doctor” (73.2%) treated them, followed by a “physician’s assistant” (20%) and a “nurse practitioner” (16.4%). Health insurance status, ethnicity, and age did not influence the number of times a respondent reported visiting a doctor. Females (\( M = 3.97, SD = 4.55 \)) visited the doctor more than males (\( M = 2.90, SD = 3.23 \)), although this difference was only marginally significant, \( t (359) = 1.88, p = .06 \).

**Family Doctors.** A total of 81.2% of respondents indicated that they have a family doctor (18.8% did not). Females were more likely to report that they had a family doctor than males, \( \chi^2 (2, N=399) = 14.27, p < .001 \), and those that were older were more likely to indicate that they had a family doctor, \( t (361) = -4.02, p < .001 \). In addition, African American (77%), White (88.5%), Biracial (91.7%), and American Indian/Alaskan Native (75%) were more likely to report having a family doctor than were Hispanic (37.5%) or Asian (25%) respondents, \( \chi^2 (6, N = 399) = 29.54, p < .001 \). Respondents who reported being either married or divorced were more likely to indicate that they have a family doctor compared to respondents that were single, never married, separated, or widowed, \( \chi^2 (5, N = 397) = 35.62, p < .001 \). Those with annual income levels of $20,000 or more were more likely to have a family doctor than those with incomes below $20,000, \( \chi^2 (7, N = 401) = 48.98, p < .001 \). Respondents who indicated that they worked in the health care profession were more likely to report having a family doctor than those not in the health care profession, \( \chi^2 (1, N = 401) = 7.04, p < .01 \). The presence of a child under the age of 18-years-old in the home was not associated with whether respondents had a family doctor.

When respondents indicated that they did not have a family doctor, several reasons were cited, including the top five reasons of: “I do not have health insurance” (43.2%), “I cannot afford the costs” (41.9%), “I do not know where to go” (12.2%), “My insurance does not cover what I need” (9.5%), “My deductible/co-pay is too high” (4.1%), and “I do not have a way to get there” (4.1%). Additional “other” reasons cited include comments such as, “There is no doctor in the area for my health care needs,” and “I cannot get an appointment”.

**Emergency Department Utilizations.** In terms of hospital emergency department visits, 21.5% of respondents indicated that they had visited the emergency department in the past 12 months. If respondents had health insurance, they were less likely to report using the emergency department, \( \chi^2 (1, N = 399) = 25.99, p < .001 \). African American respondents were significant more likely to report visiting the emergency department (yes/no) compared to all other ethnicities, regardless of health insurance status, \( \chi^2 (1, N = 399) = 24.55, p < .001 \). There were no differences in visiting the emergency department based on gender or age. Among those who reported visiting the emergency department at least one time over the past 12 months, the average number of visits was 3.73 (\( SD = 4.32 \)). Of those visits, only 11.4% resulted in an overnight hospital stay, and the average length of stay at the hospital was 2.20 days (\( SD = 1.66 \), Range: 0-6 days).

In terms of **non-urgent emergency department utilization**, respondents were asked where they typically go when they are sick, but it is not an emergency. Overwhelmingly, respondents indicated that they go to their doctor or health care provider’s office (67.1%), followed by an urgent care center (31.9%), the hospital emergency department (13.1%), and a pharmacy/drug store minute clinic (6.3%). Females were more likely to report they go to their doctor or health care provider’s office than males, \( \chi^2 (1, N = 422) = 12.25, p < .01 \), while males were more likely to report that they go to the
emergency department, $\chi^2 (1, N = 422) = 14.82, p < .001$. Furthermore, White respondents were more likely to report that they go to their doctor or health care provider’s office compared to other ethnicities, $\chi^2 (1, N = 422) = 21.95, p < .001$, while African American respondents were more likely to report that they go to the emergency department for general care compared to all other ethnicities, $\chi^2 (1, N = 422) = 34.04, p < .001$. In fact, almost one in four (24%) African American respondents indicated that they primarily used the hospital emergency department for non-urgent needs, followed by Hispanic (11.1%) and White (4.4%) respondents. Health insurance status in general influenced hospital emergency department utilization, with having health insurance being associated with a decreased likelihood of hospital emergency department utilization, $\chi^2 (1, N = 422) = 71.81, p < .001$. The effects are more pronounced by race. Whereas 17.1% of African Americans who had health insurance indicated that they used the hospital emergency department for non-emergency issues, this was true for only 1% of White respondents. (There were no Asian, American Indian, Hispanic, or Biracial respondents who had health insurance that indicated that they used the hospital emergency department for non-emergency issues).

Annual Check-ups and Preventive Care. Given that health care access includes regular health care screenings and check-ups, respondents were asked whether they received a check-up every year, even when they are not sick. Approximately 71.3% said “Yes”, and 28.7% said “No”. Of those who indicated “Yes”, most people reported a check-up within the past 12 months (89.9%), followed by 9.7% in last 1-2 years, and .3% in last 3-5 years. Of those who indicated that they typically do not receive a check-up every year when they are not sick, the primary reason they do not receive a check-up included, “I do not have insurance” (22.9%), “I do not have time” (19.5%), “I cannot afford co-pay or other fees” (16.9%), “I do not need to, I am healthy” (13.6%), and “I do not have a doctor” (5.9%). Other common reasons cited include “I don’t think about it until I get sick”, and “I rarely think about it, so I suppose I don’t make it a priority”.

Individuals with health insurance were more likely to report that they receive an annual check-up than people without health insurance, $\chi^2 (1, N = 399) = 40.08, p < .001$. There were no gender or ethnic differences in likelihood of receiving an annual check-up, but there were differences based on income level, with those making between $0-$10,000 and $30,000-$39,999 being the least likely to receive an annual check-up, $\chi^2 (1, N = 399) = 29.43, p < .001$. Neither marital status nor the presence of a child under the age of 18-years-old in the home was associated with whether respondents reported receiving an annual check-up.

In terms of preventive care, approximately 83.2% of respondents indicated that their doctor reminds them to get care to avoid health problems such as flu shots, breast exams, and immunizations. There were no gender or ethnic differences in the response to this question; however, there were differences based on health insurance status, with those having health insurance being more likely to report hearing reminders about preventive care from their doctors, $\chi^2 (1, N = 422) = 58.59, p < .001$, as well as by income level, with those reporting lower income levels being less likely to report that they hear reminders about preventive care, $\chi^2 (1, N = 422) = 19.17, p < .01$. Interestingly, older respondents were less likely to report that they hear these preventive care messages from their doctors than younger respondents, $t (376) = 2.55, p < .01$. The most commonly reported preventive services received in the past 12 months included: a flu shot (61.1%), a dental exam (58%), an eye exam (44.5%), immunizations (15.5%), colonoscopy (9.3%), pneumonia shot (4.8%), and gender-specific services such as a pap smear (63.7%), a mammogram (39.2%), and a prostate exam (30.9%).

Specialty, Prenatal and Dental Care. In terms of specialty care, approximately 48.5% of respondents reported that they have been referred to a specialist in the past 5 years. There were no differences in specialty care referrals based on health insurance status, gender, or income, but there were differences based on ethnicity, with White respondents being more likely to report that they were referred to a specialist than African American respondents, $\chi^2 (1, N = 410) = 34.35, p < .001$. Of those who were referred to a specialist, 90.5% of respondents reported that they actually went to see the specialist. Those with health insurance were significantly more likely to follow up with the referred specialist, $\chi^2 (1, N = 410) = 53.51, p < .001$, females were more likely to follow up with the referred specialist than males, $\chi^2 (1, N = 410) = 13.02, p < .001$, and White respondents were more likely to follow up with the referred specialist than any other ethnicity, $\chi^2 (1, N = 410) = 20.60, p < .001$. There were no differences by age. Of those who didn’t see the specialist they were referred to, the reasons included “I do not have health insurance” (5%), “I cannot afford the costs” (5.5%), and “There is no doctor in the area for my health care needs” (1.5%).

