

Comments in Opposition from Cape Fear Valley Health System, Inc.
Regarding FirstHealth of the Carolinas, Inc.
Certificate of Need Application (Project I.D. # H-10296-14)
Submitted June 16, 2014 for July 1, 2014 Review Cycle

Received by
the CON Section
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I. Introduction

In accordance with N.C.G.S. Section 131E-185(a1)(1), Cape Fear Valley Health System, Inc., submits the following comments regarding the June 16, 2014 Certificate of Need Application Project I.D. # H-10296-14 submitted for the July 1, 2014 review cycle by FirstHealth of the Carolinas, Inc. (FirstHealth) for 25 additional acute care beds at FirstHealth Moore Regional Hospital.

II. CON Review Criteria

The following comments are submitted based upon the CON Review Criteria found at G.S.131E-183. While some issues impact multiple Criteria, they are discussed under the most relevant review Criteria and referenced in others to which they apply.

G.S. 131E-183 (1)

The proposed project shall be consistent with applicable policies and need determinations in the State Medical Facilities Plan, the need determination of which constitutes a determinative limitation on the provision of any health service, health service facility, health service facility beds, dialysis stations, operating rooms, or home health offices that may be approved.

As discussed below in detail, the proposed project is non-conforming to Policy Gen-3: Basic Principles.

A. Policy Gen-3 – Basic Principles

FirstHealth failed to adequately demonstrate the need for the project and failed to justify the capital expenditure for the proposed project; therefore FirstHealth failed to document how its project incorporates the Basic Principles in the 2014 SMFP. Consequently, the FirstHealth Application is not conforming to Policy Gen-3 and does not conform to Criterion (1). Please see discussions in the context of Criterion (3) and Criterion (12).

B. Acute Care Need Bed Need – Data and Projected Need – Results in Surplus Acute Care Beds

The projections included in the FirstHealth Application for FirstHealth Moore are significantly overstated. Baseline data utilized in the projections is overstated and growth rates are overstated. As a result, the proposed project does not project future utilization of total projected acute care beds at FirstHealth Moore at 75.2% utilization as required in the Acute Care Bed Need

Methodology. Therefore, the FirstHealth Application is non-conforming to Criterion (1). Please see also a discussion in the context of Criterion (3).

G.S. 131E-183 (3)

The applicant shall identify the population to be served by the proposed project, and shall demonstrate the need that this population has for the services proposed, and the extent to which all residents of the area, and, in particular, low income persons, racial and ethnic minorities, women, handicapped persons, the elderly, and other underserved groups are likely to have access to the services proposed.

FirstHealth failed to identify the population to be served by the proposed project and failed to demonstrate the need to add 25 acute care beds at FirstHealth Moore.

A. FirstHealth Incorrectly Identified the Population to Be Served

FirstHealth failed to adequately and correctly identify the population to be served by the proposed project. Projected patient origin for FirstHealth Moore is inconsistent throughout the Application.

Projected patient origin is presented in two locations in the Application: on page 29 in response to the Acute Care Criteria and Standards and on page 61 in Section III. The following table reflects the percentage of patient days projected on pages 29 and 61.

**FirstHealth Moore
Projected Patient Day Patient Origin**

	2018 page 29	2018 page 61
Moore	44.2%	46.2%
Richmond	11.6%	12.6%
Hoke	9.4%	4.7%
Montgomery	7.9%	8.9%
Robeson	6.7%	5.4%
Lee	5.4%	6.4%
Scotland	4.4%	4.0%
All Other	10.4%	11.8%
	100.0%	100.0%

Source: FirstHealth CON Application p.29 and p.61

As reflected above, the patient origin for the proposed expanded FirstHealth is inconsistent. FirstHealth did not provide any specific assumptions regarding patient origin and therefore, the difference is unexplained and unreasonable. Therefore, the why these two patient origin tables are so different. As a result, the Agency cannot determine what the proposed patient origin should be and as a result, the population to be served has not been correctly identified and the project is non-conforming to Criterion (3).

B. Projected Growth Rate Is Overstated

a. Use of 3.77% Growth Rate Is Not Supported Quantitatively by Historical Utilization Data

To justify the need to spend \$15,288,500 for new construction of the proposed 25 new acute care beds, FirstHealth must justify the need for its total acute care bed capacity plus the new acute care beds.

To do this, FirstHealth utilizes an unreasonable and unsupported annual growth rate of 3.77% from 2014 through 2019. The following table presents historical patient days, annual growths and calculates average annual growth rates for acute care inpatient days at FirstHealth Moore from 2006 through 2014.

FirstHealth Moore Regional Historical Patient Day Growth

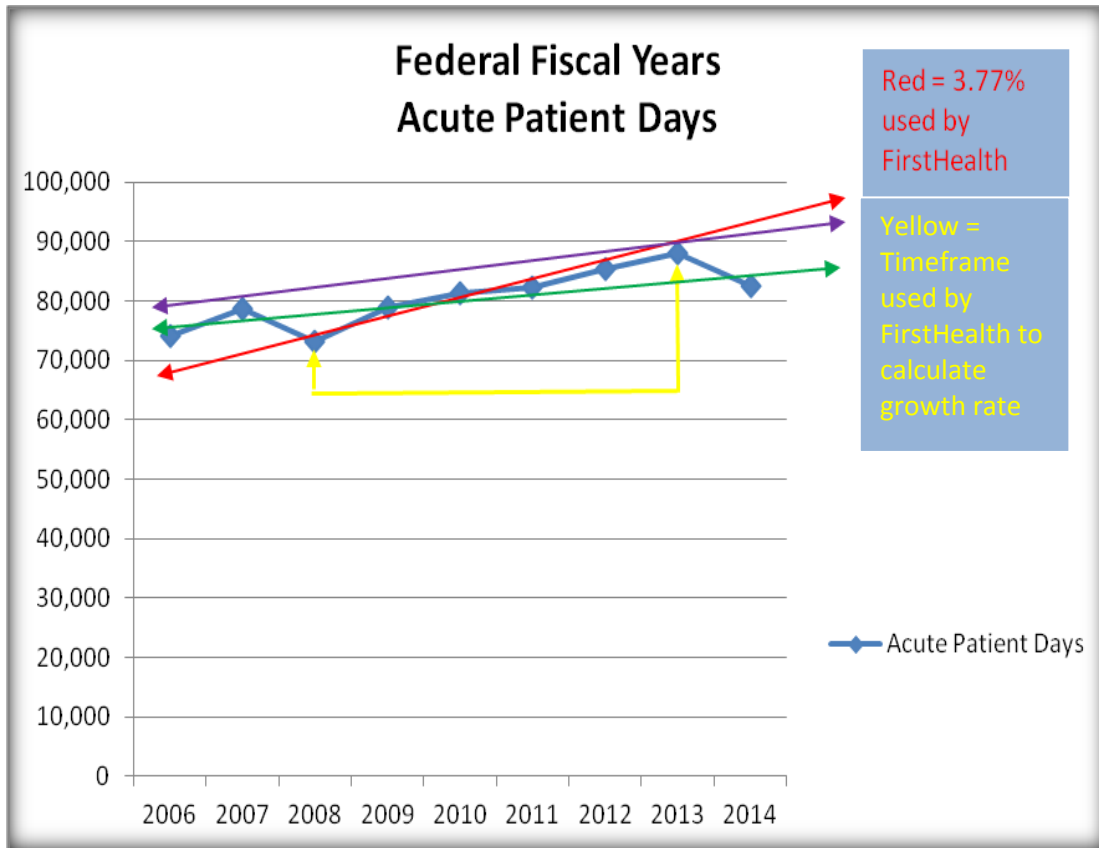
Federal Fiscal Year	2006	2007	2008	2009	2010	2011	2012	2013	Estimated 2014	Average Annual Growth through 2013	Average Annual Growth through 2014
FMRH Acute Patient Days	74,037	78,816	73,264	78,996	81,288	82,234	85,453	88,037	82,465		
Annual Change/ Growth Rate from previous year		6.5%	-7.0%	7.8%	2.9%	1.2%	3.9%	3.0%	-6.3%		
2006-2013										2.61%	
2006-2014											1.5%
2007-2013										1.96%	
2007-2014											0.8%
2008-2013										3.77%	
2008-2014											2.1%
2009-2013										2.75%	
2009-2014											0.9%

Source: SMFPs; CON Project I.D. #H-10296-14, page 66

NOTE: 2008 = lowest patient days during the nine year timeframe
2013 = highest patient days during the nine year timeframe

Inpatient utilization and inpatient annual growth rates at FirstHealth Moore fluctuated dramatically from 2006 through 2014 as shown in the previous table and illustrated in the following graphs. The following graph illustrates that FirstHealth's growth rate is inflated. FirstHealth selectively used a timeframe which begins with the lowest volume of patient days, experienced in the last nine years, 73,264 patient days in FFY 2008, through the highest volume of patient days experienced in the last nine years 88,037 patient days in FFY 2013, as illustrated

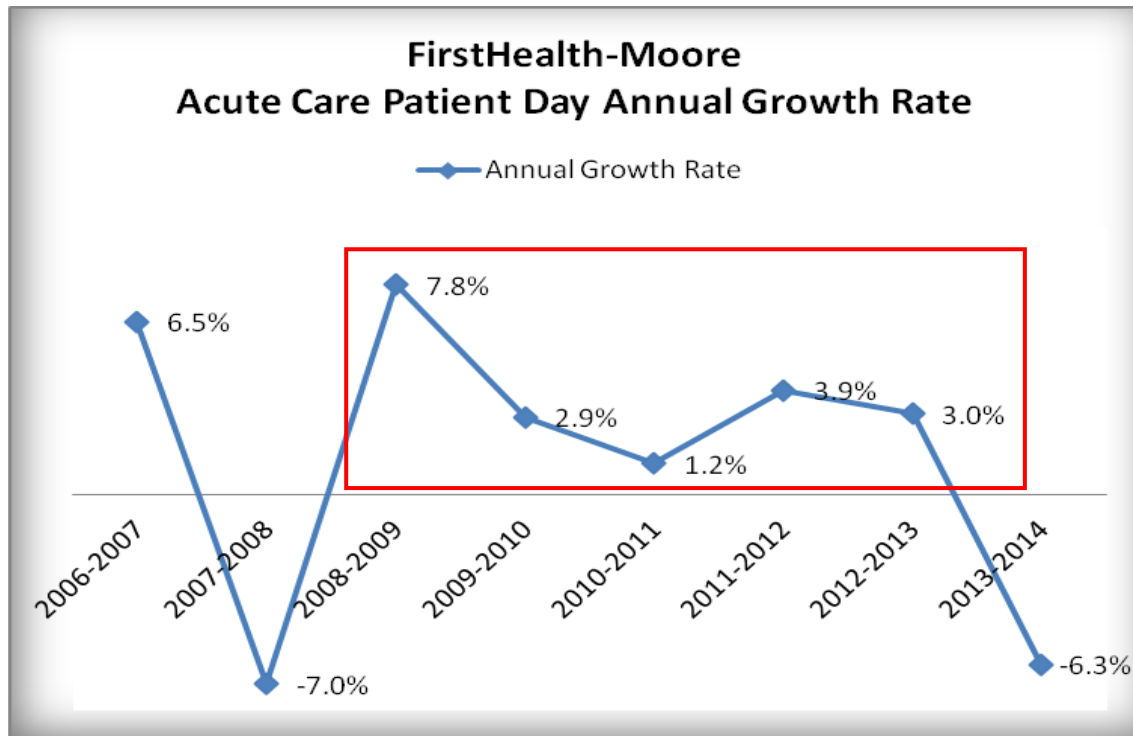
with the red line. This growth rate is unreasonable as it ignores the significant decrease in days from 2007 to 2008.



