

**Wake Forest Baptist Health- Davie Hospital**

**Accepted by the Board of Trustees**

**Approved on May 7, 2013**

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## I. Introduction

Founded in 1956, Davie Hospital has a rich history of providing care to the residents of Davie County and surrounding areas. Davie Hospital cares not only for the sick and injured, but strives to provide preventive care and health education to the people it serves. As part of Wake Forest Baptist Health, the mission, vision, and values of Davie Hospital are as follows:

### Our Mission

Wake Forest Baptist Health - Davie Hospital provides patient centered healthcare services for the residents and industries of the county and surrounding communities.

### Our Vision

Wake Forest Baptist Health - Davie Hospital strives to be the provider of highest quality health care services as part of an integrated local health care network and the provider of choice for physicians, consumers, employees, and insurers.

### Our Values

**Excellence** - demonstrate the highest standards of patient-centered care, education, research and operational effectiveness

**Compassion** - responsive to the physical, emotional, spiritual and intellectual needs of all

**Service** - cultivate selfless contribution for the greater good

**Integrity** - demonstrate fairness, honesty, sincerity and accountability

**Diversity** - honor individuality and protect the dignity of all

**Collegiality** - foster mutual respect, facilitate professional growth and mentorship, and reward teamwork and collaboration

**Innovation** - promote creativity to enhance discovery and the application of knowledge

Davie Hospital, located in Mocksville, is currently designated as a critical access hospital and operates 25 of its 81 licensed acute care beds. DCH offers inpatient nursing services, emergency care, several medical specialties, outpatient surgery, radiology, laboratory, and physical and occupational therapies.

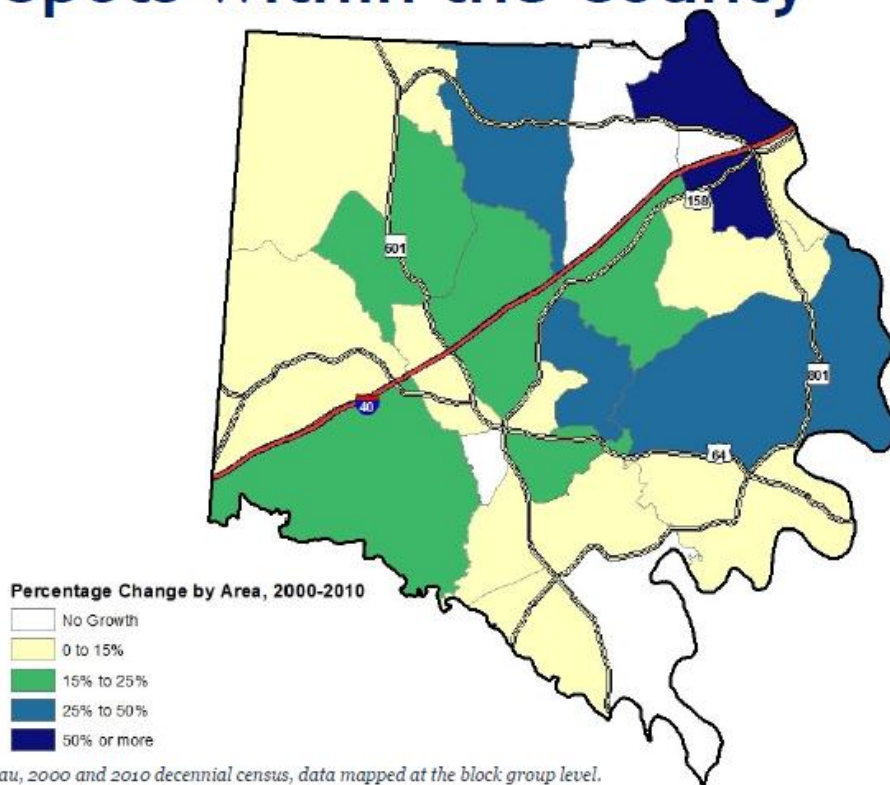
This document provides a summary of the current state of health within Davie County as well as Davie Hospital's plan to develop new and enhance existing community benefit programs and services.

## Community Profile

Davie County is located in the Piedmont Triad region of North Carolina. Widely rural, the county is characterized by rolling farmland. The nearest metropolitan area is Winston-Salem, located just 12 miles to the northeast. Davie County is bounded on the north by Yadkin County, on the northeast by Forsyth County, on the west by Iredell County, and to the south by Rowan County. There are seven townships in Davie County. Mocksville is by far the largest municipality with 5,551 residents<sup>1</sup> and is also the county seat. However over 80% of the county's population is contained within unincorporated areas<sup>1</sup>. Davie County is bisected by Interstate 40, which provides convenient access to Greensboro, Charlotte and Raleigh - just 34, 40 miles and 98 miles away, respectively. Approximately 54% of working Davie County residents travel outside the county to their employer on a daily basis<sup>3</sup>. Of those, 62% work in Forsyth County.