In terms of prenatal care, approximately 6.9% of women who completed the survey indicated that they have been pregnant in the past 12 months. Of those women, 95.7% reported receiving health care while pregnant, and 8.7% reported
having problems getting prenatal care. Age, ethnicity, and health insurance status were not associated with whether women received health care while pregnant or whether they had difficulty receiving health care. Overwhelmingly, among focus group and interview participants, prenatal care was one form of health care that was recognized as being easy to access and very comprehensive.

In terms of dental care, when asked whether respondents had dental insurance, 67.5% indicated “Yes” (32.5% said “No”). Females were more likely to have dental insurance than males, $\chi^2 (2, N = 397) = 15.18, p < .001$, and White respondents were the most likely to have dental insurance (77.9%), followed by African American (61.2%), Biracial (58.3%), American Indian/Alaskan Native (25%), Asian (25%), and Hispanic (12.5%) respondents, $\chi^2 (6, N = 397) = 32.57, p < .001$. Respondents who reported being either married or divorced were more likely to indicate that they have dental insurance compared to respondents that were single, never married, separated, or widowed, $\chi^2 (5, N = 395) = 19.27, p < .01$. Those with annual income levels of $30,000 or more were more likely to have insurance than those with incomes below $30,000, $\chi^2 (7, N = 399) = 72.49, p < .001$. The presence of a child under the age of 18-years-old in the home was not associated with whether respondents indicated they had dental insurance. **Those with health insurance were significantly more likely to report that they also had dental insurance, $\chi^2 (1, N = 400) = 114.06, p < .001$, across all ages, genders, ethnicities, and income levels.** Of those who do not have insurance, the primary reasons cited for the lack of insurance include “I can’t afford to buy dental insurance” (60%), “My employer does not provide dental insurance” (10.8%), and “I don’t think that I need it” (6.9%). Additional reasons cited include being “unemployed” and a strong theme of the costs of the insurance being too high for the benefits received (e.g., “cost of plan not worth the benefits - less expensive to pay out of pocket”).

**Parenting and Access for Children.** We asked a series of questions specifically to understand parent’s views on health care access for their minor children. Among those respondents that indicated that they had at least one minor child living in their home, 90.1% reported that they have health insurance and 79.3% had dental insurance for their child(ren). Females were more likely to report that they had health insurance for their child(ren), $\chi^2 (1, N = 151) = 6.52, p < .05$. There were no other differences based on age, income level, or ethnicity. The most common forms of health insurance for children were “My employer provides insurance” (42.6%), “Medicaid” (34.6%), “I buy their insurance” (14.7%), and “Orange Card” (7.4%). The overwhelming reason that children were uninsured according to the parents was that parents “Can’t afford to purchase their health insurance” (86.7%). As one parent commented, “It hurts as a parent not to be able to afford to have health care for my child...”. In general, parents shared their thoughts on health care for their child(ren) by stating, “Children should be allowed access to medical care regardless of parents ability to pay.”

The most common place for parents to take their children when they don’t feel good, but when it’s not an emergency is a doctor or health care provider’s office (81.2%) followed by an urgent care center (29.5%), hospital emergency room (12.8%), and the health department (6.7%). The majority of parents (86%) report that their child(ren) receive a check-up every year, even when they are not sick. Of those who indicated “Yes”, most children received a check-up within the past 12 months (94.6%), followed by 4.6% in last 1-2 years, and .8% in last 3-5 years. There were no age, gender, or ethnic differences in whether respondents were more or less likely to receive a check-up, but there was a difference based on health insurance, with those children with insurance being more likely to receive an annual check-up, $\chi^2 (1, N = 150) = 23.87, p < .001$. Of those who parents who indicated that their child(ren) typically do not receive a check-up every year when they are not sick, the primary reason they do not receive a check-up included, “Not needed, they are healthy” (50%), “No insurance coverage” (18.2%), “No time” (13.6%), “Unable to afford the co-pay or other fees” (9.1%).

**B. Focus Group and Key Informant Interviews**

**Key Informant Interviews and Focus Groups**

The NC A&T research team, in partnership with the Cone Health Foundation Health Investment Team (HIT), identified diverse community stakeholders within the greater Greensboro whose expertise and experience in health care and related fields might inform this study. These individuals included providers, nonprofit leaders, agency administrators, advocates, public sector personnel, and community members. Similarly, the team targeted multiple constituencies for focus group feedback. Consequently, groups were conducted with adults between the ages of 18-34 (two groups), adults between the ages of 35-64 (two groups), immigrants/refugees (with interpreter assistance as available), and persons within the Hispanic/Latino community. The timing and location of key informant interviews and focus groups were designed to be
as convenient as possible for respondents. Furthermore, each session was digitally recorded and subsequently analyzed using NVIVO, a qualitative data analysis software program.

A total of 26 key informant interviews were conducted along with six focus groups, totaling 82 face-to-face participants. A full listing of the individuals who participated in a key informant interview is provided in the acknowledgements section, although for confidentiality names are not included with individual comments in this write up. Focus group locations included the Guilford County Department of Social Services, Women’s Hospital of Greensboro (two focus groups), HealthServe, UNCG Center for New North Carolinians, and Iglesia Internacional Church.

**Affordability.** Among focus group and interview participants, the discussion of affordability centered around a consistent message: Health care is not affordable. It became very clear in hearing from patients and providers that insurance status determined health care practices for patients. One patient explained why she typically didn’t go to the doctor right away if she was sick by stating, “My insurance plan changed and when it changed, it changed some of my practices.”

Additionally, one provider of health services in Greensboro explained their experience with affordability when dealing with a patient who had received a large bill by stating, “People are traumatized by the health care system. They are traumatized by, it’s not just not having the insurance, it’s part of that, but even if they have the insurance, they don’t understand the system.” By understanding the system, the provider was referring to the insurance system. However, providers continually pointed out that while the current system may not be perfect, the Orange Card option for the uninsured population in our community makes accessing care much more affordable than having nothing.

While many participants recognized that having insurance may help with the affordability of care, predominantly participants with insurance reported not being able to afford health care in regards to either the co-pays or the deductibles. When asked generally if people can afford health care, one focus group participant responded, “I have health insurance and I work and I can’t afford it.” That sentiment was echoed by many others. For those with public forms of health insurance and those who are uninsured, the issue of affordability was mainly focused on the co-pays and the utilization of emergency care. Many participants who reported having Medicaid or being uninsured avoided trying to access health care because of the bills that would follow that care in the event that Medicaid does not cover a particular service. One participant explained, “Some people don’t go to the doctor because they don’t have no money, don’t have no Medicaid or Medicare and you go to the Emergency room, they’re gonna charge you for just laying on that bed. That’s why some people just don’t go. They’re sick but they don’t have no money, they know that bill is gonna come.”

Further, other participants discussed avoiding accessing care because they already had an outstanding bill and did not want to be embarrassed by that or not wanting to be harassed by the staff regarding that bill in order to get the care they may need at that time. To that point, one participant explained, “Sometimes, like you’re afraid to go because sometimes you say, ‘I visit that emergency room a lot and I haven’t finished paying.’ And I’m kind of afraid that I’m going to get in a situation, bad situation and I’m gonna show up and they’re not gonna take care of me.”

Prenatal care is one bright spot, with one provider stating, “It is amazing that pregnant women, and I know we’re unique in the service we provide, I think are more easily connected with resources by virtue of the fact that they’re carrying another life that they’re responsible for and people tend to surround them for that.” It was repeatedly acknowledged that pregnant women get exceptional health care, above and beyond any other medical condition.

