

New Hanover Regional Medical Center Community Health Needs Assessment September 30, 2013

The Community Health Needs Assessment is a requirement of the Internal Revenue Service of all nonprofit hospitals. This the first CHNA required of hospitals, and this document is to be updated every three years. It was expected that hospitals not duplicate the work of other agencies that routinely complete Community Health Needs Assessment surveys, and that is the case here, as this document draws heavily on work done by the Health Departments in New Hanover, Pender and Brunswick counties since 2010. The hospital owes each a debt of gratitude.

This assessment will include a demographic overview of the community served, a review of process and methods used, a summary of input from other agencies, a prioritized description of health needs, a review of leading causes of death and health concerns, a review of the medical center's existing facilities and resources, and an implementation strategy.

The implementation strategy of this Community Health Needs Assessment was adopted Sept. 17, 2013, by the Strategic Planning and Facilities Committee of the NHRMC Board of Trustees.

Community Served

New Hanover Regional Medical Center is the tertiary, or specialty, hospital in Southeastern North Carolina, with its primary service area including New Hanover, Pender and Brunswick counties. NHRMC also serves, on a more secondary basis, the counties of Columbus, Onslow, Duplin and Bladen, and is receiving a growing number of referrals from additional counties in the region, to include those in South Carolina. But 79% of hospital discharges in those three primary counties are from New Hanover Regional Medical Center, and this was the determining factor in defining "community served" for this assessment.

The medical center opened in 1967 as New Hanover Memorial Hospital. A public referendum passed in November 1961 to build the new hospital, which merged separate black and white hospitals without protest, riot or bloodshed – a crowning civil rights achievement in the South in 1967. Since the day it opened, the hospital has served all in need of its care, regardless of race, ethnicity, creed or ability to pay.

Though the hospital was built to serve New Hanover County, it quickly became the hospital of choice for specialty services in the region, a reality the hospital later acknowledged by renaming itself "New Hanover Regional Medical Center" in 1991. The hospital has never received tax dollars for its everyday operations, and it paid off all county taxpayers' building debt in 1993. All total, the county's taxpayers have invested about \$23 million, total, in NHRMC during its 46 years of operation, or about a half million per year. In return, NHRMC has provided indigent care and community benefit in the billions, and has created an economic engine worth billions annually to the region's economy.

The primary service area of NHRMC is the southeastern coast of North Carolina, which has parlayed its natural beauty and temperate climate into tremendous population and business growth in the past 20 years. The three counties' population of 367,019 (New Hanover 206,189, Brunswick 107,431 and Pender 53,399) is 83.3% more than in 1990. Even from 2010 to 2011, Brunswick's population grew by 2.5%, Pender's by 2.3% and New Hanover's by 1.7%.

This population is largely Caucasian in all three counties, including 79.1% in New Hanover; 83.4% in Brunswick; and 78.4% in Pender. African-American is the largest minority, with 14.8% in New Hanover; 19.7% in Pender; and 11.4% in Brunswick. The state average for Caucasians is 72.1%, while the state average for African-Americans is 22.0%.

The Latino population continues to grow, though not as quickly as in past years. In New Hanover County, 5.3% of the population is Latino, with 5.2% in Brunswick and 4.9% in Pender. The region's climate is suitable for large farm operations, which in turn draws a large migrant, Latino workforce. Native American and Asian minorities make up less than 2%, combined, in the region.

As an attractive site for retirement, the region has a larger-than-average – and growing – retirement population. In Brunswick County, 22.5% of the population is older than 65. In Pender, this group makes up 15.4% of the population, and in New Hanover, it's 14.2%. The statewide rate for population greater than 65 is 13.2%.

Children less than the age of 18 make up 22.6% of the population in Pender County; 19.7% in New Hanover and 18.4% in Brunswick. Statewide, the percentage of children less than 18 is 23%.

Children in New Hanover County graduate from high school or a higher level at a rate of 89.5%. Some 36% receive a BS degree or higher. The county has 38 public and 14 private schools. The dropout rate is 3.4%, and 44.3% of the students in public schools in 2009 were enrolled in free or reduced lunch programs. The state average is 53.7%.

In Pender County, 86.2% graduate from at least high school and 19.3% receive a BS degree or higher. The county's dropout rate is 3.57%, and 51.6% receive free or reduced price lunch.

In Brunswick County, 85% graduate from at least high school and 23.7% go on to receive at least a BS degree. Six percent drop out of school, and 61.8% receive a free or reduced price lunch.

In terms of physical environment, New Hanover County in 2010 had 14 unhealthy days for those who have asthma or lung disease. The county reports that over the last several decades, it has experienced a decline in water quality because of human activity. New Hanover County was one of the first to ban smoking in public buildings, and Brunswick County has followed suit by banning smoking in restaurants and bars. Brunswick characterizes its water as hard, with low levels of bacteria. The county has no air quality programs and relies on New Hanover County to maintain updates on area air quality. The average air quality index for Pender County has fallen within the "green" or "good" range for several years.

Regarding economy and employment, New Hanover County is by far the most urban of the three counties, and therefore is home to the region's largest employers, the largest of which is New Hanover Regional Medical Center. Average household income

in 2011 was \$44,719 in New Hanover County; \$45,132 in Brunswick County and \$44,568 in Pender. The state average for household income in 2011 was \$46,291.

New Hanover County features a workforce that relies on tourism, health care and social assistance, retail trade, hotels and food services, and professional, scientific and technical services. A byproduct of its climate and coastal location is EUE/Screen Gems Studios, the site of dozens of major motion pictures as well as television series and commercials. Other large employers include PPD, General Electric, the University of North Carolina at Wilmington, and Verizon Wireless.

Brunswick County's economy is based on retail trade, health care and social assistance, hotels and food services, construction, entertainment and recreation. Its largest employer is also its largest hospital, Novant Health. Pender County's economic leaders are in health care and social assistance, retail trade, hotels and food services, manufacturing and real estate.

The economic downturn of the century's first decade was especially acute in the service economies on the coast. Brunswick County's unemployment rate in 2012 was 11.3%, and Pender County's rate was 10.9%. New Hanover County had a 9.5% unemployment rate. The state's overall rate was 9.4%.

The economy also drove the numbers of those living in poverty. In Pender County in 2011, some 15.9% of its population lived in poverty, and 14.2% had Medicaid, the federal/state government insurance plan for the poor. Some 15% in Brunswick County lived in poverty, with 14.1% on Medicaid, and in New Hanover County, 14.3% lived in poverty and 13% received Medicaid services. In the state as a whole in 2011, 16.2 % lived in poverty and 19 % received Medicaid.

Another outcome of economic status is the rate of uninsured residents. In North Carolina in 2011, 19.7% were without health insurance. In Brunswick County, 19.8% of its people were uninsured, Pender County had an uninsured rate of 18.2% and New Hanover County's rate stood at 16.9%. A byproduct of low-income status and lack of insurance is difficulty accessing a primary care physician. New Hanover County in 2010 had 12.8 physicians per 10,000 people, but in Brunswick that dropped to 6.3 physicians per 10,000 and in Pender, the rate dropped to 2.8 per 10,000.

Process and Methods Used to Conduct the CHNA

This Community Health Needs Assessment owes a debt of gratitude to the public health departments in New Hanover, Brunswick and Pender counties, each of which produced a Community Health Needs Assessment for their individual counties in the past three years. Those assessments helped guide the priority and discussion of health concerns in this region. In all cases, details, statistics and further information on each health concern can be found within these assessments. What is presented here is a distillation of the work those county health departments put together.