Source: SMFPs; CON Project I.D. #H-10296-14, page 66

As shown in the previous graph, FirstHealth’s growth rate is inflated. To smooth out both the negative drop in utilization from 2007-2008 and the positive spike in utilization from 2008-2009 FirstHealth should have utilized either the growth illustrated by the purple line (2006-2013) or the green line (2009-2013) reflected above and in purple and green in the previous table. Instead they chose to use the low volume in 2008 as their base year resulting in overstating actual growth at FirstHealth.

The following graph illustrates the peaks and valleys in annual growth rates from 2006 through 2014.



Source: SMFPs; CON Project I.D. #H-10296-14, page 66

On page 66 of the Application FirstHealth Moore informs the Agency of the 7.0% decrease in inpatient utilization from 2007-2008 but makes no attempt to explain the 7.0% decrease. FirstHealth then proceeds to utilize the growth rates from 2008-2013 (identified above in the red box) to calculate the 3.77% growth rate used in their projections. This includes the 7.8% growth rate from 2008-2009 but not the 7.0% decrease from the previous year as illustrated above.

It appears that FirstHealth had a problem of some type from 2007 to 2008 which resulted in a significant decrease in inpatient utilization. It also appears that the problem was remedied the next year. The one year growth from 2008 to 2009 represents a recovery from a dramatic incident the previous year. It is not true growth in patient days as implied by FirstHealth, but a recovery of previous utilization levels as illustrated in the previous table and graphs. When both the decrease in utilization from 2007-2008 and the increase in utilization from 2008-2009 are included in the calculation of average growth rates over several years the impact of the negative and positive extremes is smoothed.

The inclusion of one spike year in projections has the impact of overstating future growth. FirstHealth did not provide a complete picture of utilization by excluding the fact that even with the 7.8% spike in growth; this represented a decrease from previous utilization from 2006 to 2008. Therefore, it is unreasonable for FirstHealth to use the 3.77% average growth from 2008-2013 in projecting future growth.

Calculating inpatient acute care patient day average annual growth rates at FirstHealth from 2006-2013 smooths the spike years (both the negative and positive annual extreme changes) and results in a 2.61% growth rate for the six year timeframe. Likewise, calculating inpatient acute care patient day growth rates at FirstHealth from 2009-2013 removes the spike years (both

the negative and positive annual extreme changes) from the equation and results in a 2.75% growth rate for the four year timeframe. FirstHealth overstates the growth in patient days at FirstHealth Moore by including only the positive spike in growth and ignores the fact that patient days had in fact declined significantly from 2007-2008 as reflected in the above table.

FirstHealth also explains away the estimated 6.3% decrease in patient days between 2013 and 2014 as a one year phenomenon due to the new Medicare “two midnight” rule in order to once again exclude a negative growth rate in the calculation of average annual growth rates. It should be noted that implementation of the “two midnight” rule was delayed and did not begin as anticipated on October 1, 2013 and the “two midnight rule” did not impact Medicare designated “inpatient-only” procedures and admissions. Therefore, this rule will continue to result in decreased utilization in future years. FirstHealth also discusses the impact their “Transition Team” has had on decreasing readmissions. This is a continuing programmatic effort at FirstHealth and as the program is expanded into Richmond, Hoke and Montgomery Counties where FirstHealth has inpatient hospitals, and to surrounding counties served by FirstHealth, the impact will continue to decrease inpatient readmission days. Assuming patient day volume has flattened and these two programs will have no additional impact on inpatient utilization is short sided and unreasonable. The following table shows actual average annual growth rates since 2006 through 2013 and estimated average annual growth rates through 2014 based upon estimated utilization for 2014 from the FirstHealth CON Application.

FirstHealth Moore Average Annual Growth Rates

Federal Fiscal Year	Average Annual Growth through 2013	Average Annual Growth through 2014
2006-2013	2.61%	
2006-2014		1.5%
2007-2013	1.96%	
2007-2014		0.8%
2008-2013	3.77%	
2008-2014		2.1%
2009-2013	2.75%	
2009-2014		0.9%

Source: SMFPs; CON Project I.D. #H-10296-14, page 66

FirstHealth maximized its projections by unreasonably assuming the largest of the above growth rates included in the above table, 3.77%, which includes the high growth year spike but ignores the two spike decreases in utilization from 2007-2008 and 2013-2014. This results in overstating future bed need at FirstHealth Moore. The following tables show projected bed need using the 2009-2013 average annual growth rate, and the 2009-2014 estimated average annual growth rate.

**Adjusted FirstHealth Bed Need Projections
2009-2013 Actual Average Annual Growth Rate – 2.75%**

Projected	2014	2015	2016	2017	2018	2019
Total Days of Care	83,541	84,988	87,326	89,728	91,348	89,770
Growth Rate 2009-2013		2.75%	2.75%	2.75%	2.75%	2.75%
FH Hoke 8 Bed Impact	828	828	828	621		
FH Hoke - 36 Bed Impact				1,034	4,602	6,487
Incremental Days Shifted	828	0	0	826	3,981	1,885
FirstHealth Moore Projected Days	82,713	84,988	87,326	88,902	87,367	87,886
Projected ADC						240.78
Projected Bed Need at 75.2% Utilization						320.19
Current Licensed Beds						312
Needed New Beds						8.19

Source: CON Project I.D. #H-10296-14, page 66

**Adjusted FirstHealth Bed Need Projections
Utilizing 2009-2014 Estimated Average Annual Growth Rate – 0.9%**

Projected	2014	2015	2016	2017	2018	2019
Total Days of Care	83,541	83,457	84,209	84,966	84,898	81,645
Growth Rate 2009-2014		0.90%	0.90%	0.90%	0.90%	0.90%
FH Hoke 8 Bed Impact	828	828	828	621		
FH Hoke - 36 Bed Impact				1,034	4,602	6,487
Incremental Days Shifted	828	0	0	826	3,981	1,885
FirstHealth Moore Projected Days	82,713	83,457	84,209	84,140	80,917	79,760
Projected ADC						218.52
Projected Bed Need at 75.2% Utilization						290.59
Current Licensed Beds						312
Needed New Beds						-21.41

Source: CON Project I.D. #H-10296-14, page 66

Using the FirstHealth methodology presented in the CON Application on page 66 and changing only the overstated growth rate results in negating the projected need for 25 additional acute care beds at FirstHealth as shown in the previous tables.

b. Use of 3.77% Not Supported Qualitatively

On page 39 In Section III. of the Application FirstHealth identified the following four areas which they assume validate the projected patient days.

- Population Growth Trends
- FirstHealth Network Growth
- New FMRH Services and Markets
- Inpatient Utilization.

However, they provided no quantitative analysis or additional detail or data to document this validation except in the case of inpatient utilization, which is unreasonable as discussed in the previous Section.

Population Growth Trends

FirstHealth provides six pages of population statistics to support the 3.77% growth rate. However, the statistics presented do not support this high an annual growth rate in inpatient days.

- On page 40 the Moore County total population growth is only 1.2% annually; the 65+ population growth rate is only 2.5% annually.
- On page 42 the Primary Service Area total population growth is only 1.1% annually; the 65+ population growth rate is only 3.1% annually.
- On page 44 the total FirstHealth Moore North Carolina Service Area, which includes 13 counties, total population growth is only 0.5% annually; the 65+ population growth rate is 3.36% annually.

According to data on page 58 in the FirstHealth Moore Application 44.59% of total patient days were from Moore County residents who are projected to increase only 1.2% annually in the next five years. Further, the Medicare population represents only 64.8% of patient days based upon the payor mix for inpatient services reflected on page 5 of the FirstHealth Moore 2014 Annual Licensure Renewal Application, therefore the impact of the 2.5% annual 65+ population growth in Moore County is tempered by the slower growth of the remaining population. Therefore, the 3.77% annual growth rate utilized by FirstHealth in the Application is NOT substantiated by the population growth in Moore County, the Primary Service Area or the region.

FirstHealth also provides 2010 data from the CDC/NCHS National Hospital Data Discharge Survey. However, no trend data is provided which would show increases in inpatient discharge rates or inpatient day rates. In fact, as discussed in the FirstHealth Application, changes in Medicare regulations are resulting in decreased inpatient utilization. Further, the impact of the Affordable Care Act is expected to further lower inpatient utilization as a result of changing regulations associated with readmissions and the emphasis on wellness and prevention.

Therefore, the 3.77% annual growth rate utilized by FirstHealth in the Application is NOT substantiated the data provided on pages 41, 43, and 45 (which are all identical).

FirstHealth Network Growth

On pages 46 and 47 FirstHealth provides a list of new healthcare providers and locations open in the FirstHealth Service Area since the beginning of January 2013. All of these providers are outpatient providers and will support the development of integrated care at FirstHealth. In addition, 15 of the 23 listed network expansions are located in Hoke, Richmond and Montgomery counties where FirstHealth has other inpatient locations. However, FirstHealth provided no documentation regarding any impact on inpatient utilization at FirstHealth Moore

resulting from these new practices. Therefore, the 3.77% annual growth rate utilized by FirstHealth in the Application is NOT substantiated the data provided on pages 46 and 47.