Participants in focus groups and interviews recognized the need for more preventive care to avoid chronic illnesses that are fully avoidable. One physician explained, “You pay a lot more money in the long haul trying to take care of people through catastrophic illness than you do if you could do preventive care and kind of get people into the system early.” Many patients recognized the importance of preventive care as well, specifically in the area of dental care.

Focus group participants were specifically asked whether or not they go to the dentist. Many explained that they don’t go to the dentist primarily because of the high cost associated with dental procedures, even with insurance, and the long wait times for clinics serving the uninsured. In regards to the uninsured population gaining access to dental care, one of the dental providers explained, “We have calls every day of people, um, calling in pain wanting to be seen but they don’t have the Orange Card. Um, I mean all I can do is give them the information on how to get into the program, um, but I still have to hear, you know, some people are crying, and that’s really hard to hear.” Participants who had received the
Orange Card reported mixed experiences with the process and specifically mentioned dental as the area most difficult to access with the Orange Card. For participants who reported having insurance, regular dental cleanings were more frequently reported but only because it was included in the insurance and they understood that the costs of the regular visits were far less than the cost of a major dental procedure they may need because dental care was neglected. One participant said, “I go against my willing and my wallet” when speaking about going to the dentist regularly as a preventive measure.

**Availability.** Regarding the availability of physicians and other health care services provided in the greater Greensboro area, there were some common agreements across both focus group and interview participants. A great need to increase the number of primary care physicians and dental providers in the area, specifically for those who are underinsured or uninsured, was identified. One focus group participant stated, “It takes almost a year to get an appointment with the dentist if you have the Orange Card.”

Across all audiences, these were two key availability issues which were highlighted. Factors playing into the shortage of primary care providers that were identified centered around the high cost of running a primary care practice and the temptation of specialty practice when examining return on investment for the doctor's education. The shortage of dental providers, specifically for the underinsured and uninsured populations, was often attributed to lack of funding in the current programs to support more physical space, more dentists, and more dental assistants for this population. However, with recent local funding cuts, it was felt that this was unlikely to improve. For example, it was explained that as a result of the funding cuts, the adult dental health clinic went from having two dentists to having one and went from being open Monday-Thursday to now only being open on Mondays and Tuesdays from 8:00am-5:00pm. As these changes took place, the demand for care remained the same causing the system to be even more backed up. There are also night clinic hours available three times a week (two in Greensboro; one in High Point) but those are first come first served and involve volunteer dentists and dental assistants. As a recommendation until more funding becomes available, suggestions were made for more private dental providers to donate time to the public dental clinic to help spread the workload out.

Key informants were asked if they felt there were enough providers in the Greater Greensboro area to address the needs of their target population. While many participants reported that there weren’t, there were quite a few who felt there were. Regardless, all participants expressed a critical need for the health care service system to be more connected and coordinated. Participants understood that while the creation of additional agencies and organization in the current economic climate may not be likely, better coordinating the services currently in place would allow the community to make the most of what is available. One provider explained the ideal coordinated system in terms of a person's body saying, “What we’re trying to do here is build a body that is able to take care of the patients and the residents of Guilford County.” The concept of the body was driven by the idea that each agency would address their specific need and population in conjunction with other agencies being able to provide services to those patients as needed. This metaphor highlighted the increased need for the right arm to know what the left arm is doing as far as providers understanding what else is available in the community.

**Accessibility.** Geographic access to health care services was a notable theme across the focus group and individual interviews. While the community clinics may be near the center of town, they were not necessarily felt to be accessible by many groups who are in need of their services. Transportation was recognized as the key challenge to accessing health care services. Many individuals do not have cars and rely on friends and/or family and public transportation, which are not always reliable.

One consistent recommendation made to increase accessibility to health care services was to create a mobile clinic which could bring the services to communities of high need. Suggestions were made for the mobile clinic to visit different communities on specific days of the week so each community knows when to expect the mobile clinic. Suggestions of services that should be provided by a mobile clinic varied but, consistently, the provision of basic care and screenings seemed to be the minimum.

Transportation was cited by nearly all participants in the focus groups and interviews as a significant barrier to accessing health care services. Various forms of transportation were cited as being used by patients in Greensboro. Many reported frequent use of public transportation, private vehicles, or walking. One common theme that was frequently mentioned across participants was that “Medicaid transportation is very unreliable.”
Accommodation. Participants in the interviews and focus groups identified many accommodating factors of the health care system and identified things that could be done to make health care more accommodating for them. Regarding clinic hours, some focus group participants reported that urgent care facilities typically have evening hours and are open on weekends, making accessing care more convenient for many individuals who may not be able to take off work. Specifically, regarding the dental clinic, a provider acknowledged that the limited clinic hours and days open are not accommodating to those attempting to access dental care.

In focus group and interview discussions about the use of hospital emergency departments as frequent entry points for non-emergency health care, one emergency care provider stated, “Unfortunatley we never planned the emergency departments for providing care for everybody but somehow we’ve created the perfect model for people accessing care without difficulty. Walk right in and we see you.” The ease of use and non-refusal of any patient make hospital emergency departments popular places for individuals to access services that would more appropriately be addressed by a primary care physician. For the individuals who reported using the emergency department for non-emergency health problems, they explained that to get an appointment at a community health clinic could take one to three months when compared to being able to walk into an emergency department and get care within a few hours.

Focus group and interview participants were asked about waiting periods to get appointments and waiting times upon arrival for health care services. For community clinics, providers and patients acknowledged long waiting periods to obtain an appointment, estimating between one and three months. Additionally, upon arrival for those appointments, a waiting period of at least one hour was reported. For private providers, participants reported the ability to get an appointment typically within two days and being able to get in and out of the office within an hour. For urgent care facilities, no appointments are needed, which was identified as a benefit, and the waiting period to obtain services was reported to be between one and two hours. For emergency departments, participants reported multiple hour waits to access health care services.

Health care service providers reported various methods to help patients deal with difficulties making and keeping appointments. Many public providers reported accepting walk-ins due to the difficulty of their target population to make and keep an appointment. Many providers reported that their agencies require appointments but provided reminder calls 24-48 hours prior to a patient’s appointment. However, for patients without phones, there was no alternative form of communication attempted by many.

The Orange Card program was referenced frequently as a way to attempt to accommodate the needs of the uninsured in our community. The Guilford Community Care Network does eligibility enrollment at various location throughout the community as an attempt to bring the services to those who need it and assist in getting them enrolled. Many patients referenced getting signed up for their Orange Card at various locations with the Interactive Resource Center being one of the most commonly referenced.

Accountability. Patient accountability was a popular topic among the key informant interview and focus group participants. Patient accountability took on two central forms: 1) patients being accountable for making appointments and taking the necessary precautions to show up or call ahead to cancel; and 2) accountability of patients to take care of themselves outside of the health care system. Many providers, as mentioned previously, identified ways they tried to facilitate that the patient shows up for his/her appointment. Additionally, providers explained consequences for missed appointments. On the whole, the general rule of thumb was three no-shows equal a patient discharge. However, depending on the agency and the reasons for not showing up or cancelling the appointment, there is some flexibility among providers with that rule.