These assessments can be found on line as follows:

New Hanover County: <http://www.nhcgov.com/News/Lists/Posts/Post.aspx?ID=213>

Pender County:

<http://www.pendercountync.gov/LinkClick.aspx?fileticket=znnO3cHKTgQ%3D&tabid=675>

Brunswick County:

http://www.brunswickcountync.gov/Portals/0/bcfiles/health/health_2011_Community_Health_Assessment.pdf

New Hanover Regional's own Business, Analysis and Planning Department provided patient volume, disease state and demographic data. Priorities of health care needs of uninsured or under-insured groups were supplied through an emailed survey to community leaders of efforts to serve those populations. Agencies assisting with this effort include Community Care of the Lower Cape Fear, South East Area Health Education Center, New Hanover Regional Medical Center Outpatient Clinics, Cape Fear HealthNet, Cape Fear Clinic and New Hope Clinic.

For nationwide and statewide health statistics and trends, data over the last three years was gathered from the U.S. Census, the N.C. Centers for Health Statistics, the Cecil Sheps Center for Health Services Research at UNC-Chapel Hill, the N.C. Division of Public Health, N.C. County Profiles, N.C. County Health Care Rankings, N.C. Institute of Medicine, Statewide Comprehensive Outdoor Recreation Plan and the 2012 Healthcare Business Market Research Handbook.

There were two persistent information gaps NHRMC would like to raise. First, assessing the needs of the poor, uninsured is always difficult because finding an accurate count of their number is daunting. Whenever community services for them have opened, capacity has almost always immediately filled, suggesting the problem may be more profound than anyone realizes. Determining the actual level of access, transportation and chronic disease issues they face is at best an estimate.

Also, gaining an overall community snapshot of the degree of health issues as presented to providers is challenging, because providers use their own medical records vendors and they are not linked – an issue NHRMC is beginning to address through its Epic electronic medical record and through its investment in the Coastal Carolinas Health Information Exchange.

External Input:

As part of NHRMC's Community Health Need Assessment, we reached out to health leaders most familiar with the public health needs of the community – particularly the uninsured, under-insured and medically underserved in our community. We reached out to them via survey during the month of August 2013. We asked them to list the biggest needs of the population they serve, obstacles in serving that population and strategies to overcome the obstacles. Their responses are summarized below.

Community Care of the Lower Cape Fear is one of 14 networks that make up a state health care partnership known as Community Care of North Carolina. Its website states that it works in partnership with 154 primary care practices, hospitals, health departments, departments of social services, and other agencies and organizations, including MCOs and SEAHEC, in a six-county network. These professionals work together to provide cooperative, coordinated care through the Medical Home model. This approach matches each patient with a primary care physician who leads a health care team that addresses the patient's health needs. Care managers provide services to enable patients to better manage their chronic health conditions. The agency's goal is to improve health outcomes and quality of life for patients, while reducing care costs in their communities.

Angela Ives, RN, CCM, is CCLCF's Deputy Director.

Biggest needs of population served:

- Transportation. There is a lack of transportation for unscheduled needs. DSS provides transportation for scheduled events with three days' notice. If patients are sick and could get a same day appointment, they don't have transportation to that appointment. So they wait for neighbors/friends to get home from work and then get a ride to the ED or call 911 for a ride to the ED. Most aren't physically able to walk to the bus stop.*
- Money for co-pays/medication adherence*
- Better understanding of the importance of health management*
- More Section 8 housing. The New Hanover, Brunswick and Pender counties' list for Section 8 housing have been closed for months. People are living in substandard housing because there are no affordable options available.*

Obstacles in serving:

- Unreliable tools for communication, e.g., telephone or mail*
- Lack of money and access to money. All transactions are now on a debit card, so patients have difficulty getting cash for the bus or other small cost transactions.*
- Lack of interest in health management*
- Co-morbidities*

Strategies:

- Charitable funds for bus tickets, taxi rides, co-pays, and other medical needs*
- Improved health literacy tools, understanding of health literacy*

- Promotion of free cell phones e.g., Assurance Wireless, Safelink*
- Telephonic nurse is working later in the evenings to try and reach patients who cannot be contacted during usual business hours.*
- Working closely with MCO and local behavioral health/substance abuse providers*

Elissa Hanson, MSW, LCSW, is CCLCF's Behavioral Health Coordinator

Biggest needs of population served:

- Medical Detox transitioning into inpatient rehab*
- Specialized sickle cell treatment clinic*
- Chronic Pain*

Obstacles in serving:

- Lack of local resources – people don't have resources to go far away*
- Lack of continuity among a patient's providers*
- Lack of cognitive behavioral therapists specializing in chronic pain*

Strategies:

- Collaborating with MCO to create and promote a provider-wide, common crisis plan*
- Notified LIP of the need for therapist certified in CBT for chronic pain*
- Contacted NC regional sickle cell specialist to brainstorm how regional sickle cell centers can communicate better with local primary care providers*

South East Area Health Education Center, formed in 1972 under the Federal AHEC Charter, works to improve the quality of health care in our region by providing training, education and resources to professionals in New Hanover, Pender, Brunswick, Duplin and Columbus counties. SEAHEC also works to increase the local medical workforce by inspiring youth to pursue health care careers.

Through affiliations the University of North Carolina at Chapel Hill School of Medicine and New Hanover Regional Medical Center, SEAHEC provides board-certified physicians in several adult and pediatric specialties/subspecialties; accredited continuing education programs for nurses, mental health professionals, dental assistants, pharmacists and allied health providers with 88 different types of credit; educational and business tools for health care professionals and medical practices which include medical billing and practice support services; and access to the Fales Health Sciences Library, the largest medical library in the service area.

Cecile Robes, D.O., is Director of Osteopathic Medical Education for the Coastal Family Medicine residency program. Dr. Albert Meyer, M.D., is Associate Professor for the Department of Family Medicine at the University of North Carolina Chapel Hill.

Biggest needs of population served:

- Lack of safe/efficient transportation to & from appointments (outpatient)*

- Lack of insurance (working poor or uninsured)*
- Lack of adequate mental health resources (takes too long to get in or no one accepts their insurance)*
- Lack of local specialists accepting Medicaid or uninsured (hence necessitates outpatient setting sending them to UNC CH – see problem #1)*

Obstacles in serving:

- Lack of financial resources (reimbursement) for caring for uninsured populations*
- Lack of mental health resources or local mental health professionals willing to take our uninsured patients. We cannot get in touch with anyone quickly and sending these types of patients to the ED is not always possible (or welcomed by the patient). When admitted, it often takes an inordinate time to obtain consults and, once obtained, the consults have conflicting treatment plan and/or Behavior Health Unit is always full*
- Although we are on a bus line, elderly and large families with young babies are not able to travel via bus, nor are they able to afford cabs (nor are cabs equipped to take babies who require car seats). There is no local transportation that is accessible and affordable to these populations*
- Medical Providers do not know the cost of the tests, procedures or therapies they prescribe for their patients.*
- Too many of our patients are using the ED when slots are available in the clinic.*

Strategies:

- Our in house behavioral specialist, Joe Kertesz, will be seeing patients in the clinic beginning August 2013*
- We are working to educate the ED on how our clinic works*
- A hospital sponsored a Lean project that directly lead to an improved CFMC phone system*
- A quality project is underway in which we are tracking who uses the ED among our patients and why*
- A member of our medical staff calls each patient after their visit with us to get feedback on the patients perceived quality of the office visit, tracking care received from the front office staff, the nurses, the providers and others. During this call we also remind patients of our evening clinic hours and our improved phone availability and access to appointments during the day*
- Our practice administrator visits about 1/3 of our patients during their visit with us to assess their level of satisfaction with our clinic's access and availability and the quality of their experience*

NHRMC Outpatient clinics are teaching clinics for resident physicians in Internal Medicine, OBGYN, Surgery and Family Medicine. These clinics treat about 90,000 patients a year, the overwhelming majority of them either uninsured or under-insured. The teaching clinics are one of the major access points for the low-income uninsured in the region.

Mimi Jones, RN, is the clinic's director. She points out that her population's biggest needs are access to primary care and access to care from a specialty physician. The biggest obstacle is a lack of awareness in the medical community about available resources for primary care. Her current strategy is to refer patients to safety net providers for ongoing primary care, particularly providers within Cape Fear HealthNet.