New FMRH Services and Markets

On pages 48 through 52, FirstHealth discusses a variety of new business ventures and changes in reimbursement which FirstHealth projects will result in increased inpatient utilization.

Bundled payments represent a collaborative effort between hospitals, physicians and other providers to full meet the needs of patients needing a particular procedure or service. The overall impact of bundled payment is decreasing the cost of care and improving quality of care. The way the cost of care is decreased is through decreasing duplication, decreasing readmissions (patient days) and decreasing, not increasing patient length of stay. FirstHealth assumes that admissions will increase has insurers choose to send more patients to FirstHealth. However, FirstHealth fails to acknowledge that they are not the only North Carolina hospital bundling services. FirstHealth provides no documentation of increased utilization as a result of this change in care model.

FirstHealth discussed the potential impact of the international market. However, FirstHealth does not discuss the potential impact of the affiliation with Nueterra Global Alliance. The affiliation was effective January, 2014, so at a minimum FirstHealth could have provided five or six months of data. Also, FirstHealth did not disclose the number of patients utilizing the Nueterra Global Alliance annually. What percent of the 800,000 foreign patients utilize Nueterra? What percent of that percent are expected to utilize services at FirstHealth? No data was presented to substantiate the impact of this alliance.

The remaining two “new services and markets”, Hospital Direct Contracting and Affordable Care Organizations are both methodologies which target patient health with a goal of decreasing inpatient utilization. FirstHealth already enjoys 88% market share of Moore County residents. Therefore, any direct contracting with Moore County employers will likely not result in increased utilization. Further, the #1 industry in Moore County is the golf industry. Outside of the resorts themselves, there are few large employers. Most of the resorts employees are of the hourly variety so many employers can avoid the 50 FT employee threshold in the ACA.

No data or examples illustrating the potential impact of direct contracting were included in the application to substantiate the impact of the proposed direct contracting with employers. Therefore, the 3.77% annual growth rate utilized by FirstHealth in the Application is NOT substantiated by the new services and markets discussed in this section.

Further, as will be discussed below, the methodology utilized by FirstHealth erroneously assumes no additional growth at FirstHealth Hoke and does not adjust previous FirstHealth Hoke projections in the methodology.

FirstHealth has failed to document the need for additional acute care beds and therefore is non-conforming to Criterion 3 and Criterion 1.

C. First Health Hoke Impact on FirstHealth Moore

As part of an April 2012 Settlement Agreement, FirstHealth was issued a certificate of need to construct an 8-bed inpatient unit adjacent to an emergency room at FirstHealth Hoke with one shared operating room (Project I.D. #N-8497-10).

FirstHealth Hoke opened in October 2013. At that time licensed acute care beds decreased from 320 and 312 at FirstHealth Moore.

As reflected in a letter from FirstHealth in February, 2014, included in [Attachment 1](#), FirstHealth has failed to realize projected utilization levels in the 8-acute care beds approved for FirstHealth Hoke and has indicated that the 8-acute care beds at FirstHealth Hoke were not needed.

FirstHealth projected over 2,000 acute care patient days in each of the first three years of utilization for FirstHealth Hoke in its 2010 application. This volume was projected solely upon utilization of emergency services at FirstHealth Hoke. While emergency room utilization at FirstHealth Hoke has exceeded projected utilization, average daily census at FirstHealth Hoke has been less than 2.27 patients per day based upon projections included on page 66 of the current FirstHealth Moore CON Application. **The fact that emergency volume was higher than projected should have resulted into significantly higher inpatient days than expected NOT less.**

FirstHealth does not provide any explanation in this Application regarding why FirstHealth Hoke has failed to meet projected utilization. Have they been unsuccessful in recruiting physicians or hospitalists? Did they understate the cost of operating an eight bed hospital? Or have they simply determined that an eight bed hospital is not a reasonable alternative and that operating a satellite emergency facility which continues the practice of serving Hoke County residents out of the county for inpatient services is a better revenue stream for FirstHealth?

This failure to reach projected utilization at FirstHealth Hoke documents the fact that the Agency erred in approving the original CON Application for an 8-Bed FirstHealth Hoke Hospital based solely upon the projected emergency department methodology utilized by FirstHealth Hoke. Cape Fear Valley Health System provided substantial data and analysis to show that the projections provided by FirstHealth were wrong. However, the Agency failed to correctly analyze the application resulting in the current underutilization of the hospital. FirstHealth is again projecting a need for additional acute care beds based upon unreasonable projections.

FirstHealth further aggravates its failure to develop the 8-bed CON as proposed by projecting continued failed utilization through the first three years of the project. Projected utilization for FirstHealth Hoke is anticipated to remain at 2.27 patients per day through 2016 as reflected on page 66 of the application. It appears that FirstHealth is acknowledging the failure of FirstHealth Hoke as a community hospital and that the original 8-Bed FirstHealth Hoke hospital is not needed and should not have been approved by CON.

It is evident that FirstHealth does not plan to develop and operate the 8 acute care bed hospital currently licensed as proposed in its CON Application. As evidenced by its letter dated February

14, 2014 to the CON Section, [Attachment 1](#), FirstHealth intends to continue operating FirstHealth Hoke as a satellite emergency department in Hoke County transferring overnight patients to FirstHealth Moore rather than attempting to address the underutilization at FirstHealth Hoke.

In June, 2012, FirstHealth submitted CON Application N-8838-12 in which FirstHealth sought to expand FirstHealth Hoke by 28 acute care beds for a total of 36 acute care beds in Hoke County. In its June, 2012 CON application for additional beds at FirstHealth Hoke, FirstHealth stated that the need for these beds was justified partially by shifting inpatient volume from FirstHealth Moore Regional. CON Application N-8838-12 was approved for an expanded FirstHealth Hoke with 28 medical/surgical beds and a 4-bed ICU.

FirstHealth Moore fails to discuss or acknowledge the erroneous Hoke County projections utilized by FirstHealth when projecting needed beds for Moore County. The failure to admit Hoke County residents in Hoke County at FirstHealth Hoke has inflated inpatient utilization at FirstHealth Moore. As will be discussed below, the decrease in utilization at FirstHealth Moore in FFY 2014 would be even greater if FirstHealth had utilized FirstHealth Hoke appropriately as projected in the 2012 CON Application resulting in a lower base utilization for FY 2014.

D. Impact of FirstHealth Hoke on Projected Base Year 2014 Inpatient Days of Care at FirstHealth Moore

FirstHealth's failure to appropriately develop FirstHealth Hoke resulted in excess patient days at FirstHealth Moore. As discussed above, FirstHealth has failed to appropriately utilize the new 8-bed acute care hospital in Hoke County and as reflected on page 66 of the CON Application FirstHealth has no plans to address this failure in the interim.

Projected utilization for the 8-beds included in the 2012 CON Application was based solely upon utilization of the emergency department and it was expected that 48.7% of this volume was emergency volume that **would be shifted from FirstHealth Moore** resulting in over 1,000 patient days shifting to FirstHealth Hoke.¹ Those projections are reflected in the following table.

¹ FirstHealth Hoke CON Application Project I.D.# N-8497-10 page 209, [Attachment 2](#),

FirstHealth Hoke Projected Utilization

	PY 1	PY 2	PY 3
Total ED Visits	9,155	9,428	9,704
Total Inpts	713	735	756
ALOS	3.1	3.1	3.1
Total Inpt Days	2,210	2,279	2,344
Percent Shifted from FirstHealth Moore	48.7%	48.7%	48.7%
Inpatient Days Shifted from FirstHealth Moore	1,076	1,110	1,141
Ratios			
Admits:ED Visit	1 Admission for every 12.84 ED Visits	1 Admission for every 12.83 ED Visits	1 Admission for every 12.84 ED Visits
Pt Days:ED Visit	1 Patient Day for every 4.14 ED Visits	1 Patient Day for every 4.14 ED Visits	1 Patient Day for every 4.14 ED Visits

Source: CON Project I.D. #N-8497-10, Section IV, [Attachment 2](#)

As reflected above, every 4.14 emergency patient visits were projected to result in 1 patient day for the new hospital. Of these **over 1,000 would have been shifted from FirstHealth Moore** if FirstHealth had opened and operated FirstHealth Hoke as proposed in CON Application Project I.D.# N-8497-10. Therefore, the base data utilized for FFY 2014 on page 66 of the FirstHealth Moore Application is **overstated by 1,076 patient days at a minimum**, and the total patient days for base year 2014 is more appropriately represented as 82,465 (83,541-1,076 = 82,465). The impact of this one change is reflected in the following table.

Projected FirstHealth Moore Bed Need Adjusted to Reflect Projected Utilization of FirstHealth Hoke

Projected	2014	2015	2016	2017	2018	2019
Total Days of Care	82,465	84,715	87,908	91,223	93,805	93,210
Growth Rate		3.77%	3.77%	3.77%	3.77%	3.77%
FH Hoke 8 Bed Impact	828	828	828	621		
FH Hoke - 36 Bed Impact				1,034	4,602	6,487
Incremental Days Shifted	828	0	0	826	3,981	1,885
FirstHealth Moore Projected Days	81,637	84,715	87,908	90,397	89,824	91,325
Projected ADC						250.21
Projected Bed Need at 75.2%						332.72
Current Licensed Beds						312
Needed New Beds						20.72

Source: CON Project I.D. #H-10296-14, page 66 and CON Project I.D. #N-8497-10, Section IV, [Attachment 2](#)

As reflected in the previous table, adjusting for the underutilization of the new FirstHealth Hoke community hospital reflects a need for only 21 new acute care beds, **IF** all other assumptions were reasonable, which they are not as discussed above.

Adjusting for the overstated base year data and the overstated growth rate negates the need for 25 new acute care beds at FirstHealth Moore in Project Year 3 as reflected in the following table; using the 2009-2013 average annual growth rate only 4 beds are needed and using the 2009-2014 average annual growth rate there is a surplus of 26 beds.