Beyond scheduling issues, there were other factors identified by physicians that are barriers to their provision of care to any and all patients. One private physician explained, “After a certain point, if you go above a threshold of a certain type of patient, paying out of pocket, paying one dollar a month, or whatever, then you can’t keep your practice open. And also you have those same kind of limitations on Medicare patients because if your practice is totally Medicare, with the reimbursement cuts that are occurring uh, you’ll, you’ll find that you’re expenses are not being greater than your revenues and you go out of business as well.” Striking the balance between making care available to various insurance levels and keeping the doors open to a medical practice is a continual concern for physicians and an important point to consider.
Regarding accountability on the part of the patient to be compliant with the doctor’s suggestions and take care of their health, one physician declared, “We’ve got to take more responsibility for our own health and for our own nutrition. Um, you know, somebody who is 200 lbs. overweight is going to have chronic medical condition by the very nature of their weight. Um, and to expect our health care system to be able to fix all of that is um, unreasonable.” Participants in focus groups recognized the need for individuals to take responsibility for their own health as well. One participant stated, “I think the responsibility is on the patient just because at the end, you’re going to be hurt.”

Some providers discussed ways to improve patient accountability, with the central theme being to incentivize patient compliance. One provider explained that currently, when a patient comes in for their appointment they receive a free bag of groceries, which is potentially the “carrot dangling” that encourages them to make it to their appointments. Other suggestions were to tie individual health with lower insurance premiums for their same policy and to somehow connect individual taxes with individual health to reward those who are healthy or who were compliant in receiving their health care for the year. As one provider explained, “We can build it. We can build the system. What’s gonna make the patient be compliant? And we continually, um, develop these systems but we don’t add to the equation the need to have, uh uh, patients be accountable for their portion of their care.”

Acceptability. Within the focus groups and interviews, the concept of acceptability of the care they received seemed to be a give and take experience for patients. When asked what they do when they get sick, the majority of participants reported taking the “wait and see” approach when feeling sick by waiting anywhere between a few days to a couple weeks for whatever is ailing them to go away. Many participants reported going to a local drug store to get over-the-counter medications and/or advice from a pharmacist to address their illness. Participants reported not going to the doctor immediately when they are sick because of costs of the visit, costs of prescriptions they may be given, and the time it takes out of the day to go to the doctor.

Cultural differences were found to exist between reported approaches of what to do when you are sick. Hispanic/Latino participants overwhelmingly reported trying home remedies over purchasing medications or going to the doctor for an illness. One Hispanic/Latino participant stated, “If we don’t die, we don’t go” in regards to going to the doctor. Participants explained that among their community, there is an overall resistance to access health care for some because of documentation status, for others because of financial reasons, and for others not believing it is necessary.

A central accommodation that some participants recognized was the provision of interpretation services for those who speak other languages besides English. However, providers and patients alike identified that accommodation does not exist in some health care facilities and is difficult to provide for the over 100 different languages that are spoken in Greensboro. Some participants also pointed out that the provision of interpretation services also potentially leads to stereotyping in some agencies. Hispanic/Latino participants explained that they are often met with “the look” from front desk staff wondering whether they speak English or not, followed by the statement, “Do you need an interpreter?” Hispanic/Latino participants reported mixed feelings on this type welcome. Some were thankful that they had an interpreter available but for those that speak English, they reported being offended by the assumption that they need an interpreter. Such an experience suggests a potential need for more cultural sensitivity on the part of front desk staff as well as the physicians.

Further, satisfaction with care seemed to differ by insurance status. Participants who reported having insurance were generally satisfied with the care they received from their primary care doctor. Mainly, the only complaint was that doctors don’t spend as much time with them as they feel necessary. But overall, they were receiving care and were happy with it. For participants who reported having Medicaid or the Orange Card, they were less satisfied with their health care. However, much of their dissatisfaction centered on factors such as difficulty getting an appointment and waiting times.

Involvement in the process of health care decision-making was a key area of dissatisfaction for patients with Medicaid, Orange Card, or who were uninsured. Participants discussed the fact the doctors sometimes do tests, do procedures, or prescribe things without taking into consideration their insurance limitations and their opinion in general. For example, one participant explained that he went into the emergency department for a knee injury and informed them he had no insurance but the doctor just ordered procedures and tests to be completed without discussing it with him first to determine what the costs would be and what his options were.
Survey respondents were asked an open-ended question about whether everyone has access to the same quality of care that they need. Some of the responses included, “No. If you don't have money or insurance, it is difficult”, “I believe that everyone doesn't have the same access quality of care. If your insurance is considered to be good, then you will receive quality care, but if someone has Medicare/Medicaid they receive the bare minimum”, and “Same quality? No. Same access? Yes. Everyone can get some type of health care.” Many responses were logged and the full list of responses is available upon request.

**Health Disparities.** Focus group and interview participants were specifically asked if health disparities exist in Greensboro regarding access to treatment. In speaking with key informants, the majority of them acknowledged health disparities in regard to chronic illnesses or health concerns like infant mortality and high blood pressure. A key informant clarified the concept of health disparities and the relationship rather than the causality between location and socioeconomic status and health outcomes. They explained, “Not in the sense that there is evidence that because individuals couldn’t get access to care that they therefore were sicker; uh, uh, we do tend to see an association though, between the same, in the same areas, the same neighborhood, in the same communities, that people that have low income tend to be people that have poor access and they are the same people that tend to have poorer health outcomes. So um, but determining some of the causal sequences is more tricky.” Focus group participants overwhelmingly reported that they believe everyone does not get equal health care treatment. Many differences in treatment reported were based on a variety of factors such as insurance type (Medicaid, uninsured, private, etc), socioeconomic status, race, age, language differences, and perceived cultural differences.

Some participants specifically felt that uninsured and Medicaid patients get treated worse than patients who have private insurance. Key informants recognized disparities similar to those mentioned by focus group participants, but were overwhelmingly more focused on disparities by socioeconomic status. One provider stated, “It’s no secret, if you’re poor, it’s harder to access pretty much everything.”

Disparate treatment by diagnosis or illness type was an interesting theme that emerged from both the focus groups and key informant interviews. Focus group participants discussed that there may be less knowledge locally for diseases that disproportionately impact certain racial and/or ethnic groups, specifically sickle cell anemia. There were uncertainties among participants regarding whether the major health system in Greensboro had any specialists for sickle cell anemia.

It was highlighted that for individuals diagnosed with HIV/AIDS, it is sometimes difficult to get them setup with other services for a number of reasons, some of which potentially hinge on stigma around the disease and disrespectful interpersonal treatment. Finally, participants from the Hispanic/Latino community reported believing that someone who doesn’t speak English gets a lower level of care than those who do speak English. This belief was founded in experiences some of the participants had in accessing services at a local hospital where no interpreters were available and they were asked to wait for long periods of time without any explanation of why.

**Health Literacy.** As an underlying factor throughout each of the identified domains discussed, health literacy was discussed as a foundational element in accessing health care. One provider gave this definition: “Health literacy is someone’s ability to understand, access, use health resources, to make good informed choices for themselves.” There is an identified, overwhelming need to improve health literacy for individuals in every domain from understanding insurance coverage, to knowing how to physically get to a provider, to comprehending what the doctor is explaining and asking the patient to do. Focus group participants particularly recognized health literacy as an issue for them as patients, both with and without insurance. One participant stated, “I understand what its saying but I don’t understand what you mean” in describing the experience of her trying to understand her insurance coverage. Many participants identified with that experience and felt that there has to be a better way for insurance companies to provide you with information about your coverage than sending you a packet of information full of insurance jargon in the mail.

Language barriers, specifically those around non-English speaking individuals, continually came up across all the interviews and focus groups as an important factor to consider in accessing health care. However, it was also pointed out that health care has its own language as well so knowing English often times isn’t enough. One participant made the point, “But even if you know the language the doctors sometimes, they use some words like you know exactly what they’re talking about. But it’s not your career. And you talk to me like the way you learn, I haven’t studied what you know, so how I’m supposed to understand what you’re saying if you’re not explaining what, what does that mean?” Similar
experiences were shared by many participants. Some providers pointed out the need to increase education around teach-back and Ask Me 3 questions to improve upon this issue of health literacy.