Cape Fear HealthNet, a four-county initiative in Southeastern North Carolina, has a mission to create a coordinated system of health care for the poor and uninsured in Brunswick, New Hanover, Pender and Columbus counties, and to increase the capacity of health care safety net providers by ensuring that low-income residents have access to a medical home, receive preventive services, and avoid unnecessary health complications resulting in a better, healthier quality of life. Eline Rhoades is HealthNet's interim Executive Director. Her staff assisted with her responses.

Biggest needs of population served:

- Unable to afford medication, even if generic. We have an increasing number of homeless people and others who have lost employment, assets, etc. They are having a difficult time with co-pays as they have no regular source of income. The lack of GA at DSS has exacerbated the situation.*
- Payor source for medications for patients who go to the Cape Fear Clinic and others that need pain management, particularly among the large populations of patients with diabetes and hypertension*
- Dental care – (Community providers who offer this service are struggling to keep dentists. Limited options on where to send patients)*
- Eye care – Services for the Blind is apparently not going to get funding for their medical eye care program. DSS still can do referrals to the Lions Club but it takes months before they can see someone.*
- Pain management – We continue to get requests for pain management but understand there are no providers.*
- Still have a need for more options for primary care if patients need to be seen right away.*

Obstacles in serving:

- No real solutions re: medication. We try to find pts the lowest prices and/or PAP programs but this is not always enough.*
- We don't get feedback from the clinics when they are no longer offering a service, even if it is a temporary situation*
- Need regular feedback from the clinics in general so we can be sure we are referring patients appropriately*
- Getting in touch with patients on a consistent basis*

Strategies:

- We still try to find resources wherever we can. Have found some eye care resources, assistance with medication programs when possible, refer to VR if appropriate.*
- Keep abreast of services offered at DSS and in the community – e.g. maintain contacts with advocates for the homeless, etc.*
- Work with the hospital to get information about patients who fit our program*

Dr. Janelle Rhyne is medical director for Cape Fear HealthNet and is a staff physician at Cape Fear Clinic. She offers this response to the largest issues in caring for the low-income uninsured:

- Failure to follow through. Initially starts with Navigation and failure to complete Navigation. The failure to get labs, radiological studies as ordered. One obstacle may be transportation but often is they simply do not do it - substance abuse, do not see the need, forget, and cannot take time off of work. We have placed a Navigator in the clinic. We call to remind them to get labs, radiologic studies. We give them appointment cards for studies, labs, appointments. These constant reminders take a tremendous amount of staff time so it is difficult to complete routine tasks.*
- Language. About 25% of our patients speak a language other with English. (Spanish, Korean, Vietnamese, Portuguese). It is very difficult not only at their appointment but contacting them about lab results, making referrals again takes a lot of staff time. We have recruited interpreters but the interpreters may not show up or cancel. We try to have back up interpreters.*
- Obesity. Many people are not motivated to lose weight. Many of our patients feel lucky to find food to eat. We provide some nutrition counseling and stress exercise but need a community-wide program to address this issue.*
- Smoking or cigarette abuse. Many of our patients do not want to quit. They have underlying psychiatric disease and simply do not want to quit. We give them counseling, the 1-800-QUIT-NOW number and smoking cessation drugs/inhalers.*

Cape Fear Clinic, in Wilmington, provides medical care to those in Southeastern North Carolina who would otherwise be unable to access care, have no health insurance and household incomes less than 200% of the Federal Poverty Guidelines. The clinic provides a medical home for adult patients with a chronic medical condition. Services include primary medical care, oral health, and mental health and pharmacy services. John Devaney is the clinic's Executive Director.

Biggest needs of population served:

- Societal Needs*

- *Money (for bills, food, clothing, housing, transportation)*
 - *Employment*
 - *Transportation*
- *Health Needs*
 - *Medication*
 - *Care for most common disease states (depression, anxiety, hypertension, heart disease, diabetes, high cholesterol)*
 - *Wellness/Prevention Needs*
- *Health/Wellness Education and/or coaching*
 - *Improvement in diet/exercise/medication adherence*
 - *Smoking cessation*

Obstacles in serving:

- *Funding*
- *Funding*
- *Funding*

Strategies:

- *Successful use of volunteers*
- *Seeking new/innovative funding streams (collaborative grants, joint ventures, etc.)*
- *Effective use of the resources that ARE available (PAP programs, discounted medications and supplies)*

New Hope Clinic, in Southport, provides basic medical and dental care, diagnostic services and prescription drugs to low income, uninsured residents of Brunswick County, with a mission of enhancing the quality of life while preserving the privacy and dignity of every patient. Sheila Robert's is the clinic's Executive Director.

Biggest needs of population served:

- *Affordable transportation options.*
- *Local specialty care / preventive care (i.e. colon screenings).*
- *Access to affordable urgent medical and dental care.*
- *Exercise options - especially those with back/joint problems*

Obstacles in serving:

- *Trying to serve patients who have not had access to healthcare for multiple years.*
- *Trying to engage patients in their own healthcare.*
- *Transportation.*
- *Access to specialty care locally.*

Strategies:

- *Cape Fear HealthNet specialty referral program.*
- *Clinic providers, nurses and CFHN nurses spend a great deal of time educating patients on disease, goals, and outcomes.*
- *Seeing the patients regularly to hold them accountable for their choices and gain their trust to openly discuss their concerns.*

Prioritized Description of Health Needs:

In reviewing the three county health department assessments, common themes appear regarding leading causes of death and leading health concerns among their respective county populations.

As far as leading causes of death, New Hanover County's top five mirrored that of the state of North Carolina. Those causes of death are:

- 1) Heart disease
- 2) Cancer
- 3) Cerebrovascular disease
- 4) Chronic lower respiratory disease
- 5) Unintentional injuries

In Pender County, diabetes and pneumonia are among the top five. Brunswick County cites an opinion poll of interested county residents, and heart disease, cancer, cerebrovascular disease, diabetes and motor vehicle accidents were listed.

As far as health concerns, the counties' Community Health Needs Assessments have different ways of listing their population's top concerns. In New Hanover, surveys about physical health and health behaviors revealed top concerns of chronic disease, obesity, drug/alcohol abuse, and a large percentage of binge drinkers.

The Pender County assessment listed top 10 health concerns and issues. They are:

- 1) Obesity
- 2) Aging problems
- 3) Diabetes
- 4) Heart disease
- 5) Cancer
- 6) Mental health disorders
- 7) Motor vehicle accidents
- 8) Teen pregnancy
- 9) Dental health
- 10) Lung disease

Brunswick County's assessment also listed top health concerns. They are:

- 1) Chronic disease
- 2) Drug/alcohol abuse
- 3) Obesity
- 4) Tobacco use
- 5) Asthma/lung disease

Finally, all three assessments stated a strong concern, typically coming from the residents' surveys, over access to health care, a contributing factor for just about every cause of death or health concern.

In the following pages, we will address these concerns, starting with causes of death.

Leading causes of death

Heart disease

NHRMC has the area's only open-heart surgery program. The NHRMC Heart Center houses a 16-bed Coronary Care Unit and a 14-bed Cardiovascular Intensive Care Unit, as well as cardiac catheterization, electrophysiology, and cardiovascular labs. It employs Artic Sun technology to cool down patients whose hearts have been restarted.

The medical center's Cardiac Rehabilitation program is among the state's oldest and most robust. To more fully address this disease state, the hospital is refurbishing a corner of its campus to create a Heart Center entrance, and consolidating cardiology practices within its physician network, along with a re-located Cardiac Rehabilitation program, to a new facility across the street from its main campus.

The hospital, in coordination with its own Emergency Medical Services, physician staff, clinical staff and partners in the region, has worked diligently on reducing the time from a cardiac arrest call to getting that patient into a cardiac catheterization suite. That time is now an average of 44 minutes, much less than the national average. NHRMC's cardiac outreach staff has worked on teaching and expanding the "Code STEMI" protocols into the region, helping create a unified system of cardiac best practices and response. The medical center's AirLink air ambulance service is adding a second helicopter to improve response times and patient outcomes in the region.