**Projected FirstHealth Moore Bed Need
Adjusted to Reflect Projected Utilization of FirstHealth Hoke and
2009-2013 Actual Average Annual Growth Rate – 2.75%**

Projected	2014	2015	2016	2017	2018	2019
Total Days of Care	82,465	83,883	86,190	88,561	90,149	88,538
Growth Rate 2009-2013		2.75%	2.75%	2.75%	2.75%	2.75%
FH Hoke 8 Bed Impact	828	828	828	621		
FH Hoke - 36 Bed Impact				1,034	4,602	6,487
Incremental Days Shifted	828	0	0	826	3,981	1,885
FirstHealth Moore Projected Days	81,637	83,883	86,190	87,735	86,168	86,653
Projected ADC						237.41
Projected Bed Need at 75.2%						315.70
Current Licensed Beds						312
Needed New Beds						3.70

Source: CON Project I.D. #H-10296-14, page 66

**Projected FirstHealth Moore Bed Need
Adjusted to Reflect Projected Utilization of FirstHealth Hoke and
2009-2014 Actual Average Annual Growth Rate – 0.9%**

Projected	2014	2015	2016	2017	2018	2019
Total Days of Care	82,465	82,372	83,113	83,861	83,782	80,520
Growth Rate 2009-2014		0.90%	0.90%	0.90%	0.90%	0.90%
FH Hoke 8 Bed Impact	828	828	828	621		
FH Hoke - 36 Bed Impact				1,034	4,602	6,487
Incremental Days Shifted	828	0	0	826	3,981	1,885
FirstHealth Moore Projected Days	81,637	82,372	83,113	83,035	79,801	78,635
Projected ADC						215.44
Projected Bed Need at 75.2%						286.49
Current Licensed Beds						312
Needed New Beds						-25.51

Source: CON Project I.D. #H-10296-14, page 66

FirstHealth has failed to document the need for 25 additional acute care beds and therefore is non-conforming to Criterion 3 and Criterion 1.

E. FirstHealth Failed to Revisit or Revise Future Projections for the 28 Bed Expansion of FirstHealth Hoke

In adjusting the FirstHealth Moore projections for the future impact of FirstHealth Hoke, FirstHealth failed to review, revisit or revise projections for FirstHealth Hoke. **In fact, FirstHealth has acknowledged that the projected utilization included in Project I.D. #N-8497-10 was significantly overstated, both in the letter submitted in February, 2014, included as Attachment 1, and in the projections included in this Application.** Projected FirstHealth Hoke patient days are significantly less than those in the original application for the first three years of operation. However, FirstHealth did not see the need to revisit the projections for the 28-Bed expansion in Project I.D.# N-8838-12 even though **over 18% of total patient days included in the 2012 methodology were based solely on the erroneous projections included in Project I.D. #N-8497-10.**²

If the projections in Project I.D. #N-8497-10 were incorrect, and the projections in Project I.D.# N-8838-12 are based upon Project I.D. #N-8497-10, then the projections in Project I.D.# N-8838-12 are incorrect. As a result, FirstHealth should have re-projected patient days for FirstHealth Hoke and documented the need for both the additional 28 acute care beds at FirstHealth Hoke and the need for 25 additional acute care beds at FirstHealth Moore. **The same patient days cannot be used to populate new acute care beds in two locations.**

Since the 28 beds at FirstHealth Hoke are still under appeal and are not yet developed, the CON Agency has the opportunity to review and analyze the continued need for these beds by FirstHealth, since FirstHealth relies on erroneous calculations in the current application to justify the additional acute care beds; and **could conditionally approve the FirstHealth Moore application for 25 new acute care beds with a condition that the CON approval for the 28 additional acute care beds in Hoke County be surrendered.**

FirstHealth has not documented the need for both the additional 25 new acute care beds at FirstHealth Moore and the need for the additional 28 new acute care beds at FirstHealth Hoke. In fact, FirstHealth has documented that the additional 28 beds at FirstHealth Hoke are not needed.

FirstHealth has failed to document the need for 25 additional acute care beds and therefore is non-conforming to Criterion 3 and Criterion 1.

F. 2015 SMFP Bed Need for Moore County is Overstated

The acute care bed need for Moore County included in the 2014 SMFP is overstated because the FFY 2012 base patient days utilized in the acute care bed need methodology included days of care provided at FirstHealth Moore which were utilized to justify the need for the 28 additional

² See Steps 12 through 15. in Section IV of Project I.D.# N-8838-12 included in **Attachment 3**. Calculation as follows: 9,706 total patient days (Step 15) – 6,049 medical patient days (Step 13) – 1,880 surgical patient days (Step 12) = 1,774 patient days or 18.3% of total patient days associated with Step 14. Step 14 on page 103 of Project I.D.# N-8838-12 included in **Attachment 3** states that this step is based solely on “its approved CON application, Project ID# N-8497-10.”

acute care beds in Hoke County. The 36 (8 + 28) beds approved for FirstHealth in Hoke County **are not included** in the Moore County acute care bed inventory in the Acute Care Bed Need Methodology. However, the additional 28 acute care beds approved for development in Hoke County were justified based upon shifting 7,929³ patient days of residents of Hoke County at FirstHealth Moore to FirstHealth Hoke. The **7,929 patient days are included** in the base patient day volume utilized to calculate the SMFP bed need but **the beds identified as needed due to these days are not included**. This volume is projected to shift to Hoke County when the 28 beds open in the future.

When Governor Perdue established Hoke County as a separate service area in 2013, the 8 acute care beds originally approved for FirstHealth Hoke and the additional 28 beds approved for FirstHealth Hoke were shifted to Hoke County (along with the 41 from CFVMC). However, the 7,929 patient days at FirstHealth Moore, which were the basis for the development of 28 additional beds at FirstHealth were not shifted. Therefore, the days of care which generated the need for FirstHealth's Hoke 28 additional acute care bed hospital in Hoke County **were included** in the 2012 Truven patient days utilized in the 2014 SMFP Acute Care Bed Need Methodology to calculate the Moore County acute care bed need.

Since the acute care beds were removed from the inventory for the combined Moore/Hoke Service Area when the separate Hoke County Service Area was established, **the days used to justify those beds also should have been removed to accurately project future bed need in the 2014 SMFP**.

The table on the next page illustrates the impact of removing these days from the methodology.

³ See Steps 12 and 13. in Section IV of Project I.D.# N-8838-12 included in [Attachment 3](#). Calculation as follows: 6,049 medical patient days shifted from FH Moore (Step 13) + 1,880 surgical patient days shifted from FH Moore (Step 12) = 7,929 patient days shifted from FH Moore

2014 SMFP Moore County Bed Need Adjusted

	Cty	Bed Capacity	SMFP/Truven Data										For 2014 SMFP							
			FFY 2008	FFY 2009	FFY 2010	FFY 2011	FFY 2012	Growth Rate 2008 to 2009	Growth Rate 2009 to 2010	Growth Rate 2010 to 2011*	Growth Rate 2011 to 2012**	Avg 4 Year Growth Rate	2013	2014	2015	2016	ADC YR 2016	2016 Adj for Target	(Surplus) Need Beds	Need in SMFP
FH Hoke	Hoke	36					7,929													
FirstHealth Moore Reg Hosp	Moore	312	73,264	78,996	81,288	82,234	85,453	7.82%	2.90%	1.16%	3.91%	3.95%	88,829	92,339	95,987	99,779	273	364	52	52
Impact of FH Hoke							-7,929													
FirstHealth Moore Reg Hosp - Adjusted Bed Need		312					77,524					3.95%	77,524	80,587	83,771	87,080	239	317	5	0

As a result of removing the 7,929 acute care patient days used to justify the additional 28 beds in Hoke County, the bed need for Moore County in the 2014 SMFP should have been decreased to adjust for this anomaly resulting in a zero need for additional acute care beds in Moore County in the 2014 SMFP. This analysis is consistent with and supports the previous analyses in Sections A, B and C. **The same patient days cannot be used to populate new acute care beds in two locations.** Therefore, the FirstHealth Application is non-conforming to Criterion 3.

G.S. 131E-183 (4)

Where alternative methods of meeting the needs for the proposed project exist, the applicant shall demonstrate that the least costly or most effective alternative has been proposed.

As discussed in the context of CON Review Criterion (3) above, FirstHealth does not adequately demonstrate a need to renovate FirstHealth Moore. When an applicant does not demonstrate need for its project(s), it has not demonstrated that it proposed the least costly or most effective alternative as required by CON Review Criterion (4).

G.S. 131E-183 (5)

Financial and operational projections for the project shall demonstrate the availability of funds for capital and operating needs as well as the immediate and long-term financial feasibility of the proposal, based upon reasonable projections of the costs of and charges for providing health services by the person proposing the service.

ProForma financials are based upon erroneous projections, questionable payor mix and unsupported charity and bad debt assumptions and therefore are incorrect.

On page 90, FirstHealth reported providing 13.6 million or 2.7% of Net Patient Revenue to charity care in FY 2013. For the new 25 beds in 2017 and 2018, they are planning on nearly doubling the amount of charity care offered by the new 25 acute care bed unit to 5.2%. FirstHealth provides no assumptions related to this increase in charity care. Furthermore, when the amount of charity care reported on page 90, and reflected in Form C are used to calculate the percentage of charity care projected as a percent of net revenue, the percentage is considerably greater, more than 20%:

- FY 2017 Charity Care of \$805,676 / Net Patient Revenue of \$3,879,869 = 20.8%
- FY 2018 Charity Care of \$948,321 / Net Patient Revenue of \$4,566,590 = 20.8%
- From Form C page 127

This is an irreconcilable error in the FirstHealth Proformas. The assumptions and the actual projections are significantly different. Therefore, the Proformas are wrong and cannot be analyzed to determine the financial feasibility of the project.

On page 90, FirstHealth reported providing \$51.7 million or 10.1% of Net Patient Revenue as bad debt in FY 2013. For the new 25 beds in 2017 and 2018, they are planning on significantly decreasing the amount of bad debt for the new 25 acute care bed unit to 6.7%. FirstHealth provides no assumptions related to this decrease in bad debt. Furthermore, when the amount of bad debt reported on page 90, and reflected in Form C on page 127 are used to calculate the percentage of bad debt projected as a percent of net revenue, the percentage is considerably greater, more than 25%:

- FY 2017 Bad Debt of \$1,030,866 / Net Patient Revenue of \$3,879,869 = 26.6%
- FY 2018 Bad Debt of \$1,213,382 / Net Patient Revenue of \$4,566,590 = 25.6%
- From Form C page 127

This is an irreconcilable error in the FirstHealth Proformas. The assumptions and the actual projections included in the Proformas are significantly different. Therefore, the Proformas are wrong and cannot be analyzed to determine the financial feasibility of the project.