One provider explained, “Access is about information. How you get the information and what do you do with it. And that’s the other piece, then the next thing is what do you do once you get the information?” Health literacy efforts must span the continuum of care in order to ensure understanding throughout the entire process. Many providers suggested the use of patient navigators to assist in the enhancement of access to and understanding of the process health care for individuals. However, the same providers also acknowledged the cost of such an effort in order for it to be comprehensive. It is evident that access to care is a multi-dimensional issue that must be tackled in a comprehensive way, including interventions at individual, community, and systems levels.

IV. Analysis of Cone Health Foundation’s Grantmaking Related to Access

Improving access to health care has been a priority of the Cone Health Foundation from the outset. Between 1998 and 2011, the foundation invested over $30 million in local organizations and programs to improve access. This represents approximately half of the Foundation’s total grants to date, much more than any other of the Foundation’s funding areas.

Within the access area, Cone Health Foundation has consistently invested most of its funding in a limited number of programs that the board and staff have regarded as providing high leverage. The program receiving the most grant dollars since the inception is HealthServe, with more than $10 million, primarily for general operations. Other access-related programs that have received at least $400,000 in total grants are:

- Medication Assistance Program (MAP) -- $3.9 million
- Congregational Nursing -- $2.9 million
- Guilford School Health Alliance (GSHA) -- $2.7 million
- Immigrant Health Access Project (IHAP) -- $2.4 million
- Partnership for Health Management (P4HM) -- $1.8 million
- Health Care Sharing (replication of Asheville’s Project Access) -- $1.3 million
- Health Choice (enrollment of children in CHIP) -- $1.1 million
- Dental Access -- $997,000
- Guilford Community Care Network (GCCN) planning and administration -- $820,000
- Adopt-a-Mom and other prenatal care programs -- $543,000 (with additional grants made under the now defunct Infant Mortality funding area)
- Congregational Social Work -- $483,000

Together, these programs account for 94% of the total of $30.9 million that Cone Health Foundation has invested in access. The remaining grants have supported programming in a wide array of access issues, some related to specific health issues (e.g., diabetes, hepatitis, oncology, epilepsy, sickle cell disease), some focused on specific population groups (e.g., elderly, adolescents), and others that support specific functions that contribute to access (e.g., information and referral, health literacy). Most of these smaller grants were provided for a limited period of time (1 to 3 years), and many were awarded through the now defunct Community Health Improvement Fund (CHIF). The Foundation recognized early on that a responsive grantmaking approach could easily distract attention from its more strategic work, and consequently bifurcated its grantmaking into core strategies to improve access (i.e., the Foundation’s signature programs) and the Community Health Improvement Fund (administered by the United Way of Greater Greensboro) which allowed a wide range of community organizations to gain access to needed funding.

Figure 4 shows how the grant portfolio for the access area has evolved between 1998-2011. The Foundation ramped up its grantmaking in 1998-1999. Approximately $1 million in access grants were made each of those first two years, most of which went to HealthServe, GSHA, and Congregational Nursing. Between 2000-2005, the Foundation was making between $2.5 million and $3 million per year in access grants to a diverse set of programs. More recently, the Foundation has focused its approximately $2 million per year of grants on a relatively stable cohort of grantees: HealthServe, MAP, Congregational Nursing and Social Work, IHAP, P4HM, Health Choice, GCCN, Dental Access, and Adopt-a-Mom.
In reviewing the list of programs that have received the largest grants from Cone Health Foundation, it is important to recognize that the Foundation’s role in many of these extends well beyond financial support. From the outset, community leadership has been a crucial component of the Foundation’s strategy for improving access. The Foundation’s staff were integrally involved in developing programs such as the Guilford School Health Alliance, Congregational Nursing, Congregational Social Work, and Immigrant Health Access Project. Likewise, the Foundation took the lead in convening key local actors to examine Asheville’s Project Access and adapt it the Greensboro context (under Health Care Sharing grants), and then followed up by establishing the local infrastructure to carry out the model (including GCCN, P4HM, and IHAP).

The Cone Health Foundation’s leadership in the access area evolved considerably around the turn of the century. Rather than looking to supplement the existing system by adding population-specific programs such as Congregational Nursing and GSHA, the Foundation staked out a more central role in reforming the overall health care system in order to improve access for systematically underserved groups. One of the first of these cross-cutting initiatives involved facilitating a major expansion in the clinical facility operated by HealthServe. The HealthServe site has proven to be a crucial (and now over-burdened) resource in meeting the medical needs of uninsured and low-income residents, including those who are ineligible for Medicaid because of immigration status.

Expanding physical capacity for dedicated safety-net care is certainly important, but this is only one of a complement of strategies that the Foundation has employed to reform the system to provide increased and improved access to the community’s residents. Over the past decade, the Foundation has invested nearly $10 million and untold hours of staff and board time in building the Orange Card system. This work has played out on the provider side (recruiting primary
and specialty care providers to donate a portion of their service to patients who cannot fully pay), the consumer side (building awareness among underserved patients, connecting them to services, and providing interpreter services to various immigrant groups), and especially in creating an integrated system (with an Orange Card that signifies enrollment, a case management system, a management information system, and a network that oversees the entire system). Without the Cone Health Foundation’s active and continual leadership in the Guilford Community Care Network, this safety-net system likely may not have become a reality in Greensboro.

The critical question facing the Cone Health Foundation’s board and staff is what the Foundation should do to build on the current system in light of the issues and needs identified in the prior sections. While the experiences of other foundations provide some guidance in identifying new program models or other ways to improve the system, we are reluctant to treat any other health foundation as a model that the Cone Health Foundation should emulate. Indeed, the Cone Health Foundation’s grantmaking and leadership work to date can offer lessons to other local and regional health foundations and help them to adopt a more strategic and systems-level approach to improving access within their communities. As the Cone Health Foundation steps forward with new strategies to address unmet needs and a rapidly shifting policy context, there will additional opportunities to chart a path for health foundations around the country.

V. Recommendations for Foundation Action to Address Health Care Access

Because the Cone Health Foundation has demonstrated such a strong track record in initiating and supporting needed changes in the local health care system, the deliberations that accompany this white paper will be critical to determining the community’s long-term progress on the access issue. Ingenuity and determination will be needed to truly effect change. At the writing of this document, we believe that there is a strong momentum and commitment from a variety of audiences across the community that can be leveraged to create authentic, long-term partnerships and change in our community.

Despite all of the information gathered and presented here, the evidence base is not sufficiently developed to present recommendations in a precisely quantified fashion that will clearly point to the most or least cost-effective initiatives. This is so for several reasons. First, the benefits of various initiatives have not been measured in standardized ways across all of the initiatives, so there is a lack of program comparisons, to a substantial extent. Second, even when focusing on a specific access goal, many programs and interventions can be implemented in several ways, ranging from full funding to collaborative initiatives with partial, low, or no cost to the foundation. These various means to achieve a given end greatly affect a particular initiative’s cost-beneficial ratio – from the perspective of the Foundation’s own investment in the initiative. But, of course, which means are available for a particular goal depend to a great extent not only on the nature of the initiative, but also on what else has been done to date, and who else is in the community is likely to pursue the same goal.

In moving to the next level of work, the Foundation should examine the community’s current and future needs with regard to access, but also look critically at what the Foundation has been able to accomplish in the past. Those successes involve not only specific improvements in services, programs, information systems, collaboration, etc., but also a more general pattern of highly strategic philanthropy. The Foundation has consistently identified both the dominant underlying problems that limit access and leverage points for overcoming those problems. The Foundation’s capacity will need to be fully brought to bear if the community is to change the system in the following ways that can make a genuine impact on access.