In the community, the hospital offers numerous screening and education programs in an attempt to lower the incidence of heart disease. The Cardiac Risk Assessment Program is a program dedicated to providing free cardiac risk assessments as part of an ongoing project to combat heart disease. The program consists of a team of NHRMC employees visiting sites within the community (malls, large business, etc.) and providing individuals a cholesterol, glucose and blood pressure check. Once participants take the assessment, they can then talk with a cardiac health care provider about their personal risk and how to manage and reduce it.

The Red Dress Project, which funds the Cardiac Risk Assessment program, has been sponsored for seven years by the NHRMC Foundation. The 2012 Red Dress Gala raised more than \$30,000, which funded more than 700 cardiac risk assessments and education materials for women in the hope of curbing the devastating effects of heart disease among women.

The hospital also offers broader educational events, known as Live & Learn events, to educate the broader region about signs and symptoms of heart disease and stroke, as well as other disease states. These events have been held in New Hanover, Brunswick, Onslow and Duplin counties so far.

NHRMC's cardiac services have been recognized multiple times with awards and other recognitions. In 2013, the Society of Thoracic Surgeons awarded three-star recognition for the hospital's overall composite rating for Coronary Artery Bypass Graft surgery. In 2012, the American College of Cardiology Foundation's NCDR Action Registry awarded NHRMC a Platinum Performance Achievement Award for its STEMI initiative and a Gold Performance Achievement Award for Heart Failure treatment. The American Heart Association and American College of Cardiology awarded the hospital its Lifeline Gold Quality Achievement Award.

Cancer

NHRMC's cancer program has been nationally designated as a Teaching Hospital Cancer Program by the American College of Surgeon's Commission on Cancer. Its Zimmer Cancer Center includes physician specialists in medical, surgical and gynecologic cancers, an infusion unit for chemotherapy, a radiation oncology department, and a Cancer Research Program that offers patients access to new therapies for the treatment and prevention of cancer. Patients with cancer also benefit from an extensive support system that includes nutrition counseling, pharmacy, social care and complementary therapies. Inpatient care is provided in a newly renovated unit with large private rooms and laundry and kitchen areas to help patients and families cope with extended stays. As oncology services have grown at New Hanover Regional, fewer and fewer patients have had to leave the area for treatment.

The hospital takes the lead on a number of cancer screening and outreach initiatives.

The Pink Ribbon Project is sponsored by the NHRMC Foundation, and 2012 was the 14th anniversary since the project's inception in 1998. The proceeds from Pink Ribbon provide funding for those who meet the financial criteria to receive screening and diagnostic mammograms and other breast procedures at New Hanover Regional through a voucher system. Providers around the region have vouchers to provide to their eligible patients needing a mammogram. Vouchers can also be obtained from the NHRMC Outreach Coordinator. In FY 2013, the Pink Ribbon Project provided services to more than 1,000 people, most of them women who had no other option for this valuable screening.

The Pink Ribbon Project also provides bags filled with comfort items to women in the community who are diagnosed with any type of cancer.

The incredible success of the Pink Ribbon project has not only provided early diagnosis and comfort to thousands of area women, but has helped raise community awareness on the issue of women and cancer.

NHRMC also sponsors or collaborates on screenings for prostate cancer, skin cancer and lung cancer. It provides quarterly smoking cessation classes – at no charge for the low-income smokers – and offers discounts to allow these students to receive lung screening services.

Cerebrovascular Disease

To combat diseases stemming from blood vessel flow to the brain, NHRMC provides a variety of inpatient, outpatient and preventive services. NHRMC treats 800 strokes a year, one of the highest totals in the state.

The hospital has a 21-bed inpatient Neuroscience Unit for patients who require surgery or medical treatment for stroke and other associated disorders. The hospital is in the process of becoming nationally certified by the Joint Commission on Accreditation for Healthcare Organizations as a Stroke Center.

NHRMC has developed some targeted strategies specifically to address stroke treatment. The hospital has implemented a Code Stroke process, a multi-disciplinary effort to identify patients who would benefit from clot-busting drugs and administer them within 60 minutes. In 2008, two patients fit that descriptions, but now the number exceeds 30 on an annual basis. These improvements are made by standardizing and preparing order sets, portals and pathways, and by developing and ensuring that patients are seen by staff specifically trained in stroke treatment.

The hospital has also partnered with neurologists to organize rounds twice a week on all stroke care patients and review all Code Stroke patients to ensure process improvement.

In the community, the stroke care staff is reaching out to referring Emergency Departments in nearby counties and to referring agencies and providers in those counties to standardize their stroke care by addressing education and awareness.

High blood pressure, a common underlying cause of cerebrovascular disease, is treated throughout the organization's physician network at the primary care level. To this end, NHRMC's investment in additional primary care sites in Pender County, Duplin County and Brunswick County, as well as its ongoing partnership with Cape Fear HealthNet serving uninsured patients in four counties, is helping address and treat high blood pressure at an early stage.

The medical center's Community Outreach program often conducts public screenings solely to monitor blood pressure levels, and all screenings for cardiac risk assessment, as described in the heart disease section above, include a blood pressure screening component.

Chronic Lower Respiratory Disease

To decrease the mortality rate due to chronic lower respiratory disease in the community, New Hanover Regional Medical provides a 21-bed Pulmonary Unit dedicated to meeting the special needs of patients requiring hospitalization with pulmonary conditions. The unit includes a family lounge with activities for children, a television, puzzles and game, and a kitchen next to it.

Outpatient services are also offered to patients of the Pulmonary Unit to ensure their complete recovery. The New Hope Program is a wide-ranging program that is intended to improve the quality of life for patients leaving the Pulmonary Unit who are suffering from chronic bronchitis, emphysema, asthma, or other debilitating lung diseases. This program provides individuals with knowledge of how to most effectively manage their condition, and works towards building the patient's strength, endurance and self-confidence.

NHRMC recently expanded the New Hope Program to create more access, and the program will move with outpatient cardiac services to the new consolidated home on Physicians Drive, increasing access again. A program that opened in 1994 with four patients now offers three education classes a day, with 13 patients per class, and works with more than 80 "maintenance" patients who have graduated from the program.

Unintentional injuries

NHRMC is a state-designated Level II Trauma Center, reflecting its ability to provide comprehensive emergency services to patients suffering from the life-threatening illness or injury, 24 hours a day. The organization also staffs Emergency Departments at NHRMC, NHRMC Orthopedic Hospital and Pender Memorial Hospital. A free-standing Emergency Department in northern New Hanover County is in the planning stages.

NHRMC has also assumed responsibility for emergency medical response in New Hanover County through New Hanover Regional EMS, one of three hospital systems in the state providing their home county's emergency response. The level of care provided by New Hanover Regional EMS, the state's first system to be recognized

as a “model system,” is widely recognized as being among the best in the state. AirLink, the air ambulance services, provides emergency coverage throughout the region and into South Carolina, and the service is planning to add a second helicopter. Finally, for people who have medical questions that don't need to be answered in a doctor's office or the emergency department, NHRMC provides VitaLine, a free 24-hour call system staffed by trained medical personnel.

To help patients recover from unintentional injuries, NHRMC provides Rehabilitation Hospital and Services, with the centerpiece the 60-bed NHRMC Rehabilitation Hospital, accredited by the Commission on Accreditation of Rehabilitation Facilities. The service provides physical, occupational and speech therapies to help patients, both inside and outside the hospital, restore function limited by illness or injury.

Outpatient locations at Independence Rehabilitation, Oleander Rehabilitation and Pender Health & Diagnostics in Rocky Point provide services that include therapy for patients with orthopedic, musculoskeletal and neurological conditions, as well as children with developmental delays.

The medical center has a dedicated department for Trauma Outreach, which educates in the community year-round. A centerpiece is two Kohl's Cares For Kids events a year. In the spring event, more than 700 free life jackets are given to children, and during the fall event, more than 700 free bicycle helmets are given away.