Furthermore, FirstHealth failed to provide assumptions regarding the payor mix for the proposed project. On page 93 in response to Question VI.12. FirstHealth reported total inpatient payor mix for FY 2013. The data in this response is consistent with the payor mix reported for total acute care days provided at FirstHealth in page 5 of its 2014 Annual Licensure Renewal Application. However, in response to Question VI.13. FirstHealth reflects a completely different FY 2013 payor mix for acute care services. The two payor mix percentages are significantly different however, FirstHealth failed to provide any assumptions, definitions, or explanation related to the differences between the two payor mix tables both of which are for inpatient acute care days. Therefore, the payor mix associated with the proposed project is unsubstantiated and the Application cannot be analyzed to determine the financial feasibility of the project.

As a result, the proposed project is non-conforming to CON Review Criterion (5).

G.S. 131E-183 (12)

Applications involving construction shall demonstrate that the cost, design, and means of construction proposed represent the most reasonable alternative, and that the construction project will not unduly increase the costs of providing health services by the person proposing the construction project or the costs and charges to the public of providing health services by other persons, and that applicable energy saving features have been incorporated into the construction plans.

On page 2 in its Executive Summary and on page 17 in Section II. FirstHealth describes the development of shelled space as a component of the proposed project.

“The ground floor will be an open air floor, meaning that the building’s support columns will be exposed on the ground floor.”

The drawings included in Exhibit 3 provided no illustration or documentation of the proposed shell space on the first floor. The construction of approximately 24,500 additional square feet with support columns, elevators, stairs, etc. needed for a second floor adds significant construction expense to the project. FirstHealth provided no discussion, documentation, or additional detail regarding why the shell space was a reasonable alternative. Nor did FirstHealth provide any additional discussion of the added cost associated with the shell space.

Therefore, FirstHealth did not demonstrate that the cost, design, and means of construction proposed represent the most reasonable alternative, or that the construction project will not unduly increase the costs of providing health services by the person proposing the construction project

G.S. 131E-183 (13)c

The applicant shall demonstrate the contribution of the proposed service in meeting the health-related needs of the elderly and of members of medically underserved groups, such as medically indigent or low income persons, Medicaid and Medicare recipients, racial and ethnic minorities, women, and handicapped persons, which have traditionally experienced difficulties in obtaining equal access to the proposed services, particularly those needs identified in the State Health Plan as deserving of priority. For the purpose of determining the extent to which the proposed service will be accessible, the applicant shall show:

- c. That the elderly and the medically underserved groups identified in this subdivision will be served by the applicant's proposed services and the extent to which each of these groups is expected to utilize the proposed services; and*

FirstHealth failed to provide assumptions regarding the payor mix for the proposed project. On page 93 in response to Question VI.12. FirstHealth reported total inpatient payor mix for FY 2013. The data in this response is consistent with the payor mix reported for total acute care days provided at FirstHealth in page 5 of its 2014 Annual Licensure Renewal Application. However, in response to Question VI.13. FirstHealth reflects a completely different FY 2013 payor mix for acute care services. The two payor mix percentages are significantly different however, FirstHealth failed to provide any assumptions, definitions, or explanation related to the differences between the two payor mix tables both of which are for inpatient acute care days. Therefore, the payor mix associated with the proposed project is unsubstantiated and the Application cannot be analyzed to determine the conformity with this Criterion.

As a result, the proposed project is non-conforming to CON Review Criterion (13).

III. CON Criteria and Standards

Criteria and Standards for Acute Care Beds – 10A NCAC 14C .3800

.3802 (5) Patient Origin

FirstHealth failed to adequately and correctly identify the population to be served by the proposed project. Projected patient origin for FirstHealth Moore is inconsistent throughout the Application.

Projected patient origin is presented in two locations in the Application: on page 29 in response to the Acute Care Criteria and Standards and on page 61 in Section III. The following table reflects the percentage of patient days projected on pages 29 and 61.

**FirstHealth Moore
Projected Patient Day Patient Origin**

	2018 page 29	2018 page 61
Moore	44.2%	46.2%
Richmond	11.6%	12.6%
Hoke	9.4%	4.7%
Montgomery	7.9%	8.9%
Robeson	6.7%	5.4%
Lee	5.4%	6.4%
Scotland	4.4%	4.0%
All Other	10.4%	11.8%
	100.0%	100.0%

Source: FirstHealth CON Application p.29 and p.61

As reflected above, the patient origin for the proposed expanded FirstHealth is inconsistent. FirstHealth did not provide any specific assumptions regarding patient origin and therefore, the difference is unexplained and unreasonable. Therefore, the patient origin presented in the Criteria and Standards proposed by FirstHealth is incorrect and as a result the Application is non-conforming to this Criterion.

.3803 (a)(b) Performance Standards

FirstHealth proposes to develop an additional 25 acute care beds at FirstHealth Moore. As discussed in the context of CON Review Criterion (3), the need methodology used by FirstHealth relies on unreasonable assumptions and results in overstated inpatient volume. As a result, the projections are overstated and utilization will not reach the required 75.2% threshold.

IV. Conclusion

FirstHealth utilized incorrect base data and growth rates to project future patient days. FirstHealth has a surplus acute care beds, the projections and proforma financials associated with the project are erroneous and based upon incorrect assumptions, or no assumptions were provided as discussed above. As a result, the application is non-conforming to multiple criteria and must be denied.

Attachment 1

Handwritten signature

February 11, 2014

Ms. Martha Frisone
Section Chief, Certificate of Need Section
NC Division of Health Service Regulation
2704 Mail Service Center
Raleigh, NC 27699-2704

Received by
the CON Section
FEB 19 2014

RE: Request for Ability to Use Acute Care Bed Patient Rooms for Emergency Department
Treatment Rooms at FirstHealth Moore Regional Hospital – Hoke Campus / Hoke County

Dear Ms. Frisone:

FirstHealth intends to use acute care bed inpatient rooms at FirstHealth Moore Regional Hospital – Hoke Campus as Emergency Department treatment rooms.

Statement of Facts

The FirstHealth Moore Regional Hospital – Hoke Campus Emergency Department (Emergency Department) treats patients in eight (8) treatment rooms. In the approved 2010 CON application, FirstHealth projected first year Emergency Department visits at 9,155 visits or 25 visits per day (9,155 / 365 = 25.1) (Attachment 1). Since the Emergency Department began treating patients in October 2013, its daily Emergency Department visits have never been below 30 visits and have increased from a peak of 61 visits on October 31, 2013 to a peak of 91 visits on December 25, 2013 (Attachment 2). The Emergency Department visit volumes have maintained their levels in 2014; however, the Emergency Department has experienced an increase in patients "leaving without being seen" because wait times can be long due to only operating eight treatment rooms and experiencing Emergency Department visit volumes nearly 4 times higher than originally projected.

Adjacent to the Emergency Department treatment rooms are eight (8) acute care beds (inpatient rooms), which serve the inpatient needs of the hospital; however, daily average census for the acute care beds has been below four (4) inpatients since October 2013.

FirstHealth intends to use the available inpatient rooms as Emergency Department treatment rooms while the need to decrease the number of Emergency Department patients "leaving without being seen" exists. This action will be temporary while FirstHealth considers other long-term actions to address the dramatic increase in Emergency Department visits.

Requested Action

FirstHealth requests that the Certificate of Need Section make a determination that the proposal to use of acute care bed inpatient rooms at FirstHealth Moore Regional Hospital – Hoke Campus as Emergency Department treatment rooms is within the internal actions available to FirstHealth to address the dramatic increase in Emergency Department visits and should not require any additional regulatory review.

EXHIBIT
tabbles
cute-Care Beds
Page 21

If you require additional information concerning this request, please contact me at 910-715-1981.

Sincerely,



Amy Graham
Director of Business Development

Attachments: Attachment 1 – Year 1 ED Projections
Attachment 2 – ED Daily Visits in 2013

Cc: Ms. Azzie Conley, Section Chief, Acute & Home Care Licensure & Certificate Section

Step 11.

The following table summarizes Table 2 from Step 10:

**FHCH Emergency Department
 Observation, Inpatient, and Discharge Volumes Summary
 FY2013 – FY2015**

	2013	2014	2015
Total ED Visits	9,155	9,428	9,704
ED Observation Patients	246	253	261
ED Inpatients	1,426	1,469	1,512
ED Discharges	7,482	7,706	7,932

FirstHealth has determined that it can relocate eight (8) acute care beds from FMRH to the proposed FHCH without impacting the patients who remain at FMRH. In order to accommodate the projected ED Inpatients, specifically those patients who may have higher acuities, FirstHealth assumes that 50.0 percent of the ED Inpatients will be admitted to the inpatient unit and the remaining 50.0 percent will be held in the four observation beds, located on the inpatient unit, until they can be transferred to either FMRH or to CFVMC.