Davie County covers 264 square miles<sup>1</sup> and has a population of approximately 41,500<sup>1</sup> – 156 residents per square mile<sup>1</sup>. It is the 60<sup>th</sup> largest county in North Carolina. Davie experienced unprecedented growth between 2000 and 2010, at almost 2% annually. This is significant compared to the Piedmont Triad's average growth rate for that same time period, at just 1.2%. There are pockets of the county where the majority of the population growth occurred, chiefly in the eastern part of the county that borders Winston-Salem. However portions of Mocksville also experienced substantial growth during this time period. It is projected that Davie County will grow to approximately 52,400 residents by 2030<sup>2</sup>.

## Growth Spots within the County



Approximately 87% of Davie County residents are White/Non-Hispanics<sub>3</sub>, while just 6.1% of residents are Black<sub>3</sub>. Although Hispanic residents represent just 6.3% of the population currently, their numbers have increased by 106.5% between 2000 and 2010. Davie County has a disproportionately high percentage of residents over the age of 65, at 17.8%. The 65+ age group is also the fastest growing, at almost 5% per year<sub>4</sub>. The median age of Davie residents is currently 42.5 and is projected to grow to 44.8 by 2020.

**FY '12 Davie Profile**

	<b>2013 Population</b>	<b>Market Discharges</b>	<b>WFBH DC Discharges</b>
<b>Age</b>			
<b>Totals</b>			
00-17	9,535	597	-
18-44	12,260	993	13
45-64	12,344	1,164	22
65+	7,386	2,109	59
Total:	41,525	4,863	94
<b>Percent of Total</b>			
00-17	23.0%	12.3%	-
18-44	29.5%	20.4%	13.8%
45-64	29.7%	23.9%	23.4%
65+	17.8%	43.4%	62.8%
<b>Race</b>			
<b>Totals</b>			
Native American	161	9	-
Asian	266	12	1
Black	2,534	358	8
White	36,153	4,313	85
Other/Unknown	2,411	171	-
Total:	41,525	4,863	94
<b>Percent of Total</b>			
Native American	0.4%	0.2%	-
Asian	0.6%	0.2%	1.1%
Black	6.1%	7.4%	8.5%
White	87.1%	88.7%	90.4%
Other/Unknown	5.8%	3.5%	-

## **II. Establishing the Assessment and Infrastructure**

The Patient Protection and Affordable Care Act (ACA) enacted Internal Revenue Code Section 501(r), which imposed additional requirements on charitable hospital facilities. Such requirements include performing and adopting a community health needs assessment (CHNA) at least once every three years and adopting an implementation strategy to meet the community health needs identified through the CHNA. The CHNA must take into account input from persons who represent the broad interests of the community served by the hospital facility, including those with special knowledge of or expertise in public health, and must be made widely available to the public. For purposes of this report, a community health needs assessment is a written document developed by a hospital facility (alone or in conjunction with others) that utilizes data to identify and prioritize significant community health needs and includes descriptions of the following: (1) the process and methods used to conduct the CHNA; (2) individuals, groups and collaborators used to provide input; (3) how DCH took into account input from community members and public health experts; (4) a description of the community served and how it was determined; (5) a description of the prioritized significant community health needs identified through the CHNA; and (6) a description of measures and resources identified during the CHNA process to address the significant community health needs.

To complete a comprehensive assessment of the needs of the community, an internal Davie Hospital team relied on the North Carolina Division of Public Health Assessment process as an organizing methodology. A community wide team comprised of the Davie County Health Department, Davie Hospital and various community groups including the United Way, Storehouse for Jesus, the YMCA, and the County government and others convened to conduct a collaborative Community Health Needs Assessment (CHNA) with input from key community leaders and the public.

Davie Hospital also participates in a wide variety of local coalitions including, several sponsored by Davie County Health Department- Chronic Disease Committee, the County Wellness Committee- as well as partnerships and sponsorships with many community-based organizations like the United Way and Senior Services to name a few.