Areas of concern

Each of the three county's health needs assessment surveys discussed areas of concern that were determined through various survey methods, each detailed in those individual documents. Areas that were common in each of those assessments are detailed below:

Obesity

The term "obesity" here encompasses adult obesity, childhood obesity, and obesity-related diseases. This region mirrors North Carolina in terms of staggering obesity statistics and related chronic diseases including diabetes, heart disease and other life-threatening illnesses.

The most recent surveys from the three counties show that 50-60% of adults are considered obese or overweight, and that childhood obesity is steadily rising to 25-35% of the population. To combat this major health concern, there have been multiple programs put in place among the three communities.

Community's response

The Obesity Prevention Initiative (OPI) is a diverse community collaboration that was established in 2005 through Cape Fear Healthy Carolinians to increase the healthy weights of Cape Fear residents. It is currently operating on several projects throughout the New Hanover community that are aimed at obesity prevention. OPI has recently paired with the Eat Smart Move More NC program to provide even more resources to the area.

Eat Smart Move More NC is a statewide movement that seeks to increase healthy eating and physical activity opportunities for all North Carolinians. For example, Eat Smart Move More in Wilmington worked with OPI in developing a multi-use path along Colwell Avenue to promote biking to school. This project also includes recruiting 100 children between the ages of 9 and 14 to wear accelerometers to monitor their physical activity for one week over each of the next three years.

NHRMC response

New Hanover Regional has expanded the amount and quality of primary care providers available in the region. The hospital supports a physician network that includes 34 family medicine and internal medicine physicians, including two practices in Pender County the hospital recruited and located in rural areas. Patients at these practices establish ongoing relationships with providers at these medical homes, where the care includes counseling and education on proper dieting and exercise habits.

The hospital also offers primary care through its Internal Medicine and Coastal Family Medicine residency programs, and their clinics on campus or nearby. One clinic in the Betty H. Cameron Women's and Children's Hospital is the Nunnelee Pediatric Specialty Clinic, where thousands of children from Southeastern North Carolina have access to more than 30 pediatric physician specialists, nurse practitioners and physician assistants who diagnose and treat a wide range of medical conditions in children, to include obesity and related conditions. A NHRMC-based Pediatric Endocrinologist, hired in partnership with South East Area Health Education Center, leads this care, and also provides outreach in Onslow County and other areas of the region.

New Hanover Regional also offers a program for adults called “Weight Transitions,” aimed at assisting healthy lifestyle changes among individuals whose level of obesity threatens their health and quality of life by addressing exercise and nutrition choices to help participants lose weight and keep it off. The program focuses on people with a Body Mass Index of 30 or above, which is considered obese. Participants in the program exercise on equipment specifically made for obese people that was purchased through a grant with the Cape Fear Memorial Foundation.

The hospital conducts community education through its Nutritional Department, and offers this education on its website:

<http://www.nhrmc.org/LifestyleChoicesforWellness>

NHRMC also addresses obesity and healthy exercise habits with its employees through its own wellness program. Employees who sign up for the medical center’s insurance program are rewarded for not smoking and are offered education if their blood sugar levels exceed certain limits, but the centerpiece is membership in the hospital-owned fitness center, where personal trainers have helped hundreds of employees lose weight while gaining strength and self-confidence.

Though the medical center and community have offered many initiatives to meet this problem, the size and scope of this public health concern is such that it remains a gap in meeting the health care needs of this community.

Access to Health Care

The lack of access to health care for the poor, uninsured and under-insured is most acutely felt in Pender and Brunswick counties. New Hanover County doesn’t exhibit the degree of need as does Pender and Brunswick, but there is still a lack of access.

Community’s response

In an attempt to offset this need for more access to health care, this region collaborated on an effort to strengthen and streamline the safety net organizations that care for the low-income uninsured. Cape Fear HealthNet began in 2005, with most of the region’s safety net providers participating. These partners include:

- New Hanover Regional Medical Center Internal Medicine Clinic
- Cape Fear Clinic
- New Hope Clinic
- New Hanover Community Health Center, now known as MedNorth
- Wilmington Health Access for Teens
- Good Shepherd Clinic
- Coastal Horizons
- New Hanover County Health Department
- Brunswick County Health Department
- Black River Medical Center
- Department of Social Services in New Hanover, Brunswick, Pender and Columbus counties
- Community Care of the Lower Cape Fear

- South East Area Health Education Center
- Wilmington Housing Authority

By combining resources for grant writing, administration and even some clinical services, the partners have addressed five primary goals. They are:

- Expand the safety net to provide medical homes for primary care
- Create a centralized system that standardizes eligibility, redistributes patients throughout the safety net based on acuity and capacity, and refers them for specialty care
- Provide case management of patients with chronic disease, teaching them to manage their symptoms and avoid unnecessary medical care
- Create a network of volunteer physicians for referrals from the safety net
- Create a network of pharmacy solutions to ensure patients can afford medications

Each of these goals has been addressed, with significant milestones including:

- Creation of the Cape Fear HealthNet Clinic
- Addition of FNPs at Cape Fear Clinic and New Hope
- Creation of system of “navigation” that created standard eligibility for care recognized by all partners
- RN Nurse Advocacy providing case management services in all four counties
- Volunteer physician network of more than 150 specialists and 20 primary care physicians
- Standalone pharmacy at Cape Fear Clinic
- Pharmaceutical Assistance program shared between Cape Fear Clinic and New Hope Clinic

This collaborative network combined to touch 11,154 patients, offering 9,315 medical visits, in 2012. It brings about \$1.5 million in grant dollars to the community annually to support this mission.

NHRMC response

New Hanover Regional Medical Center assisted in founding and creating Cape Fear HealthNet, and supports it today by providing laboratory and diagnostic tests for participating free clinics at no charge, and all related surgical and medical care is performed on a charity basis at no cost to the patient or the referring agency.

Of course, the medical center’s primary contribution to access to care for the low-income, uninsured and under-insured is the charity and uncompensated care it provides every day. NHRMC provided about \$140 million worth of uncompensated care in FY 2012. For many of these patients, this was the only available avenue to much-needed, or even life-saving, care.

Much of this care is in the context of Emergency Departments at the NHRMC campus on 17th Street and at Cape Fear Hospital. The two sites treated 120,765 patients in FY 2012, and about 30% did not have insurance. While many of these visits

were avoidable and likely belonged in another setting, the presence of the EDs provided great comfort and relief for many who had no other option for health care. The medical center also provides VitaLine, a free call to trained personnel in emergency care who can handle concerning situations over the phone, often preventing unnecessary ED visits but sometimes alerting rescue workers that an emergency is in fact taking place.

NHRMC also provides teaching clinics in four residencies: Internal Medicine, OBGYN, Surgery and Family Medicine. While the primary goal of these programs is to train medical specialists of the future, a worthy outcome is that they provide regular access to primary health care for thousands of poor, uninsured and under-insured residents. These clinics handled 84,809 visits in FY 2012.

Another critical way to expand access is by providing greater information for providers treating patients. The Epic medical record, which went live in 2012, connects all hospital patients with their physician providers and is in the process of connecting with other electronic medical record systems, creating a network in which a provider – no matter the hour or the patient's ability to communicate – can quickly learn a patient's comprehensive history and background, facilitating informed and more effective treatment.

NHRMC also sponsors individual providers of dental care for the poor. It invested in St. Mary Clinic to help provide oral surgery for the uninsured poor and is collaborating with the New Hanover Community Health Center, now known as MedNorth, on a similar program.

Finally, NHRMC is committed as an organization to Lean management principles to improve efficiency, eliminate waste and increase productivity. These principles apply to the provision of primary care, emergency care and specialty care and, through the improvements they generate, improve access to care simply from improved processes.

Despite the medical center's numerous efforts in this regard, because of the sheer scope of this issue, access to care remains a gap in meeting the health care needs of this community.