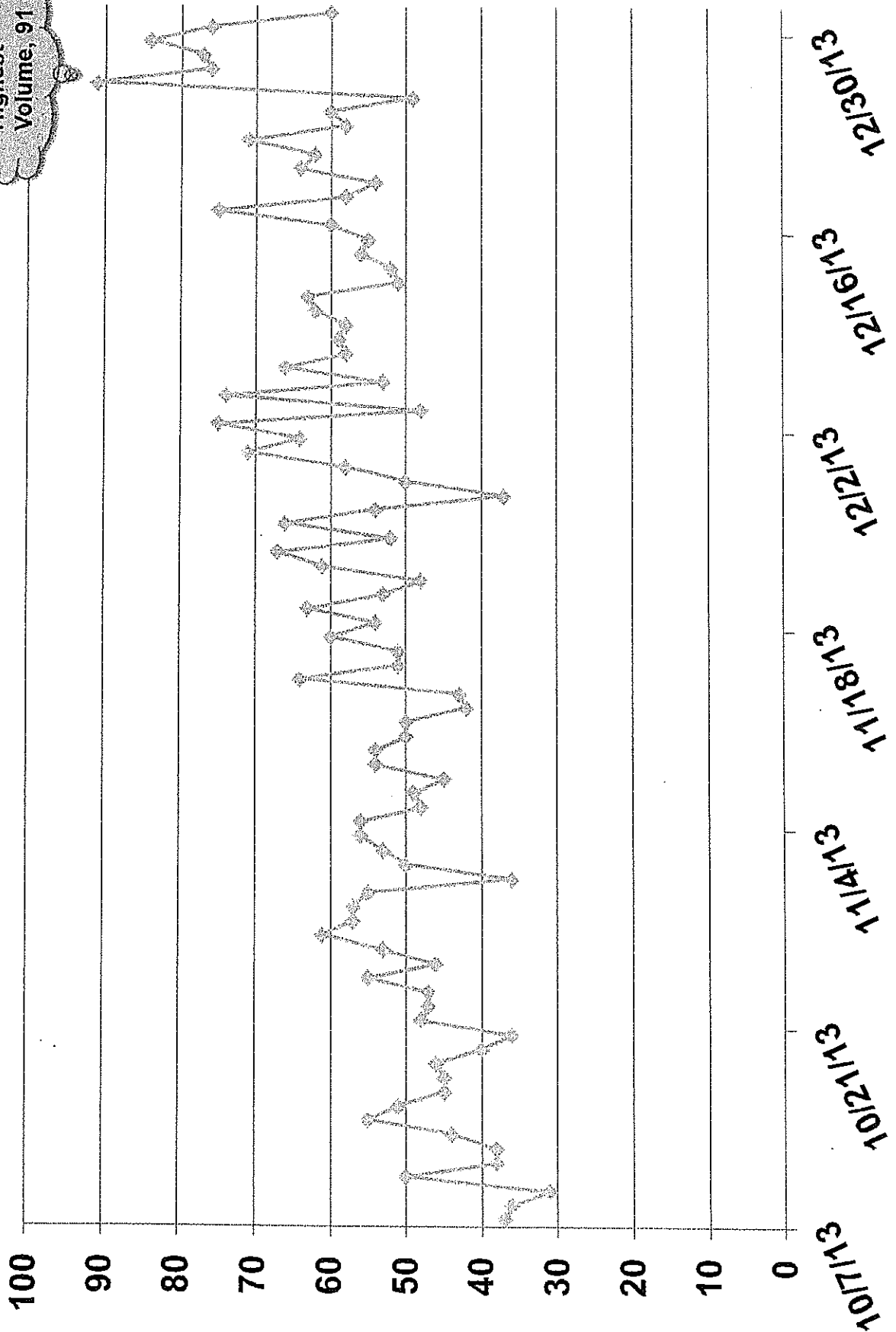
The following table presents the number of adjusted observation patients, which is equal to the number of projected ED Observation Patients plus 50.0 percent of the projected ED Inpatients, and the number of adjusted inpatients, which is equal to 50.0 percent of the projected ED Inpatients.

**FHCH Emergency Department
 Adjusted Observation, Adjusted Inpatient, and Discharge Volumes Summary
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Total ED Visits	9,155	9,428	9,704
ED Observation Patients	959	988	1,017
ED Inpatients	713	734	756
ED Discharges	7,482	7,706	7,932

ED Patient Volume - First Quarter

Highest Volume, 91



K&L|GATES

K&L Gates LLP
Post Office Box 14210
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430 Davis Drive, Suite 400
Morrisville, NC 27560
T 919.466.1190 www.klgates.com

Gary S. Qualls
D 919.466.1182
F 919.516.2072
gary.qualls@klgates.com

March 14, 2014

VIA HAND DELIVERY

Martha Frisone,
Chief, Certificate of Need Section
Division of Health Service Regulation
North Carolina Department of Health &
Human Services
809 Ruggles Drive
Raleigh, North Carolina 27603

Tanya Rupp, Analyst
Division of Health Service
Regulation
North Carolina Department of
Health & Human Services
809 Ruggles Drive
Raleigh, North Carolina 27603

RE: Comments by Cumberland County Hospital System, Inc. d/b/a Cape
Fear Valley Health System ("Cape Fear")

Dear Ms. Frisone and Ms. Rupp:

On behalf of my client Cumberland County Hospital System, Inc. d/b/a
Cape Fear Valley Health System ("Cape Fear"), enclosed please find Comments
Opposing FirstHealth's February 11, 2014 Request, which is attached as Exhibit 1 to
our Comments.

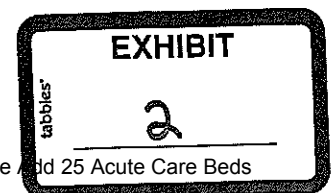
Please provide me with notice when the Agency makes a decision on
FirstHealth's Request.

Should you have any questions or concerns, please do not hesitate to contact
me.

Sincerely,

Gary S. Qualls
Gary S. Qualls

Enclosure



**Comments By Cape Fear Valley Opposing FirstHealth's February 11, 2014
Request to Convert FirstHealth Hoke Beds to ED Treatment Rooms**

Cumberland County Hospital Systems, Inc. d/b/a Cape Fear Valley Health System ("Cape Fear Valley") files these comments with the North Carolina Department of Health and Human Services, Division of Health Service Regulation, Certificate of Need Section (the "Agency").

Cape Fear Valley's comments oppose the February 11, 2014 request filed by FirstHealth of the Carolinas, Inc. ("FirstHealth") to materially change the scope of FirstHealth Hoke Community Hospital in Hoke County ("FirstHealth Hoke") so as to convert some or all of FirstHealth Hoke's eight (8) CON approved acute care beds to Emergency Department ("ED") Treatments Rooms (the "ED Treatment Room Request"). See copy of ED Treatment Room Request attached as Exhibit 1.

This ED Treatment Room Request is an admission by FirstHealth that:

- (1) FirstHealth does not need the 8 acute care beds it was awarded in Project I.D. No. N-8497-10 (the "FirstHealth 8-Bed Project"); and
- (2) FirstHealth certainly does not need the 28 additional acute care beds it was awarded by the Agency in Project I.D. No. N-8838-12 (the "FirstHealth 28-Bed Project"), which is now being defended by FirstHealth and the Agency at the North Carolina Court of Appeals.

If the Agency approves this ED Treatment Room Request, it will likewise be an admission by the Agency that:

- (1) FirstHealth does not need the FirstHealth 8-Bed Project; and
- (2) FirstHealth certainly does not need the FirstHealth 28-Bed Project.

I. Summary of Prior FirstHealth Projects

A. 8-Bed Review

In April 2012, FirstHealth received a CON for the FirstHealth 8-Bed Project. The 8-Bed Hospital opened on October 3, 2013. Since then, according to the ED Treatment Room Request, FirstHealth has struggled to sufficiently utilize the 8 beds. Thus, the ED Treatment Room Request asks for permission to use a number of such beds as ED Treatment Rooms instead of acute care beds.

B. 28-Bed Review

On June 15, 2012, Cape Fear Valley and FirstHealth each filed competitive CON Applications for the 28 acute care bed need determination for the Cumberland/Hoke Service Area in the 2012 SMFP. The Cape Fear Valley 28-Bed Application proposed to add 28 acute care beds to its existing Cumberland County campus. The FirstHealth 28-Bed Application proposed to add 28 acute care beds to its approved 8-Bed FirstHealth Hoke.

On November 27, 2012, the Agency issued its Decision denying the Cape Fear Valley 28-Bed Application and approving the FirstHealth 28-Bed Application instead. On September 17, 2013, the ALJ affirmed the Agency's 28-Bed Decision. On October 16, 2013, Cape Fear Valley appealed the ALJ's 28-Bed Decision to the North Carolina Court of Appeals.

II. FirstHealth's ED Treatment Room Request Confirms That FirstHealth Never Needed the 28 Acute Care Beds At FirstHealth Hoke.

A. FirstHealth Originally Failed To Show Need for the 28 Beds

First, recall that the 28-Bed need determination was generated by high inpatient volumes at Cape Fear Valley. Thus, it was Cape Fear Valley, not FirstHealth, that generated the Cumberland/Hoke 28-Bed need determination in the first place. It was also Cape Fear, not FirstHealth, that demonstrated a need for the Cumberland/Hoke Service Area in the competitive review.

Cape Fear Valley has maintained all along that FirstHealth never demonstrated a need for the 28 acute care beds. The FirstHealth 28-Bed Application failed to show need based upon numerous, independent bases. Those bases include (but are not limited to):

- The FirstHealth 28-Bed Application failed to alleviate the 2012 SMFP's need for 28 acute care beds in the SMFP-defined Cumberland/Hoke Service Area.
- Rather, the FirstHealth 28-Bed Application based its utilization projections on a proposal to shift 7,929 existing, historical patient days at FirstHealth Moore.
- The FirstHealth 28-Bed Application inappropriately included tertiary level services in its utilization assumptions for a community hospital, thus overstating the number of patients who might shift from FirstHealth Moore to FirstHealth Hoke, irrespective of patient origin.
- FirstHealth did not propose to serve any significant numbers of new patients from either Cumberland or Hoke Counties.

B. Manipulative Timing of FirstHealth's Request

The timing of FirstHealth's ED Treatment Room Request is quite manipulative:

- The Record on Appeal was settled on January 22, 2014. Settlement of the Record on Appeal defines the scope of evidence for the Court of Appeals to consider.
- The Court of Appeals issued the printed Record on February 11, 2014.
- That same day -- February 11, 2014 -- FirstHealth filed this ED Treatment Room Request.

FirstHealth never needed those 28 beds in Hoke County and, now that the ALJ has made his decision and the appellate record is closed, FirstHealth is disclosing what Cape Fear Valley has been telling the Agency all along -- FirstHealth has no need for the additional 28 beds at FirstHealth Hoke because FirstHealth cannot even sufficiently utilize the 8 beds.

III. The Agency Should Deny FirstHealth's ED Treatment Room Request.

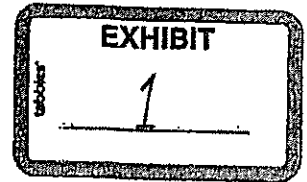
If the Agency is continuing to defend its approval of FirstHealth's 28-Bed Application, the Agency must deny this ED Treatment Room Request because the two are inconsistent.

Thompson

February 11, 2014

Ms. Martha Frisone
Section Chief, Certificate of Need Section
NC Division of Health Service Regulation
2704 Mail Service Center
Raleigh, NC 27699-2704

Received by
the CON Section
FEB 17 9 2014



RE: Request for Ability to Use Acute Care Bed Patient Rooms for Emergency Department Treatment Rooms at FirstHealth Moore Regional Hospital – Hoke Campus / Hoke County

Dear Ms. Frisone:

FirstHealth intends to use acute care bed inpatient rooms at FirstHealth Moore Regional Hospital – Hoke Campus as Emergency Department treatment rooms.