## **III. Defining the Scope**

Founded on the principles of collaboration and community mobilization, the community health needs assessment process was conducted to include the following scope: 1) a definition of the community served and a description of how the community was determined; 2) a description of the process and methods used to conduct the assessment; 3) a description of how the hospital facility took into account input from persons who represent the broad interests of the community; 4) a prioritized description of the significant health needs identified through the assessment; and 5) a description of the potential measures and resources identified through the CHNA to address the significant health needs. Particular emphasis was placed on ensuring that the broad interests of the community were taken into account including the medically underserved, low-income and minority populations, which were represented throughout the data collection and community prioritization process.

Davie Hospital is located in Davie County, NC which comprises the single largest county in total inpatient admissions, accounting for 90% of all admissions in FFY 12. Therefore, the service area defined for the assessment is limited to Davie County.

#### IV. Collecting and Analyzing Data

##### A) Community Perspective

The community's perspective was obtained through one source of primary data collection. A thirty question community survey was distributed to Davie County residents via Survey Monkey and included questions regarding healthcare access, physical activity, nutrition, health status, and the physical environment. Over 500 responses were received and the top three health issues identified by residents included obesity/weight, lack of affordable healthcare and cancer. Several of the completed surveys were conducted at A Storehouse for Jesus (SHFJ) in Davie County. SHFJ serves Families Working poor families, families without income, single parent families, families affected by illness, elderly; domestic violence families, homeless/transient, pharmacy as well as other types of support for Davie County residents without medical, dental or drug insurance, or Medicaid, who are within 200% of the Federal Poverty Level.

##### B) Health Experts

As part of the partnership, Davie Hospital worked with the public health expert from the County Health Department to conduct the community needs assessment; Brandi Patti, B.S., Health Education Specialist, Child Care Health Consultant.

In addition, in order to ensure consistency with state and national public health experts, Davie Hospital also reviewed the National Prevention Strategy Priorities, Healthy People 2020 and North Carolina Healthy People 2020 priority and focus areas.

- National Prevention Strategy – 7 Priority Areas
- NC Healthy People 2020- 12 Focus Areas

##### *Comparison of Federal and State Health Priorities*

<b>National Prevention Strategy: 2012-2013 Priority Areas</b>	<b>North Carolina Healthy People 2020 Focus Areas</b>
Tobacco Free Living	Tobacco Use
Preventing Drug Abuse and Excessive Alcohol Use	Physical Activity and Nutrition
Healthy Eating	Substance Abuse
Active Living	STDs/Unintended Pregnancy
Injury and Violence Free Living	Environmental Health
Reproductive and Sexual Health	Social Determinants of Health
Mental and Emotional Well Being	Maternal and Infant Health
	Injury

	Mental Health
	Oral Health
	Infectious Diseases
	Chronic Diseases- Diabetes, Cancer, Cardiovascular Disease

### **C) Community Leaders**

The Davie Board of Health Members provided oversight to the entire community health assessment process and represent key community leaders in the Davie County community:

#### **Board of Health Members**

Richard Poindexter- County Commissioner  
 Frances Tutterow- Nurse  
 Dr. Adam Dorsett- Dentist  
 Sara Buchanan- Pharmacist  
 Dr. Jim Eubanks- Veterinarian  
 Dr. Brian Baker- Optometrist  
 Dr. Richard Pressley-Physician  
 Pierson Holcombe- Public Member  
 Teresa Dandison- Public Member  
 Thomas Dalton- Public Member  
 Suzanne Wright- Secretary

These Board members shared information about the services they provide, their perceptions of current and emerging community issues, the strengths of the community and areas that need improvement.

### **D) Health Statistics/Indicators**

An important aspect of the CHNA is to review all readily available secondary data published by the local health department and the North Carolina Department of Health and Human Services. Davie Hospital staff reviewed the following local and state data sources:

- Davie County Health Department Data- mortality, morbidity, mental health
- North Carolina Center for Health Statistics-North Carolina Healthy People 2020
- NC Community Health Information Portal

DCH also reviewed the following national data:

- Healthy People 2020- National Agenda
- Centers for Disease Control reports/updates
- F as in Fat: Executive Summary (RWJF)
- Dignity Health- Community Need Index

The data below is categorized into the public health data categories with local and state and national data, when available reviewed for each.

### Social Determinants of Health

Social determinants of health are defined by the Centers for Disease control as the circumstances in which people are born, grow up, live, work, and age, as well as the systems put in place to deal with illness. The CHNA regarded social/health disparities as an important aspect to understanding the relation of healthcare needs to the community. The committee considered indicators published by Healthy People 2010, North Carolina Healthy People 2010, and the Robert Wood Johnson Foundation.