Diabetes

Diabetes is among the leading causes of death in the region and among the most prevalent of the chronic diseases. According to the county's health assessments, in Pender County, the adult diabetes rate is 11.2%; in Brunswick County, the rate is 9.3%; and in New Hanover County, the rate is also 9.3%.

Community's response

The community's establishment of Cape Fear HealthNet for primary care treatment of the low-income uninsured is a primary strategy for detection and ongoing treatment of diabetes' signs and symptoms. Many of the private physician practices have diabetes educators and classes in place for their patients.

In its Community Health Needs Assessment, the New Hanover County Health Department points to its diabetes program funded by the Office of Minority Health and Health Disparities in 2010 to increase awareness of the disease, provide health screenings to reduce barriers to health care, referrals and follow-up care in treating Type II diabetes. The Health Department provides a Diabetes Self-Management program to teach those diagnosed with the disease on how to control the disease by monitoring blood sugar, diet and other skills.

The Brunswick County Health Department provides an ADA-recognized Diabetes Education Program, with referrals from health care providers. Seminars taught by Registered Dietitians and Registered Nurses cover medication, blood glucose monitoring, nutrition, long- and short-term complications and exercise. Assessments are scheduled by appointment, with seminars on the third Thursday of each month, with three-month follow-ups scheduled as well. Fees are based on family income and insurance status.

The Pender County Health Departments also accepts provider referrals for education on nutrition and exercise, medications and signs and symptoms to follow.

NHRMC response

The medical center offers a 17-bed diabetes unit on its inpatient tower that cares for those acutely ill patients who must be hospitalized. Trained nursing staff, certified diabetic educators and dietitians work with patients to get them the information and care they need. The services offered there include nutritional counseling; medication education provided by licensed pharmacists; Certified Diabetes Educators on staff; referrals to New Hanover Home Care for ongoing management in the home; specialists who treat children with diabetes in the Pediatric Clinic, healing arts therapy; and help obtaining financial assistance for diabetes supplies.

For NHRMC's 5,500+ employees, a diabetes management program is offered to help employees manage the disease. Employees who are determined to be at risk of diabetes are enrolled in classes on disease factors and diet and are managed clinically as well.

The medical center also partners with Diabetes Management Solutions, which offers free classes on a monthly basis through its Diabetes Bus Initiative. The hospital funds the program in New Hanover County and provides classroom space at no cost. Students, typically referred by providers across the county, attend three one-hour sessions and learn to monitor proper blood sugar and A1c levels, how to eat healthy at home and while eating out, and how to prevent problems with feet, eyes, kidneys and heart, while reducing stress and staying motivated. The program has proven to reduce A1c levels and hospital utilization among its attendees.

Mental Health

Mental health, and its various components, are often cited in the county health assessments as unmet needs. New Hanover County's assessment quotes the agency that is now Coastal Care as reporting that 9,438 county residents received a behavioral health service in 2009/2010. Some 6,837 calls were received from county residents at the Call Center, which is staffed around the clock with licensed clinicians.

The health department's assessment found that the percentage of adults reporting bad mental health days was higher than the state average, and the numbers reporting bad mental health are on the rise

Community's response

Coastal Care is the state's entity for that cares for the state's Medicaid and poor residents in New Hanover, Pender, Brunswick, Onslow and Carteret counties,

managing mental health, developmental disabilities, and substance abuse services for this five-county region's residents. Its mission is to make available prevention, intervention, treatment services and support needed to live successfully in the patient's home community.

Coastal Horizons Center, Inc., a non-profit that serves a similar region, provides professional assistance to those in need of prevention, crisis intervention, criminal justice alternatives, community outreach, substance abuse counseling and mental health.

NHRMC response

In 1987, New Hanover Regional opened its Behavior Health Hospital, still the region's only provider of inpatient mental health services. The 44-bed hospital accredited by the Joint Commission on the campus of NHRMC provides inpatient psychiatric programs for adults, older adults and those with co-occurring mental health and substance abuse disorders.

The hospital is staffed by a comprehensive team of mental care providers, including board-certified psychiatrists staffed by NHRMC to ensure the services are available at all times, and psychiatric nurse practitioners, counselors, clinical social workers and recreation therapists.

In FY 2012, the Behavioral Health Hospital admitted 1,969 patients, a 6.67% increase from the year before.

NHRMC's Emergency Department has also become a leading provider of mental health care, an unfortunate commentary on the state of mental health services in North Carolina. In FY 2012, on just the NHRMC campus, some 4,123 patient visits were related to mental health, and on any given day, an average of 10 patients in the 45-room ED were there for mental health issues. The ED also accommodated 1,465 patients who had been involuntarily committed, and those patients' average time in the ED was 12.7 hours. Of that group, 636 patients needed transfer to a state mental health hospital or other facility. Those patients spent an average of 39.4 hours in the ED, or more than a day and a half. While NHRMC continues to meet the needs of these patients, especially with regard to the lack of services elsewhere, housing troubled and often challenging patients for this long strains not only the ability of other ED staff to care for other patients, but staff throughout the entire medical center.

Largely as a response to this problem, NHRMC fashioned one of its patient areas in the ED into a behavioral health patient area, to include additional specialized staffing and security.

NHRMC continues to work closely with Coastal Care and Community Care of the Lower Cape Fear to find ways to streamline and improve care in the ED, to include preventive services to avoid ED visits and bolstered outpatient services in the community to help these patients post discharge.

Teen pregnancy

The New Hanover County Health Department's Needs Assessment reports that teen pregnancy dropped for girls 15-17 since 2007 and remains below statewide

averages. Minorities continue to make up about half the teen pregnancies and experience a higher rate of infant mortality.

Brunswick County's teen pregnancy rate is also lower than the state average, as is Pender County's.

Community's response

New Hanover County's Needs Assessment credits Planned Parenthood Adolescent Pregnancy Program with providing direct case management and support to help teen mothers become responsible caring parents and productive young women, with goals of delaying a second pregnancy, continuing high school education, developing parenting skills and strengthening job skills.

The county's Health Department offers a Breastfeeding Peer Counseling Program, led by peers who had breastfed their own children, and a Pregnancy Care Management Program that provides case management to high-risk women and ensures they have providers for prenatal and postpartum care.

New Hanover County's Smart Start program and Communities in Schools work to provide Baby FAST, a multifamily group intervention model for young parents and their children. The program provides support, family strengthening, group intervention, mental and substance abuse counseling, parenting skills and networking opportunities.

The health departments in Brunswick and Pender counties both provide maternal care and family planning services.

NHRMC response

The medical center operates an OBGYN Clinic, primarily for the purpose training OBGYN medical residents who are pursuing specialty status in the field. The clinic handles practically all of the high-risk pregnancies in the region. The Betty H. Cameron Women's and Children's Hospital delivers just about all babies in New Hanover and Pender counties, and the majority in Brunswick County.

For women young and old who are victims of sexual assault, the hospital has developed a Sexual Assault Nurse Examiner program that provides confidential, compassionate care for assault victims that addresses the medical and psychological issues as well as the need to preserve evidence. The service is available around the clock.

The hospital's social workers and case managers work very closely with agencies in the community that provide pregnancy counseling, prenatal care and other services for teens who are either parents or would like to prevent pregnancies.

Dental health

Dental health is also often listed as an unmet need in the three counties for all populations, but particularly for children and the elderly. In 2012, some 1,549 visits to NHRMC's Emergency Department were related to dental complaints, and almost all had to be referred to the community, as New Hanover Regional is not equipped or staffed to be a provider of dental care.

The New Hanover County Health Department reports in its assessment that 12% of county kindergarten students have untreated tooth decay, and 4% of county fifth-graders have untreated tooth decay.

Community's response

The New Hanover County Health Department operates the “Miles of Smiles Mobile Dental Unit,” which is a dentist office on wheels for children aged 3 to 18. Children with Medicaid, NC Health Choice or no insurance are eligible. Services include oral exams, cleanings, fittings, extractions, sealants, fluoride treatment and x-rays. The unit typically visits schools with low-income populations, such as Gregory, Rachel Freeman, Johnson, Sunset Park and Wrightsboro elementary schools, Williston Middle School, and Head Start.