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Requested Action

FirstHealth requests that the Certificate of Need Section make a determination that the proposal to use of acute care bed inpatient rooms at FirstHealth Moore Regional Hospital – Hoke Campus as Emergency Department treatment rooms is within the internal actions available to FirstHealth to address the dramatic increase in Emergency Department visits and should not require any additional regulatory review.

If you require additional information concerning this request, please contact me at 910-715-1981.

Sincerely,



Amy Graham
Director of Business Development

Attachments: Attachment 1 – Year 1 ED Projections
Attachment 2 – ED Daily Visits in 2013

Cc: Ms. Azzie Conley, Section Chief, Acute & Home Care Licensure & Certificate Section

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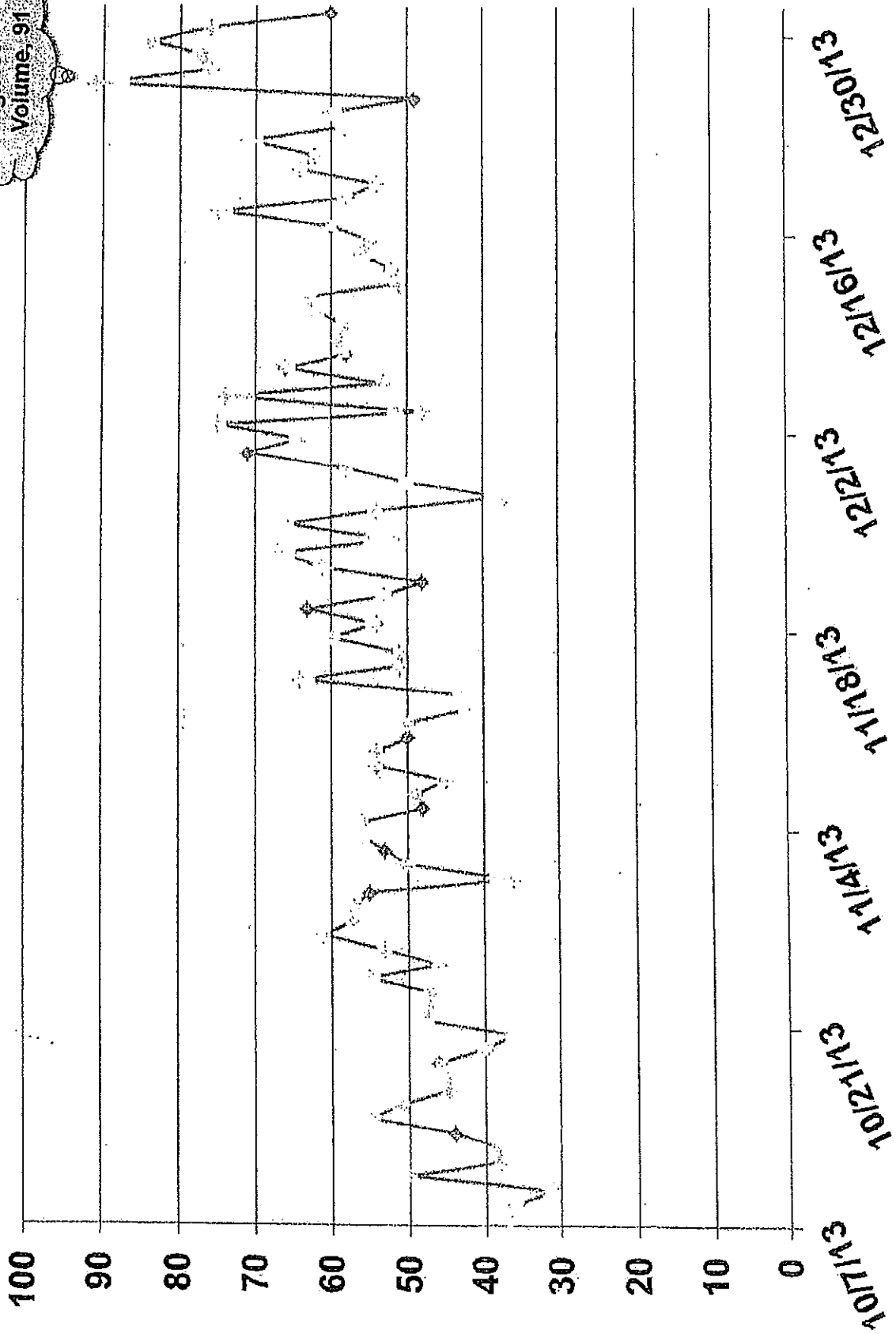
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ED Patient Volume - First Quarter

Highest Volume 91





North Carolina Department of Health and Human Services
Division of Health Service Regulation

Pat McCrory
Governor

Aldona Z. Wos, M.D.
Ambassador (Ret.)
Secretary DHHS

Drexdal Pratt
Division Director

March 21, 2014

Amy Graham
P.O. Box 3000
Pinehurst, NC 28374

No Review

Facility: FirstHealth Moore Regional Hospital – Hoke Campus
Project Description: Temporarily Utilize Acute Care Beds as Emergency Department
Treatment Beds
County: Hoke
FID #: 100390

Dear Ms. Graham:

The Certificate of Need Section (CON Section) received your letter of February 11, 2014 regarding the above referenced proposal. Based on the CON law **in effect on the date of this response to your request**, the proposal described in your correspondence is not governed by, and therefore, does not currently require a certificate of need. However, please note that if the CON law is subsequently amended such that the above referenced proposal would require a certificate of need, this determination does not authorize you to proceed to develop the above referenced proposal when the new law becomes effective.

Moreover, you need to contact the Construction and Nursing Home Licensure and Certification Sections of the Division of Health Service Regulation to determine if they have any requirements for development of the proposed project.

It should be noted that this determination is binding only for the facts represented by you. Consequently, if changes are made in the project or in the facts provided in your correspondence referenced above, a new determination as to whether a certificate of need is required would need to be made by the Certificate of Need Section. Changes in a project include, but are not limited to: (1) increases in the capital cost; (2) acquisition of medical equipment not included in the original cost estimate; (3) modifications in the design of the project; (4) change in location; and (5) any increase in the number of square feet to be constructed.



Certificate of Need Section

www.ncdhhs.gov

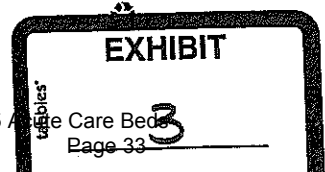
Telephone: 919-855-3873 • Fax: 919-733-8139

Location: Edgerton Building • 809 Ruggles Drive • Raleigh, NC 27603

Mailing Address: 2704 Mail Service Center • Raleigh, NC 27699-2704

An Equal Opportunity/ Affirmative Action Employer

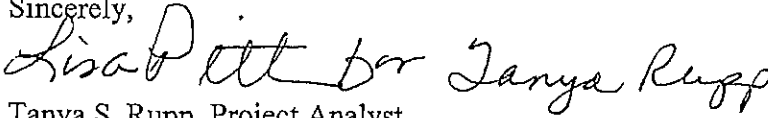
CFVHS CIO FH Moore Add 25




Amy Graham
March 21, 2014
Page 2

Please contact the CON Section if you have any questions. Also, in all future correspondence you should reference the Facility I.D. # (FID) if the facility is licensed.

Sincerely,


Tanya S. Rupp, Project Analyst



Martha J. Frisone, Interim Chief
Certificate of Need Section

cc: Medical Facilities Planning Branch, DHSR
Construction Section, DHSR
Acute Care Licensure and Certification Section, DHSR

Attachment 2

**COPY
N-8497-10**

FirstHealth of the Carolinas, Inc

CERTIFICATE OF NEED APPLICATION

Acute Care Hospital

Hoke County, NC

April 15, 2010

IV. UTILIZATION

IV.1. Using the format of Table IV below, provide annual utilization data for the following time periods:

- (a) Historical annual utilization data for the two full fiscal years prior to the submission of the application for each service component included in this application. Provide the dates for the fiscal years in the following format: Month/Date/Year to Month/Date/Year.
- (b) Projected annual utilization data for each fiscal year from the time the application was submitted through the fiscal year the project is complete for each service component included in this application.
- (c) Projected annual utilization data for each service component in this application, for the first three full fiscal years after completion of the proposed project.
- (d) Provide all assumptions and the specific methodology used for projected utilization for each service component in this application.