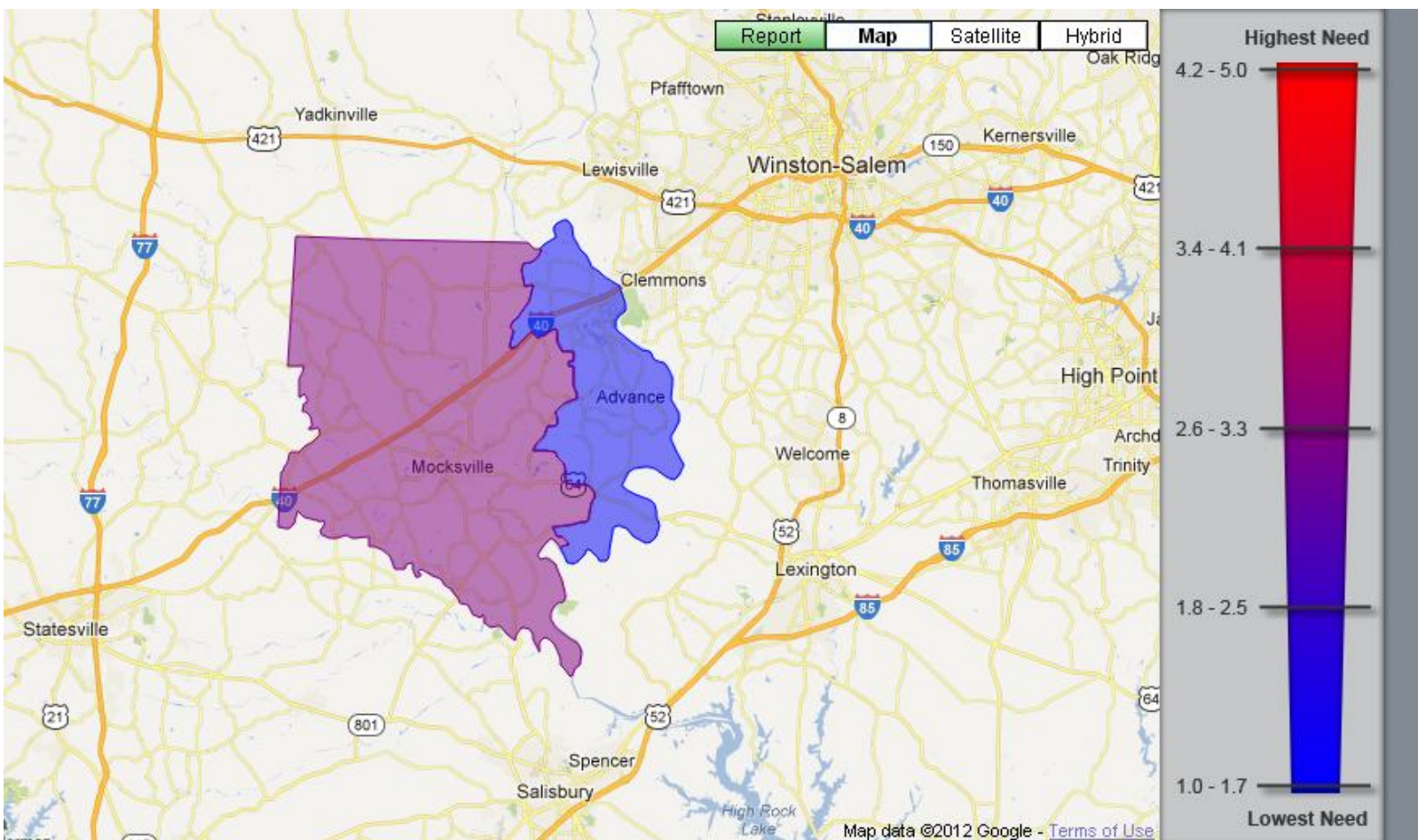
	Davie County	Benchmark/ Targets
<b>SOCIAL DETERMINANTS - Indicators</b>		
<u>Healthy People 2020</u>		
% Graduate HS in 4 years (2010-11)	76.60%	82.40%
<u>NC Healthy People 2020</u>		
% Persons Living in Poverty	12%	12.50%
% Spending >30% Income on Rent	33.80%	36.10%
<u>RWJ Indicators</u>		
% Age 25-44 w/ some post-secondary education	57.60%	-
% Avg Freshman Graduation Rate	77.30%	-
% Children Eligible for Free lunch	21.50%	45%
% Children in Poverty	21.60%	13%
% High Housing Costs	24.20%	32%
% Illiterate	12.40%	13.60%
% No Social/ Emotional Support	18.50%	14%
% Single Parent Households	22.50%	20%
% Unemployed	10.80%	5.40%
Median Household Income	\$46,957	\$43,417