St. Mary Dental Clinic in downtown Wilmington provides free and low-cost oral surgery services for patients throughout the region. Primary dental services for the underserved are available at MedNorth (formerly the New Hanover Community Health Center) and Cape Fear Clinic.

Cape Fear Clinic, largely with the help of NHRMC funding, has created a network of community dentists who are willing to treat patients at no cost in their offices. Patients are initially screened and receive x-rays at Cape Fear Clinic, then referred to the participating provider.

Cape Fear Community College offers a dental hygiene school and often provides low-cost teeth cleanings to community members to help train its students.

Community Dental Care and Wilmington Dental Care are among the handful of providers who will accept patients with Medicaid insurance.

A major initiative each year is the North Carolina Dental Society's Mission of Mercy event that comes to Wilmington in the spring. Dozens of local providers staff up to 80 chairs over the two-day event, treating hundreds of low-income patients.

In Pender County, dental clinic staff provides preventive and restorative dental care to low-income children and adults at the county Health Department, which also provides a mobile clinic for county schools, pre-K through eighth grade and at Head Start programs.

NHRMC response

Dental disease is one of the few health concerns that NHRMC does not directly address, as these services are not appropriate in an inpatient setting and are available, to some extent, in the outpatient setting. Setting up the equipment and staff mix necessary for a dental clinic is cost-prohibitive and not an effective use of resources.

NHRMC employs Oral Maxillofacial surgeons to ensure this service is staffed around the clock. Board-certified surgeons address cases of facial repair caused by trauma, or oral surgery needed at the bedside before a patient can receive other necessary procedures.

The medical center does fund the provider network that Cape Fear Clinic is establishing as a preventive measure against future oral surgery, and coordinates very closely with community providers that do offer low-cost or free dental services.

This issue remains a gap in meeting the health care needs of this community.

Drug/alcohol abuse

New Hanover County Health Department found that some substance abuse decreased since 2006 among high school and middle school students, but increases by the Sheriff Departments' Vice and Narcotics Unit reports significant increases among marijuana, mushrooms, hash, pharmaceuticals and Ecstasy. Mainstreet.com ranks

Wilmington as the 10th “drunkest” city in America (and tops in North Carolina) based on residents’ admissions of heavy and binge drinking.

Community’s response

There are numerous efforts in New Hanover County to address substance abuse among youth. Coastal Horizons Center, Inc., accepts referrals for county school students who violate school policy regarding alcohol or other drugs and determine appropriate services in lieu of a long-term suspension.

Youth Development Specialists provide substance abuse prevention services to county high school students through a variety of activities, while UNC-Wilmington’s CROSSROADS program offers high school students and staff an interactive evidence-based approach to preventing drug use.

Cape Fear Coalition for Drug Free Tomorrow aims to reduce alcohol and substance abuse by youth.

NHRMC response

The medical center’s Behavioral Health Hospital is not licensed as a substance abuse treatment center, as it has been determined that it is not prudent financially or in terms of need to change the licensing, credentialing and structure of the hospital to meet this need. As such, the medical center’s response to this issue is primary short-term emergency treatment, particularly when the patient has other mental health issues, and partnering with community agencies on prevention and education.

NHRMC does coordinate two Operation Medicine Drop Events annually to allow residents to dispose properly of old medications. Often, illegal substances are turned in during these events.

This issue remains a gap in meeting the health care needs of this community.

Tobacco use

Smoking has been on the rise in New Hanover County since 2006, with 15.1% of adults reporting they smoke, according to the county’s Health Needs Assessment survey. Tobacco use remains the leading preventable cause of death, and 90% of adult smokers started at age 19 or earlier.

Community Response

Through the efforts of the New Hanover County Health Department, New Hanover County has been a statewide leader in discouraging and preventing smoking in public places. Its Health Needs Assessment survey cites two other programs addressing smoking cessation:

- Referrals for smoking cessation are made to the NC Tobacco Use Quit line for free, confidential one-on-one support at 1-800-784-8669 (1-800-QUIT-NOW).
- Project ASSIST is a local prevention coalition of community citizens and agency representatives for New Hanover, Brunswick and Pender counties. The group’s goals include reducing the number who smokes, preventing children from beginning to smoke, encouraging establishments to become smoke-free, increasing the cigarette tax and educating the public regarding the dangers of tobacco use.

NHRMC response

The medical center in 2007 banned smoking on its campus by employees and visitors. The policy was complemented with an aggressive smoking cessation program that assisted hundreds of employees in quitting. The effort was so successful that N.C. Prevention Partners later awarded NHRMC for its success in going smoke-free.

Employees are further discouraged from smoking through the organization's insurance plans, which charges those who smoke more for their health insurance.

Through its Community Outreach program, NHRMC offers smoking cessation classes every quarter, taught at an NHRMC classroom. Those who cannot afford the class are allowed to attend for free. Students also can receive discounts for NHRMC's lung screening program, a screen to assist with early detection of lung disease.

Transportation

In the interviews with those who work with low-income patients, transportation often surfaced as a barrier to getting health care.

Community Response

This region has no mass transit system underground or on rails that is commonly used to move large numbers of people to work or for other everyday activities. The closest to a system would be Wave Transit System in Wilmington, which provides 16 bus routes – one of them through the NHRMC campus - as well as trolley and shuttle services.

Pender Adult Services Inc., a nonprofit agency in Pender County, provides transportation throughout the county for \$3 a ride and outside the county for \$8 a ride.

Cape Fear HealthNet often provides transportation for patients to go to doctor's visits or pick up medication on an individual basis.

Otherwise, there is little coordinated effort around this problem.

NHRMC response

The medical center responds to the transportation issue on individual basis, providing thousands of travel vouchers to patients who need rides from the Emergency Department or even after they are discharged from home. NHRMC also lobbies to ensure the WAVE bus route continues to ride through the campus, with a stop directly in front of the Outpatient Clinics that many patients need for ongoing primary care.

On a community-wide basis, this has not been deemed a medical center issue to address. It will continue to work with those agencies that do provide transportation solutions and will continue to ensure patients have a safe discharge home.

This issue remains a gap in meeting the health care needs of this community.

Existing Facilities and Resources

New Hanover Regional Medical Center is the ninth-largest, and second-largest county-owned public hospital, in North Carolina. It staffs 666 beds on the main campus on 17th Street and at the Cape Fear campus on Wrightsville Avenue. This figure includes standalone hospitals for women's and children's services, inpatient rehabilitation and behavioral health. NHRMC also operates Pender Memorial Hospital in Burgaw on behalf of the residents of Pender County, and has close affiliation ties with Doshier Hospital in Southport. The medical center is one of three in North Carolina that operates the home county's Emergency Medical Services.

The hospital owns its own home health service, NHRMC Home Care, and its physician network now tops 120 providers.

NHRMC employs more than 5,400 and another 750 volunteer. About 550 physicians in a wide variety of specialties are on the medical staff. The hospital provides about \$140 million worth of charity care on an annual basis, and receives no tax subsidy for operations.

The hospital is the leading provider in the region for open heart surgery and specialized cardiac care, neurosurgery, oncology, orthopedics, minimally invasive surgery, vascular surgery, pediatric critical care, trauma care, graduate medical education, renal care, inpatient and outpatient rehabilitation and behavioral health. Many of these services are provided at a loss to the organization and are done solely as a community benefit.

In FY 2012, the NHRMC campus handled 32,592 admissions, with another 4,091 admissions at the Cape Fear campus. The average daily census is 463 at NHRMC and 36 at Cape Fear. The staffed bed breakdown is as follows:

- 61 intensive care unit beds
- 330 medical/surgical beds
- 136 women's and children's beds
- 46 rehab beds
- 44 psychiatric beds
- 31 orthopedic beds
- 18 progressive care stepdown beds

Both hospital campuses have full Emergency Departments, with 45 treatment rooms and 82,572 visits at NHRMC and 20 treatment rooms and 38,193 visits at Cape Fear. The 26 operating rooms, plus two cardiovascular rooms and three obstetric rooms, at NHRMC facilitated 21,531 surgeries in FY 2012. Cape Fear's eight ORs handled 7,852 surgeries. Both hospital campuses have full imaging, pharmacy and laboratory services.