The safety net system that currently exists in Greensboro is much more developed than exists in most communities. However, for this system to truly provide adequate coordinated access for local residents, each component in the system needs to work at its optimal capacity, both individually and in coordination with the other components. The Foundation can play a crucial role in helping organizations and programs such as HealthServe, Guilford Community Care Network, Partnership for Health Management, the Immigrant Health Access Project, and Triad Adult and Pediatric Medicine to function at their full potential. But, because each possible initiative has its own unique institutional, historical and community dimensions, a formulaic approach cannot determine which mix of initiatives is best, or which one initiate is most effective. Instead, informed judgments are needed, based on considering all the relevant factors. Here, we have offered our impressions about recommended initiatives to consider.
Effective foundations do more than simply provide operating grants to existing organizations. Foundations often can have even greater impact by offering organizational assessment, evaluation consultation, and other forms of capacity-building grants to local organizations. This might be especially needed soon, recognizing that virtually all organizations providing services to the uninsured will need to undergo strategic planning once the impact of the Affordable Care Act (ACA) is clarified. The Foundation's staff and board can use their knowledge of local grantees to determine which organizations that serve as the pillars of Greensboro's safety net would most benefit from organizational enhancement. The fact that Cone Health Foundation provides ongoing support year after year means that the Foundation has tremendous leverage in ensuring that the grantees take full advantage of whatever assistance is offered.

An important component to addressing health care access is the integration of strategies for action that are consistent with the areas of need within communities as well as the areas of need across systems. Thus, consistent with a public health approach to addressing health care access, the recommendations provided here are grouped under three primary categories of (1) Individual-Level Recommendations (which encompass strategies that the Cone Health Foundation is in a unique position to implement as an individual foundation), (2) Community-Level Recommendations (which encompass strategies that effect change at a community level), and (3) System-Level Recommendations (which encompass strategies that produce a more effective, efficient systems approach to providing health care access). Although strategies are listed across these three categories for organizational efficiency, it is important to note that many of these strategies are crosscategorical in that they may impact not only community-level variables, but also systems-level variables and so forth.

**Figure 5: A Public Health Approach To Addressing Health Care Access**

Finally, in choosing the best course of action, the Foundation will naturally want to consider which initiatives will produce the greatest return on investment. Thus, the recommendations conclude with suggestions on Monitoring Results and Return on Investment as a strategic Foundation approach to addressing health care access.

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1 Pathways in western North Carolina (http://www.nonprofitpathways.org) has developed an approach to organizational enhancement that may serve as a useful model for improving the performance of organizations that serve as the pillars of Greensboro's safety net.
A. Individual-Level Recommendations

Direct funding is often the most effective way to bring about a particular goal, since the funder can determine the most cost-effective level of funding and oversee its implementation. Direct funding also allows the funder to determine conditions of funding that enhance other goals related to the primary funded initiative. However, direct funding is obviously the most expensive way to achieve a goal. Therefore, large amounts of direct funding should be reserved for the most important goals and those that are least likely to receive the necessary level of support elsewhere. Also, when funding is provided, we recommend a minimum of three years of support for programs that address health care access, in order to give sufficient time for full effectiveness to be achieved, and to promote sustainability post-funding. The following individual-level recommendations are offered consistent with those goals:

1. Expand insurance enrollment.
   The most effective measure to increase access is to enroll people with insurance for which they are eligible. The Cone Health Foundation is currently doing this by supporting Health Choice. Once ACA is implemented, screening for eligibility and assisting with enrollment will become even more important, since the ACA will greatly expand eligibility for those who are currently uninsured, yet its rules and structures will be unfamiliar and somewhat complicated. The Foundation should look for opportunities, in both hospital and community settings, and working with organizations, to maximize enrollment of people who are eligible for coverage, now and after ACA implementation.

2. Continue to support primary care medical homes and medication assistance, and prioritize funding toward programs that demonstrate integration of comprehensive care.
   For those without insurance, the most important dimension of access is having a usual source of primary care that is willing to accept patients regardless of ability to pay. That is why the location and capacity of community health centers such as HealthServe is so critical. However, it is recognized that not all providers can become fully developed primary care medical homes with integration of care at all levels. However, as national leaders such as Grantmakers in Health (2008) outline, best practices encourage that both behavioral health and oral health become integral parts of effective primary care systems. Yet, these crucial services are not typically delivered by primary care providers. Given the successful outcomes demonstrated through integrated care models, efforts should be made toward this goal. This integration of care has a solid return on investment in terms of both access to care and cost savings. For example, mood disorders rank third in health care costs, first in work loss costs and second in total costs to the health care system (Bartles et al., 2004). The MacArthur Foundation’s work with the 3 Component Model (3CM) of primary care and depression integration is an example of this type of programming (http://www.depression-primarycare.org/). Based on these examples and the Four Quadrant Clinical Integration Model (NASMHPD, 2005) described in this document, the following recommendations are offered:
   a. Prioritize funding toward those programs that are able to demonstrate the provision of integrated care (e.g., primary care and behavioral health, primary care and dental care, etc.) as primary care medical homes are most effective when they integrate a full range of services frequently needed.
   b. In situations where a program does not have the capacity for integrated care, require the funded program to coordinate referrals for care that they do not provide, and to track and report on the number of referrals made (e.g., for dental care, behavioral health, or specialists, etc.).

3. Ensure coordinated referrals.
   Primary care is necessary but hardly sufficient for adequate access. Also critical is the ability to refer patients when needed for specialist, hospital, or advanced imaging services. The Orange Card system has been shown to be a very effective way to coordinate a network of providers who are willing to accept such referrals at no or greatly reduced costs, for patients who have been prescreened for eligibility and need. The Cone Health Foundation should support efforts to expand the Orange Card system, and especially the increased participation of specialists.

4. Continue to support programs that provide community-based services to decrease barriers to access to care.
   Providing conventional points of access with sufficient capacity is often not sufficient to meet access needs for all population segments. Some people face transportation or other logistical barriers. Others do not understand the need to have and use a primary care medical home. Therefore, various outreach and education efforts in the community can be very effective ways to augment the recommendations across the individual, community, and system-level domains.
a. Programs such as the congregational nursing and social work programs and home-based programs such as Adopt-a-Mom are community-based programs that meet the needs of individuals where they are, and thus, potential barriers such as transportation, scheduling, etc. are minimized. The Cone Health Foundation is currently providing funding for programs such as these, which is applauded and encouraged for continuation.

b. In addition, we recommend expanding programming to also include support for integration of Lay Health Navigators who can work within communities identified as in high-need of care. These paraprofessionals can provide on-the-ground health information, but also build community trust and relationships that can break down barriers to those receiving the care that they need. It will be essential that the Lay Health Navigators are well-trained, able to identify with the population in which they serve, and able to work closely with other available care programs so that they can be a strong link between individuals and medical and/or dental care providers (e.g., primary care medical homes).

5. Reduce inappropriate use of emergency services.
Liaisons in emergency departments can attempt to not only reduce the inappropriate use of emergency services, but also identify a primary care medical home and enroll patients in the Orange Card system. Having a liaison on the spot in the emergency department (at least during high demand hours) could help with scheduling primary care follow-up appointments before leaving the emergency department.

Expand the capacity to place community liaisons in emergency departments to reduce the inappropriate use of the emergency department and to encourage the identification of a primary care medical home and enrollment in the Orange Card system. Expand this enrollment by possibly scheduling a primary care follow-up appointment with the individual on-the-spot before he/she leaves the emergency department.