Davie County reports a median household income of \$46,957<sub>8</sub>, approximately \$3,500 over the state average. This may partly be attributed to the fact that Davie County has more high school graduates compared to the state average, at 84.4%<sub>1</sub>. However 12.2%<sub>1</sub> of county residents record incomes below the poverty level. Childhood poverty, in particular, is of grave concern in Davie County. The rate of childhood poverty is almost double the benchmark level, at 22%. The unemployment rate, at



almost 11%, is also troubling as it can contribute to increasing levels of uninsured and underinsured residents who may opt to forgo necessary preventative care.

Dignity Health publishes a Community Need Index for each US zip code. Davie County received an overall Community Need Index (CNI) of 2.7 (weighted average). Mocksville records a significantly higher CNI compared to Advance, at 3.2 and 1.6 respectively. The index measures underlying determinants of health such as income, culture/language, education, insurance, and housing. A higher CNI indicates that on average, Mocksville residents experience more barriers to accessing health care than Advance residents. Thus Davie Hospital's efforts will be targeted to address this apparent disparity.



### Access to Healthcare Services

Perhaps due to the rural nature of the county, Davie is considered a medically underserved area. The ratio of primary care physicians to county residents is more than three times higher than desired at

2,282:1. Despite the median income of Davie County being above the state and national average, many residents are without health insurance. Barriers like lack of health insurance and the high cost of medical care decrease access to quality health care and can lead to unmet health needs. This includes delays in receiving appropriate care, inability to get preventive services, and potentially preventable

hospitalizations thus increasing mortality and morbidity. Approximately 19% of Davie County residents were without health insurance in 2010.

<u>RWJ Indicators</u>	<u>Davie County</u>	<u>Benchmark/Target</u>
% could not access doctor due to cost	16%	17%
% uninsured	19.00%	11%
PCP Physicians	2,282:1	631:1
Preventable Hospital Stays	75	49

### Health Outcomes

Davie County's mortality rate is higher than benchmark levels for practically every leading cause of death. Mortality rates for cardiovascular disease and stroke, in particular, are alarmingly high. This could be attributed in part to the deficit of primary care physicians in the area. Residents may not be receiving timely diagnosis of disease and/or interventions regarding symptoms and risk factors of chronic disease.

<u>Healthy People 2020</u>	<u>Davie County</u>	<u>Benchmark/Target</u>
Age Adjusted Heart Disease Deaths per 100K	120.4	100.8
Cancer Death Rate per 100K	173.8	160.6
Breast Cancer Death Rate per 100K (females)	22.1	20.6
Lung Cancer Death Rate per 100K	61.7	45.5
Prostate Cancer Deaths per 100K (males)	18	21.2
Stroke Deaths per 100K	41.6	33.8
<u>NC Healthy People 2020</u>		
Age Adjusted CVD Deaths per 100K	196.5	161.5
Age Adjusted Colorectal Deaths per 100K	13.6	10.1
Age Adjusted % Adults w/ Diabetes	8.30%	8.60%
<u>RWJ Indicators</u>		
% Diabetic	10.30%	10%

Key findings from the Davie County Community Health Assessment and the indicator data show that the leading causes of death in Davie County are cancer, heart disease, cerebrovascular disease, and chronic pulmonary disease. Although obesity was not listed in the leading causes of death, obesity is known to

be a significant risk factor for each of the diseases appearing at the top of the list. In Davie County, 28.5% of adults are obese<sub>5</sub> (with a Body Mass Index of 30 or greater.) Nearly 28% of Davie County adults are physically inactive, meaning they did not participate in any physical activities or exercises (including walking) other than those required for employment. Over 30% of children between the ages of 2 and 4 in Davie County are either overweight (BMI of 25 or greater) or obese<sub>6</sub>. In children ages 5 to 11, the rate increases to 49%; for children ages 12 to 18, the rate is 40%.

## **E) FY 12 Davie Hospital Inpatient & Emergency Department Data**

### **Overall ED trends**

Further review of the Davie ED data, reveals that 67% of patients originate from Mocksville. 20% of visits were from ethnic minorities compared to the total minority population of Davie County which is 9.5%.