NHRMC has won numerous awards and recognitions in the last three years for improvements and achievements in cardiac care, infection reduction, cancer care, emergency response and patient satisfaction. In 2011, the medical center won Cleverley + Associates' Community Value Five-Star Hospital, which is based on quality of care, efficiency of operations and low-cost delivery of service.

Implementation Strategy

The strategic plan adopted by the NHRMC Board of Trustees in 2012 and updated in 2013, focuses primarily on exploring accountable care payment models, partnering with physicians to improve access to care, affordability and quality, and expanding into the region to provide more clinical services. By doing so, the strategic plan addresses nearly all of the key issues raised in this Community Health Needs Assessment, which draws almost exclusively from those done by New Hanover, Brunswick and Pender counties since 2010.

All strategies will be implemented using Lean management principles, a system of organizational improvement to which NHRMC is committed. By reducing waste, improving efficiency and enhancing productivity, NHRMC will be more successful in each of the following initiatives:

Access to care: As part of its growing physician network, New Hanover Regional Medical Center has added two primary care physician practices in rural Pender County and an urgent care center in Wallace, which is in Duplin County but very close to the Pender County line. The organization continues to add specialties to its network, such as oncology and cardiology, and has adopted plans to expand further into the surrounding region by offering health services, particularly in Onslow and Columbus counties – which ranks last among the state’s 100 counties in health status. Other strategies may include expanding home health services in Brunswick County and making use of clinical space at Autumn Hall, in the eastern end of New Hanover County, for expansion of primary health services.

The medical center has plans to upgrade and expand its Epic medical record, bringing more providers and hospitals on line to create a shared medical record that will facilitate more informed and more efficient care.

With grant assistance from the State Employees Credit Union and the Cape Fear Memorial Foundation, NHRMC is also rebuilding and expanding its Hospitality House for patients and families who need a place to stay either for treatment or to visit loved ones. This expansion will allow more regional patients to receive care at NHRMC without worrying about lodging or transportation issues.

Even as federal and state reimbursement dwindles for government-insured patients, NHRMC continues to prioritize graduate medical education programs and the clinics where medical residents work. The hospital played a major role in the Family Medicine Residency program and the county’s FQHC (MedNorth) partnering to add a teaching physician to the MedNorth staff who will ultimately precept residents there as part of the Family Medicine Residency program. Discussions are underway to possibly expand that residency program, will residents rotating to MedNorth under the teaching doctor’s supervision.

NHRMC continues to support Cape Fear HealthNet, primarily by providing at no cost all diagnostic, laboratory and inpatient services needed by the free clinics’ patients within HealthNet. As the medical center partners with community agencies and providers to move more into accountable care and shared savings models, it will be further incentivized to invest in and provide access to care to reduce the costs of certain populations that will take part in these payment models.

Finally, the medical center's efforts to reduce 30-day hospital readmissions are driving down a path of ensuring patients without means have access to primary medical care, and in the case of NHRMC Home Care, even providing free care transition strategies that will reduce cost by focusing more on keeping patients healthy. Another tool in this regard is the Community Paramedic, a program the medical center, with help from grant funding from The Duke Endowment, will add this year. Specially trained paramedics will visit high-use patients and those likely to readmit in their homes, heading off health problems early and avoiding unnecessary use of the medical system that disrupts these patients' lives.

Obesity: As with the tactics stated above in "access to care," NHRMC will continue to provide and expand primary medical care, which will help address obesity in patients and better educate against further obesity. Also, the medical center will continue with its Pediatric Specialties Clinic and its staff Pediatric Endocrinologist, treating children with obesity-related illness, primarily diabetes. Obesity teaching and prevention will continue to be a primary part of that clinic's mission.

With the advent of accountable care and shared savings models, the medical center will have to become more engaged in the primary health of those signed up for these plans, and that engagement will include plans to address obesity.

Finally, NHRMC will continue to offer its 5,000+ employees access to a Fitness Center at low cost, with access to personal trainers and exercise classes. This strategy has already impacted the health cost of the work force and could become a model for expansion within the medical center or community.

In fact, NHRMC's success in implementing wellness programs, nutrition guidance and smoking cessation to its employees earned it N.C. Prevention Partners "Triple Crown" award, the first hospital in the state to be so honored.

Heart disease: NHRMC has approved plans to create a Cardiac entrance to the main hospital building, demonstrating its commitment to continuing to grow this crucial service. Also, a consolidated outpatient heart center, to include a newly acquired cardiology practice, has broken ground across the street from the main campus and will open next year. This center will include a new home for Cardiac Rehabilitation services. The addition of a second helicopter, also part of the unintentional injuries strategy, will assist in timely cardiac care. The hospital's cardiac outreach program will continue its goal to create common protocols and procedures for all regional providers responding to cardiac emergencies, thereby improving response and patient outcomes.

The hospital's Outreach Department will continue to schedule Live & Learn education events to teach residents of outlying communities about signs and symptoms of heart disease, stroke, diabetes and other disease states.

Cancer: The Zimmer Cancer Center is set to expand services within the Zimmer Building, signifying that service line's importance to the organization. NHRMC has also merged with Cape Fear Cancer Specialists, adding one of the community's leading oncology practices to the medical center's network. NHRMC has received a federal grant to help it become a Community Clinical Oncology Program, expanding the medical center's capability to perform research trials and new technologies. These

programs typically translate into more access to new clinical treatment for low-income patients who would not otherwise be able to afford it.

Cerebrovascular disease: The medical center continues its quest to become nationally accredited as a Stroke Center, which means it will meet national guidelines and best practices for stroke treatment and patient outcomes. It also continues to implement its Code Stroke program to administer clot-busting drugs to patients within the first hour of stroke symptoms. As part of this process, physicians will continue to partner on rounding on stroke patients and reviewing Code Stroke patients.

NHRMC's trained staff in stroke care will reach out to referring agencies and emergency providers in nearby counties to educate about stroke and raise awareness, thereby standardizing early stroke care and transport.

The hospital's overall Community Outreach Department will continue clinical screenings that include blood pressure as key metric, flagging patients in hypertensive distress and advising them, via specifically trained nurses, on next steps.

Chronic Lower Respiratory Disease: NHRMC will move the recently expanded New Hope Program, which helps patients suffering from chronic bronchitis, emphysema, asthma, or other debilitating lung diseases rehabilitate and regain normal activities, to the new consolidated cardiac outpatient services building under construction on Physicians Drive, across the street from the hospital. This will allow it to expand capacity and serve more patients.

Unintentional injuries: NHRMC recently was re-designated by the state as a Level II Trauma Center, and the organization has every intention of keeping that designation and continuing to live to the 24-hour, seven-day standards required.

The medical center also has grant funding to improve its response to Time Sensitive Injury and Illness, primarily by streamlining education in the region on how to respond to these events and by creating a web portal for each county to keep track of its emergency patients transferred to NHRMC. This program is well under way, and there is potential to increase its reach going forward.

NHRMC has received state approval to build a free-standing Emergency Department in Porter's Neck, the northeastern end of New Hanover County and very close to Pender County. This facility will relieve pressure on the EDs at NHRMC and Cape Fear Hospital.

The medical center will continue to enhance and improve its Emergency Medical Services, with specific plans to add a second helicopter to serve the region. This includes a Trauma Outreach department that will continue to work with Kohl's Department Store to give life jackets and bicycle helmets to children.

NHRMC remains one of only three hospitals in North Carolina to provide their home county's emergency medical services.

These areas are but a snapshot of how the medical center will respond to all the region's health issues and concerns, but cover the convergence of NHRMC's strategic goals and the health needs of this community.