6. Address health disparities in health care access.
Resources should be targeted to programs that reach those areas with the highest levels of health disparities based on available data and GIS mapping (e.g., African American and Hispanic, immigrant and refugee populations). All of the measures in these recommendations will help to reduce disparities in access, since they target the economic and social factors that produce disparities. In addition, strategies shown to help reduce disparities in access include:

a. Target resources and programs that reach those areas with the highest levels of health disparities based on national data and local GIS mapping (e.g., African American and Hispanic, immigrant and refugee populations).

b. Expect and require grantees to demonstrate a diverse governing board and workforce, to meet the needs of a diverse community.

c. Expect and require grantees to attend an annual training (at minimum) around cultural competency that includes both theoretical and practical application.

d. Where applicable, encourage grantees to include questions on patient satisfaction surveys that assess the degree to which patients perceive that the care they receive is culturally sensitive and appropriate to meet their individual needs.

Despite the various hardships that make access difficult for some people, patients need to be accountable for their own responsibilities to keep appointments, reasonably comply with treatment, or discuss with caregivers when they are unable to do so. Patient-accountability models of care are unique models of care that show promise, yet have not fully been tested or developed. Rather than approach accountability issues in a purely enforcement mode, the Cone Health Foundation, which has always been ahead of the curve in terms of testing new and innovative strategies throughout the community, could:

Explore the feasibility of identifying a grant site willing to pilot the degree to which incentivizing care leads to higher levels of care delivery and better health outcomes. Incentives could include reduced or subsidized costs, cash rewards, lotteries or point accumulations for larger prizes, or tangible items such as vouchers for food (see Oliver & Brown, 2012, and Lutge et al., 2012 for additional examples). The incentive system would need to be developed and consistently applied, but pilot testing of such a model demonstrates promise.

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B. Community-Level Recommendations

1. **Partner to implement a mobile health care unit.**
Mobile health clinics can provide access to screening and primary care for people who have been marginalized by our current health care system, especially those who are homeless or without ready access to transportation. Serving as an interdisciplinary health care provider to individuals in the community, a mobile health clinic has the potential to increase continuity of care and build better patient/provider relationships within communities.
   a. Although mobile health care units carry a price tag (typically $350,000-$500,000 a year to operate), the return on investment for these units is substantial. Given the nature, scope, and resources needed for implementation, the Cone Health Foundation is encouraged to explore braided funding and partnership-based models with other foundations, agencies, universities, and other community members to create a coordinated response that would allow for its implementation.
   b. The Lay Health Navigators referenced in the Individual-Level Recommendations section could play a key role in the implementation of a mobile health care unit by laying the groundwork within the community that will be targeted by the mobile health care units. This will encourage trust building and begin essential relationships so that upon entry into the community, the mobile health care unit is a success.
   c. For greatest impact, it is recommended that communities with the highest levels of inappropriate emergency department utilization and outside of the one-mile buffer for the proximity to a primary care medical home/clinic are the primary targets for this effort.

2. **Increase health literacy.**
Implement the Ask Me 3 Campaign, which is a patient education program designed to promote communication between health care providers and patients by encouraging patients to understand the answers to three questions: 1) What is my main problem? 2) What do I need to do? 3) Why is it important for me to do this? The Foundation can partner with other Foundations (e.g., United Way), local service agencies, reading and literacy programs, and area universities to facilitate successful implementation of this program.

3. **Promote clinical preventive services through education and outreach.**
Preventive services also are a key aspect of primary care. In allocating limited resources, the focus should be on those clinical preventive services that have been shown to be most cost-effective. Therefore, we recommend that particular action is taken related to promoting health and wellness across the community through prevention work.
   a. Provide funding that can support the implementation of a subset of the top clinical preventions that demonstrate the greatest return on investment. These areas are outlined within this document, but include areas such as aspirin chemoprophylaxis, childhood immunization series, and tobacco-use screening and brief interventions. The Foundation can include in RFP’s the need for agencies to apply for prevention work to address these areas (or other documented high impact areas) across the community.
   b. Given the local data indicating that there are a high number of individuals who do not feel preventive services are necessary for themselves or their children (e.g., 50% of parents who did not take their children to get an annual check-up indicated that they do not think they need to if the child isn’t sick, only 63% of women received a pap smear in the past year), there may be need for an education and outreach campaign specifically related to the importance of preventive care and annual check-ups for both adults and youth and one that will emphasize overall chronic disease prevention.

4. **Develop a health care access task force examining the needs of underserved populations that have not yet been well studied, especially immigrant/refugee populations.**
Although this white paper addressed the health care needs of some underserved populations, the data provided here related to health care access among these populations just scratched the surface. The distinctive circumstances of the various underserved populations (e.g., immigrant/refugee populations, Hispanic, etc.) require much more detailed attention than the resources for this project were able to provide. Thus, it is recommended that a task force is formed that can examine at a deeper level the health care needs of underserved populations that have not been well studied in order to most effectively create change for all groups in need.
C. Systems-Level Recommendations

Given the nature, scope, and resources needed for implementation, the Cone Health Foundation is encouraged to explore braided funding and partnership-based models with other foundations, agencies, universities, and other community members to create a coordinated response that would allow for its implementation. More than simply reducing the costs for each funder, shared funding also arranges support in a more collaborative fashion that broadens an initiative’s constituencies, and therefore magnifies the initiative’s community “footprint” and the number of institutions that “buy into” the project’s importance and success. With those goals in mind, the following systems-level recommendations are offered.

1. Increase access for the underinsured through subsidizing costs.
Primary care and referral networks are needed not only for low-income uninsured patients, but also for middle-income people who cannot afford insurance, and insured people who cannot afford their full co-payments and deductibles. This component of need (which will become more prominent once the ACA is implemented) calls for an approach to coordinated referrals that uses more of a sliding-scale or partially subsidized approach. Thus, in addition to accepting uninsured patients, area providers should be encouraged to accept “under-insured” patients. This group refers to those who may have insurance, but continue to face financial difficulties in terms of paying deductibles and/or co-payments. Thus, a complement to the Orange Card system for uninsured patients might be the development of a tiered system for under-insured patients that entitles eligible holders to a more steeply sliding scale for out-of-pocket payments (such as one that ranges from 10% to 90% discount/subsidization).

Providers could be supported in their willingness to participate in this tiered card system by funding a program that partially or fully reimburses providers for fees they reduce or waive. This program could work one of two ways: 1) by directly funding primary providers who agree to accept an allotment of “underinsured” patients; or, 2) by leveraging an existing provider network of multiple providers (such as the Orange Card network) and adding the tiered sliding scale system that allows those who are insured, but cannot afford the deductible or co-pay to still receive services. Denver, San Antonio and San Francisco are three large communities that use tiered sliding-scale systems that reach well into the middle-income population of underinsured people. These programs are built around public hospitals and academic medical centers. Greensboro could be a national innovator in developing a similar system using community providers.