### **Top 10 ED Diagnoses**

- Abdominal Pain
- Upper Respiratory Infection
- Headache
- Chest Pain
- UTI
- Low Back Pain
- Dental Problems
- Fever
- Contusions
- Ankle Sprain

<b>Payor</b>	<b>FY 10</b>	<b>FY11</b>	<b>FY 12</b>
Medicare	30%	30%	27%
Medicaid	12%	13%	12%
Private Insurance	29%	27%	27%
Self Pay	29%	30%	33%
Total	100%	100%	100%

### **Overall Inpatient Trends**

In FY 12, 10.5% of discharges by ethnic minorities compared to 9.5% minority population in Davie County and there was an average 1.2 discharges per patient indicates that few patients are being readmitted for chronic disease.

### **Top 10 Diagnoses**

- Pneumonia
- COPD/Chronic bronchitis
- Altered Mental Status
- Gastroenteritis

- Cellulitis
- Chest pain
- Congestive heart failure
- Dehydration
- Anemia
- Pancreatitis

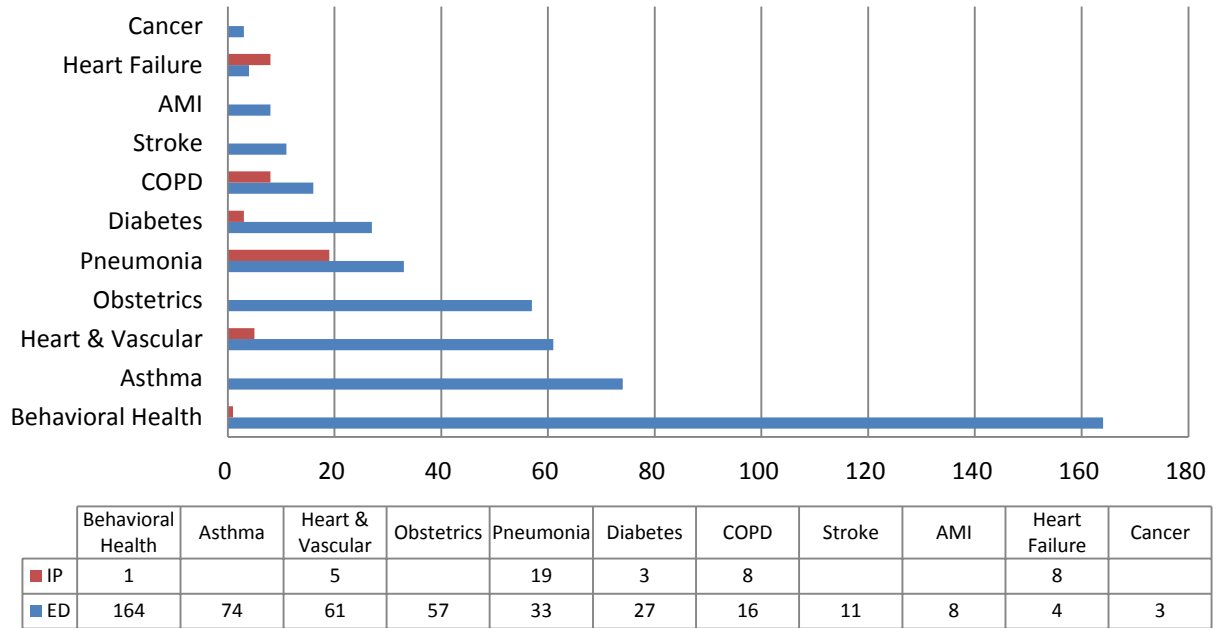
<b>Payor</b>	<b>FY 10</b>	<b>FY11</b>	<b>FY 12</b>
Medicare	54%	59%	47%
Medicaid	3%	5%	5%
Private Insurance	33%	27%	34%
Self Pay	10%	9%	13%
Total	100%	100%	100%

#### **Davie Hospital- Mocksville Urgent Care Center**

8% of visits by ethnic minorities compared to 9.5% minority population in Davie County; indicates there may be access issues for minority residents. Age distribution data indicates that 35% of visits occurred by patients age 18 and under compared to 10% of visits by patients' age 65+. In addition, 84% of Davie County visits come from residents from Mocksville.

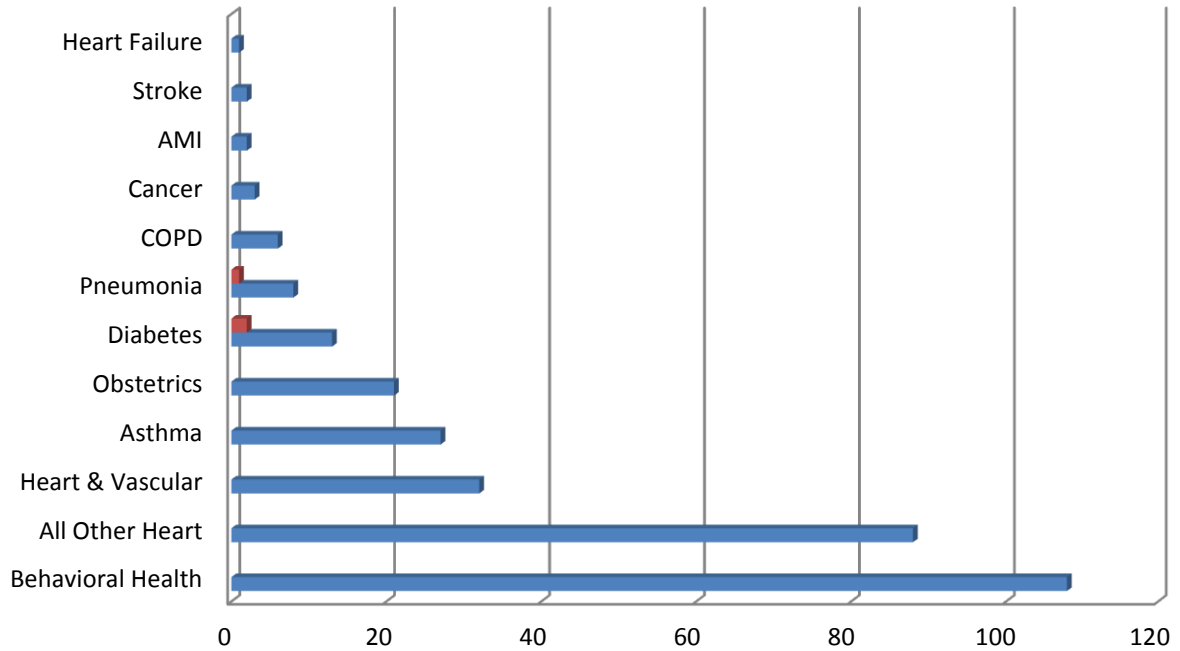
Davie Hospital also reviewed inpatient admissions and emergency department visits for FY 12 by chronic disease to understand utilization and to look specifically at the self-pay/uninsured population to identify trends. Specifically, the primary diagnosis of AMI, asthma, behavioral health, cancer, COPD, diabetes, heart failure, pneumonia and stroke were reviewed. As the table below depicts, pneumonia represents the highest number of inpatient admissions followed by COPD and Heart Failure. Behavioral health was the number one presenting ED primary diagnosis followed by asthma, heart/vascular and obstetrics.

## FY 12 Chronic Disease ED & Inpatient by All Payers



When the data is reviewed further for the self-pay/uninsured, the data indicates that behavioral health continues to represent the overwhelming chronic disease category presenting in the ED followed by other heart, and heart/vascular rounding out the top three primary diagnoses presenting in the for the self-pay population. Inpatient volume was very minimal for the uninsured volume for chronic disease.

## FY 12 Chronic Disease ED & Inpatient by Uninsured



	Behavioral Health	All Other Heart	Heart & Vascular	Asthma	Obstetrics	Diabetes	Pneumonia	COPD	Cancer	AMI	Stroke	Heart Failure
IP						2	1					
ED	108	88	32	27	21	13	8	6	3	2	2	1

## V. Selecting Priorities

Analysis of all quantitative and qualitative data described in the above section identified the top areas of significant need within Davie County. Community priorities along with Davie Hospital internal data were reviewed by Davie Hospital leadership and according to the organization's key strengths and mission, along with programs it's providing to the community, Davie Hospital chose its significant health priorities to align with its mission. The criteria outlined below were utilized to assist in the ranking:

- Magnitude: Proportion of the population affected or vulnerable
- Expertise: The ability to lead, impact change
- Severity: Impact on morality, morbidity, disability and quality of life
- Intervention/  
Effectiveness: Proven interventions exist that are feasible from a practical, economic, and political viewpoint
- Public Concern: Degree of public concern and/or awareness
- Urgency: Need for action based on degree and rate of growth; potential for affecting and amplifying other health or socioeconomic issues; timing for public awareness, collaboration and funding is present.