2. Promote cross-system collaboration, awareness, and community mobilization to reduce barriers to health care.
Health care access should be a shared priority. Thus, funding agencies, advocacy groups and other stakeholders are encouraged to share and work collaboratively, with funding and strategies to support health care access improvement efforts. These efforts could include communication strategies, dissemination of health care information, effective program implementation, outcomes tracking, and related activities. Given that the implementation of the ACA will entail major changes in the composition of the uninsured, and pose access challenges for the uninsured, a mechanism for cooperative community planning will be required to anticipate and respond strategically to these challenges and opportunities.

   a. The Foundation could play a leadership role in community-wide planning for the implementation of the ACA, which will entail major changes in the composition of the uninsured. A mechanism for cooperative community planning will be required to anticipate and respond strategically to these challenges and opportunities.

   b. In public schools, the nurse-student ratio is significantly higher in Guilford County compared to both North Carolina and national best practice targets; therefore, there is a need to closely examine the strengths, barriers, resources, and entry points to improve the provision of health care within the school setting. With the 2012 update to the Youth Risk Behavior Survey, the time is ripe to convene a working group that can examine school health in a much more targeted way. Thus, it is recommended that the Foundation leverage its position as a leader in the community to convene a working group that specifically examines the effectiveness of school health practices, the areas that are in particular need for additional resources, and the development of a strategic plan to meet those needs.

   c. Work in partnership with United Way to ensure that health care-related resources are well-integrated into United Way’s 2-1-1 directory. The increased comprehensiveness and efficiency of the database can assist in educating the community about health-related information and resources that are available, as well as assist both patients and providers with navigating the system’s available resources.
d. Spark community dialogue that will mobilize the community around the issue of health care access. One ongoing mechanism that can be leveraged for this purpose is to work closely with the Greensboro Public Library and select a book for community-wide reading as part of Greensboro Public Library’s One City, One Book program. Following up on T.R. Reid’s recent appearance in January 2012 at a community town hall meeting on health care access, one good candidate might be his book “The Healing of America.” A series of town hall meetings in various locations across the community can occur in tandem to forward the health care access dialogue across the community. This is consistent with strategies that other communities across the nation have used to spark community mobilization and dialogue about solutions to problems with health care access.

3. Re-examine the utilization of the current workforce.
Despite the known fact that we have a workforce shortage that is projected to increase over the next several years, it is well-recognized that the Foundation is not in a position in which they can magically create a larger workforce. With this in mind, several recommendations are offered here to examine how we can address the shortage through creative solutions:

a. Leverage area schools and universities to help meet the needs of the community, while at the same time, recruiting future health services providers for the area. For example, service training experiences, field placements, and internships that assist with workforce (under supervision) can assist in meeting the demand while simultaneously providing hands-on training and experience.

b. Explore partnerships with local physician assistant, nurse practitioner, and baccalaureate nursing schools and other allied professions (e.g., behavioral health programs) to develop community service learning training opportunities where “physician extenders” can work either for pay or for free as a training experience to extend the available workforce.

c. Explore partnerships with state dental schools to expand capacity to provide dental care to the uninsured and underinsured. For example, East Carolina University School of Dental Medicine opened in 2011 to “specifically address the shortage of dentists in regions of the State of North Carolina” by placing students in underserved areas to increase access to dental care. It is a viable option to explore how the Foundation can partner with East Carolina to potentially leverage dental students who can provide free or reduced dental services to individuals in our community through free dental clinics.

D. Monitoring Results and Measuring Return on Investment

Finally, in choosing the best course of action, the Cone Health Foundation will naturally want to consider which initiatives will produce the greatest return on investment. For that purpose, we provide a brief guide to measuring the benefits of access improvements. First, it is critical to continue to monitor changes in the key access measures presented in this report. This can be done by commissioning biennial updates of this report, in order to cost-effectively draw together existing information sources in a manner that is reasonably comparable over time. Also, the Foundation can leverage its role as a funding agency to create certain programmatic expectations for new grants and grant reporting requirements for both new and currently funded programs. Thus, the Foundation can prioritize funding to programs that include regularly tracked performance measures such as the following:

a. Require safety net providers to demonstrate what evidence-based or best practice model they are using and how they are implementing it within their setting.

b. Require grantees to document how their program provides greater access to care. For the largest impact, it is recommended that a common metric is used across all grantees to access impact on access to care. This will provide the Foundation with a valuable yardstick to monitor access levels community-wide across funded programs. Potential elements that could be considered as common metrics include: (1) having a usual source of care, (2) regular receipt of primary, preventive, and dental care, (3) difficulties experienced in receiving needed care, (4) being insured, or for the uninsured, enrollment in comprehensive program such as the Orange Card.

c. Require all grantees to integrate health literacy practices and policies as part of their ongoing process and demonstrate how they are applying health literacy approaches into their programming.
Documenting improvements in access is the first step to showing a return on investment. The second step is to “monetize” those improvements through quantification allowing benefits to be expressed in dollar terms. That can be a controversial and value-laden endeavor, using heroic assumptions that are subject to substantial dispute. But, it is an important endeavor to make the case for investing in access improvements and to show the value these investments generate. (For a more in-depth discussion, see Commonwealth Fund, 2008; Hamblin et al., 2008; Hamblin & Shearer, 2009).

The first step in quantifying benefits is to consider whose benefits to measure. Access improvements benefit the patients who receive care, the communities in which the patients live, and the institutions that otherwise might have to provide care less efficiently. From a patient perspective, the standard measure of benefit is some version of quality-adjusted life years (QALYs), which refers to how much longer and how much better they will live having received the services in question. A vast literature exists about how QALYs can be measured. Once documented, it then becomes controversial how to assign an economic value. What is a life (or life year, or quality-diminished year) worth, after all? One study of a mobile health unit used $70,000 as the value of a statistical life-year saved, in order to estimate a 1:36 return on investment (Oriol et al., 2009). A value of $100,000 per QALY might also be justified, based on the literature regarding what we are willing to pay for other types of health improvements.

Less controversially, a return on investment (ROI) analysis can focus on concrete expenditures that a safety net program reduces, or the market value of the services it provides. A market value analysis can be used, for instance, to quantify the return from investing in programs that encourage physicians and other providers to donate or discount their services. In such a calculation, the main difficulty is arriving at a fair market valuation. Because providers’ list prices are usually higher, and often quite a bit higher, than what they willing accept in a competitive market covered by commercial insurance, some discounting is needed to reduce list prices to market pricing. In addition, donated services by hospitals can be valued at their institutional costs by using standard cost-to-charge ratios.

Finally, a particular institution, such as a hospital, might want to focus on its concrete savings from reductions in uncompensated care. From this perspective, donated care becomes a cost to the institution, rather than a benefit to the patient. Usually, the main focus is on reduced use of emergency services. An average institutional cost of an emergency department visit is the starting point – say, $650 – and the question then becomes how many emergency department visits an access initiative is able to reduce. Because such programs are not implemented in a controlled experimental design, it is usually impossible to know for sure, simply from before-and-after data, or by comparing one population to another. Various studies that attempt to measure cost reductions from emergency department diversion programs have produced mixed results. Some studies show promising reductions (Althaus et al., 2011; Piehl et al., 2000), whereas others are either inconclusive or find no cost savings (Althaus et al., 2011; Pines et al., 2011; Richardson & Hwang, 2001).

Return on investment analysis should not be restricted merely to benefits that can be quantified in dollars. It is also essential to consider the broader set of medical, social or economic benefits these services produce, such as reducing death and disability, enabling return to work, or strengthening community networks. These broader benefits also might be measured using tools from the newly emerging method known as “social return on investment” (SROI). This school of thought attempts to document the more amorphous social benefits that standard ROI analysis often neglects. However, the methods for doing so are not standardized and they require a number of assumptions that skeptics might consider questionable. Therefore, broader social benefits often are addressed in a more qualitative or discursive fashion, rather than being reduced to a simple ratio (New Economics Foundation, 2009). For instance, a social ROI might simply document the number of people served, or how they report their experiences from those services.

In sum, the Cone Health Foundation has been a leader in improving health care access in Guilford County and is well-positioned to continue to make a critical impact on this issue through implementation of the recommendations above. Many of these recommendations overlap or dovetail with priorities of other local organizations and task forces. By working collaboratively with groups that have similar missions, an integrated, team approach to strategic action is likely to result in the most authentic change across the community.
References


Community Coverage Initiatives (2006). Health Affairs, w150.


Guilford Community Care Network. *Summary of Community Liaison Contact of Moses Cone Emergency Department Patients*. Personal communication (e-mail), January 25, 2012.


Holyfied, T. (GCCN Network Development Specialist). Personal communication (e-mail), January 20, 2012.