<b>Davie County Community Wide Priorities</b>	<b>Davie Hospital Priorities</b>
1. Physical Activity & Nutrition- Obesity	1. Physical Activity/Nutrition- Obesity
2. Chronic Disease - Cancer	2. Chronic Disease Prevention & Intervention- Heart Disease
3. Crime	

Obesity was selected as a significant health need because it is the leading health concern among Davie residents and because of the overwhelming data indicating the serious nature of the problem in Davie County. Chronic heart disease was selected as the second significant health need because it is the second most frequent cause of death in Davie County and because heart-related diseases top chronic disease presenting in the ED . The age-adjusted mortality rate for Davie County residents with heart disease is 0.17%, down from 0.3% in the 90's and 0.25% in the early 2000's. This reduction is likely due to the advances in heart disease treatment, including new interventional procedures and pharmaceuticals. However there are still an alarming number of residents contracting heart disease each year.

Although cancer is the leading cause of death in Davie County and is a concern of residents, the Davie Hospital Team elected not to pursue cancer as a priority. One reason for that is despite the number of

cancer-related deaths in Davie County, the cancer mortality rate is still below the state average<sup>5</sup>, at 0.18%. Also cancer did not appear in the top ten diagnoses for patients admitted to North Carolina Baptist Hospital from Davie County. In contrast, four of the top ten diagnoses were heart-related, which represents a significant community need for Davie Hospital.

Crime was not prioritized as a top need for Davie Hospital as it is not in the purview of mission of the hospital.

The CHNA prioritized needs for the Sustained and Strategic Response Categories and the Rapid and Urgent Response Categories' needs will be determined on an as-needed basis. Davie Hospital will provide leadership and support within the communities served at a variety of response levels. Rapid and Urgent response levels will receive priority over sustained and strategic initiatives as warranted.

- Rapid Response - Emergency response to local, national, and international disasters, i.e. Haiti disaster, weather disasters – earthquake, blizzards, terrorist attack
- Urgent Response - Urgent response to episodic community needs, i.e. H1N1/ Flu response
- Sustained Response - Ongoing response to long-term community needs, i.e. obesity and tobacco prevention education, health screenings, workforce development
- Strategic Response - Long-term strategic leadership at legislative and corporate levels to leverage relationships to promote health-related policy or reform and build key networks

## **VI. Documenting and Community Results**

The completion of this community health needs assessment marks a milestone in community involvement and participation with input from community leaders, the general public, Davie County hospitals, and health experts. This report will be posted on the hospital's website and paper copies will be made available to the public upon request. Reports and data will also be shared with our community partners and community leaders as we work together to make a positive difference in our community by empowering and building healthy communities. As this is Davie Hospital's initial CHNA report, written comments submitted by the public will be considered and included in DCH's future CHNA analyses and report.

DCH has also invested in web based software from Healthy Communities Institute (HCI) to help track all NC Healthy People 2020 indicators for Davie County that will be integrated into Wake Forest Baptist Health's public internet site. The software is designed to help local public health departments, hospitals and community coalitions to measure community health, share best practices, identify new funding sources and drive improved community health. The information will be used to promote transparency, best practice sharing, collaboration and civic engagement and will allow specifically for community tracking of the goals/impact outlined in the implementation strategy. HCI is also inclusive of tools available for performance measures that will be linked to public health interventions. DCH believes the



HCI software will allow for a meaningful way to measure and communicate progress with the general public and patients related to its CHNA.

## **VII. Planning for Action and Monitoring Progress**

DCH has identified the following available programs, activities and resources to address the significant health priorities. These activities and programs are currently in place and are accounted for /measured on an annual basis. Further review of current and new resources, programs and activities will be detailed in the CHNA's "Implementation Strategy".

### **Nutrition & Physical Activity**

- Provides healthy eating information and physical activity guidelines to Smart Start of Davie County for dissemination in their newsletters to families they serve.
- Provides healthy eating and physical activity "kits" for Smart Start of Davie County Resource Center.
- Sponsors a booth featuring healthy eating information and physical activity guidelines at Smart Starts' two annual events – Snacks with Santa and KidsFest.
- Provides healthy eating tips (generated by a registered dietitian and/or MD) on our WFBH-Davie's website
- Provides healthy recipes in the Davie Chamber of Commerce e-newsletter.
- Provides a quarterly article in the Davie County Enterprise and/or DavieLife magazine featuring Dr. Skelton from Brenner FIT that highlights healthy food options for children

### **Obesity**

- Provides BMI screenings at the Community Health Expo (hosted annually by the YMCA)

### **Chronic Disease/Heart Disease**

- Provides quarterly blood pressure screenings, free to the community and convenient locations across the County.
- Offers free, self-help smoking cessation information in the WFBH - Davie ED and in the community

### **Access to Care**

- The Davie Hospital Foundation provides an annual scholarship (\$2,500) for nursing and/or health professional education to a Davie County resident.  
Provides Radiology Support to Storehouse for Jesus.