Need Methodology Summary

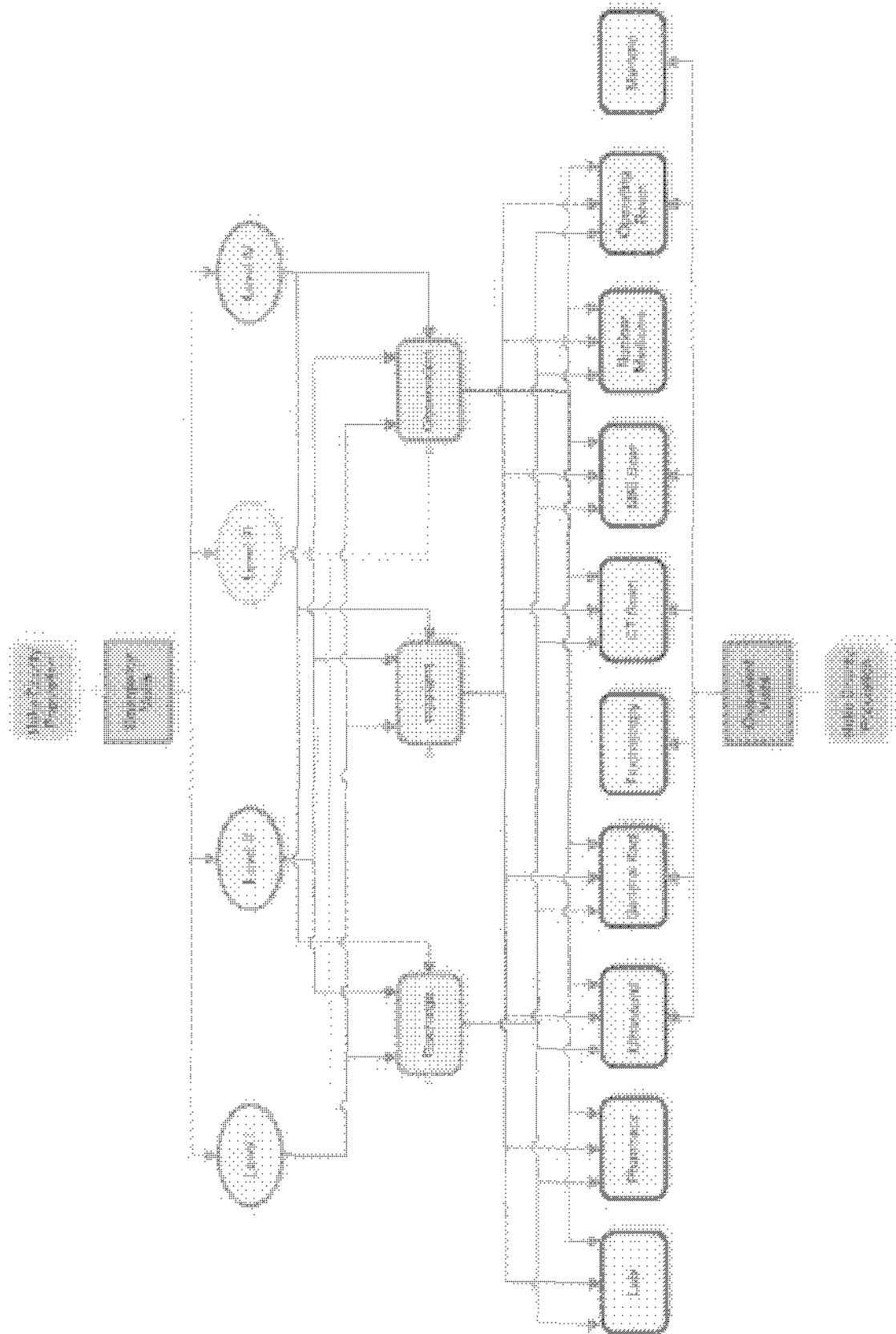
The diagram on the following page summarizes the need methodology that was used to project FHCH services in Section IV. As is evident, outpatient services, specifically the Emergency Department, will drive utilization of the inpatient unit of the hospital. This in contrary to most established hospitals in that inpatient utilization typically drives outpatient and ancillary utilization. Direct inpatient admissions are not projected in the CON application and are not planned to occur until the hospital is established and the Medical Staff increases in number.

Emergency Department Visits

- The Hoke County population generates Emergency Department visits.
- Each Emergency Department visit is categorized by level (Level I through V).
- Each Emergency Department visit categorized by level results in a discharge, an observation stay, or an inpatient stay.
- Each Emergency Department visits that results in a discharge, an observation stay, or an inpatient stay will utilize ancillary services at different rates.
- These different service rates result in utilization for ancillary services including lab, pharmacy, ultrasound, general radiography, CT scan, MRI scan, nuclear medicine, and surgery.

Outpatient Visits

- The Hoke County population by age and sex group generates outpatient visits at different rates.
- These different outpatient rates result in utilization for outpatient services including ultrasound, general radiography, fluoroscopy, CT scan, MRI scan, surgery, and mammography.



Need Methodology

Emergency Department

FirstHealth used the following need methodology to project FHCH Emergency Department visits. The projected FHCH Emergency Department visits then generated observation days, inpatient days, inpatient surgical cases, imaging procedures, laboratory tests, and other ancillary volumes. These volumes are specific to FHCH Emergency Department patients, the volumes do not include any outpatient imaging procedures referred to FHCH. Outpatient imaging projections are discussed after the Emergency Department need methodology.

Please refer to Exhibit C for population sources and for need methodology sources.

Step 1.

The following table presents actual 2008 and 2009 Hoke County ED utilization rates and the projected utilization rates for 2010 through 2015. Using the 2008 and 2009 Hoke County ED utilization rates, FirstHealth calculated that Hoke County experienced a 1-year ED utilization rate increase of 2.09 visits per 100 population ($24.88 - 22.79 = 2.09$). Conservatively, FirstHealth increased the annual Hoke County utilization rate by 0.21 visits from 2010 through 2015 to project the Hoke County utilization rate. 0.21 visits per 100 population represents only 10% of the 1-year ED utilization growth that Hoke County experienced between 2008 and 2009.

Emergency Department Projected Hoke County Utilization Rate per 100 Population

	2008	2009	2010	2011	2012	2013	2014	2015
Utilization Rate	22.79	24.88	25.10	25.31	25.53	25.74	25.95	26.16
Annual Utilization Growth Change		+ 2.09	+ 0.21	+ 0.21	+ 0.21	+ 0.21	+ 0.21	+ 0.21

Source: 2008 and 2009 Utilization Rates – Thomson Reuters.

Step 2.

FirstHealth used actual FY2008 and FY2009 Emergency Department visits (from all hospitals), as reported by Thomson Reuters and included in Exhibit C, to conservatively calculate the FY2008 Emergency Department utilization rate for Hoke County. FirstHealth added 10% of the 1-year Hoke County Emergency Department utilization rate growth annually to project future ED utilization rates.

**Emergency Department
 Hoke County Population
 Projected ED Utilization Rate**

		ED Visits	Population	Use Rate
Hoke County	FY2008	10,148	44,538	22.79
	FY2009	11,341	45,591	24.88
		2010	2011	2012
Projected ED Use Rate				
Hoke County	28376	25.10	25.31	25.53
		2013	2014	2015
Projected ED Use Rate				
Hoke County	28376	25.74	25.95	26.16

Step 3.

FirstHealth projected the number of Emergency Department visits that the residents of Hoke County would generate. First, FirstHealth calculated the Hoke County population by summing the North Carolina Office of State Budget and Management population projections with the BRAC military base realignment population impact. It should be noted that active duty military and military dependents make up approximately 53 percent of the BRAC Impact; however, as FHCH will become a TRICARE-certified provider, active duty military and military dependents will have access to FHCH without a referral.

Hoke County Population

		2013	2014	2015	
NCOSBM Population					
Hoke County	28376	50,232	51,391	52,551	A
BRAC Impact					
Hoke County	28376	3,742	3,742	3,742	B
Hoke County Population					
Hoke County	28376	53,974	55,133	56,293	C

Source: C = (A + B)

Second, FirstHealth multiplied the Hoke County populations by the 2013 – 2015 Projected ED Use Rates, calculated in Step 2, to project Hoke County's Emergency Department visits.

**Emergency Department
 Hoke County ED Projections**

		2013	2014	2015	
Projected Population					
Hoke County	28376	53,974	55,133	56,293	A
Projected ED Use Rate					
Hoke County	28376	25.74	25.95	26.16	B
Projected ED Visits					
Hoke County	28376	13,891	14,305	14,725	C

Source: C = (A x B)

Step 4.

FirstHealth projected the number of Emergency Department visits that would receive care at FirstHealth. FirstHealth used FY2009 Emergency Department visits reported by Thomson Reuters to determine the FirstHealth market share of emergency services in the service area population.

**Market Share
 Actual FirstHealth
 FY2009**

		ED Visit Total	FirstHealth Visits	Market Share
Hoke County	28376	11,349	5,522	48.7%

Source: Market Share = (FirstHealth Visits / County Total) x 100

In projecting conservative Emergency Department volumes, FirstHealth used its FY2009 market share of Emergency Department visits to project the number of Emergency Department visits that would be treated by FirstHealth in FY2013 through FY2015.

**Emergency Department
 FirstHealth ED Projections**

		2013	2014	2015	
Projected ED Visits					
Hoke County	28376	13,891	14,305	14,725	A
FMRH Market Share					
Hoke County	28376	48.7%	48.7%	48.7%	B
FMRH ED Visits					
Hoke County	28376	6,759	6,960	7,165	C

Source: C = (A x B)

Step 5.

FirstHealth projected the number of Emergency Department visits that would receive care at FHCH, rather than at FMRH. FirstHealth made the assumption that patients seeking Emergency Department care are less likely to leave the local community for emergency care to go to another county. To validate these assumptions, an independent marketing firm, InTandem, performed a phone survey of Hoke County residents to determine the percentage of residents who believe emergency care is important in the local community and to determine the percentage of residents who would use the hospital. The percentage of Hoke County residents who believe a local Emergency Department is important and that would use FHCH is identified in the following table.

**Emergency Department
FHCH Utilization
% of FirstHealth ED Visits**

	Phone Survey Results	
Local Emergency Department Important (Respond 8, 9, or 10)	76.0%	A
Would Use the Hospital (Respond Yes)	93.0%	B
FHCH Utilization	70.68%	C

Source: C = (A x B)

It should be noted that the phone survey had a +/-5.75 percent margin of error; meaning the true response to the first question may be as low as 70.25 percent or as high as 81.75 percent and the true response to the second question may be as low as 87.25 percent and as high as 98.75 percent. In order to project reasonable and conservative emergency visits, FirstHealth subtracted ½ of the margin of error from the phone survey results.

	-5.75%	-2.875%	0.0%	+2.875%	+5.75%	
Local Emergency Department Important (Respond 8, 9, or 10)	70.25%	73.125%	76.00%	78.875%	81.75%	A
Would Use the Hospital (Respond Yes)	87.25%	90.125%	93.00%	95.875%	98.75%	B
FHCH Utilization	61.29%	65.90%	70.68%	75.62%	80.73%	C

Source: C = (A x B)

**Emergency Department
 FHCH ED Projections
 % of FirstHealth ED Visits**

		2013	2014	2015	
FMRH ED Visits					
Hoke County	28376	6,759	6,960	7,165	A
FHCH Utilization					
Hoke County	28376	65.90%	65.90%	65.90%	B
FHCH ED Visits					
Hoke County	28376	4,454	4,587	4,722	C

Source: C = (A x B)

Please refer to Exhibit 47 for the InTandem survey results.

Step 6.

FirstHealth projected the number of Emergency Department visits that would receive care at FHCH, rather than go to another hospital other than FMRH. FirstHealth made the assumption that patients seeking Emergency Department care are less likely to leave the local community for emergency care to go to another county and are more likely to seek care at an Emergency Department that would have fewer patients and a shorter wait time. To validate these assumptions, an independent marketing firm, InTandem, performed a phone survey of Hoke County residents to determine the percentage of residents who believe emergency care is important in the local community and to determine the percentage of residents who would use the hospital. FirstHealth subtracted the FirstHealth ED Visits, calculated in Step 4, from the total Projected ED Visits, calculated in Step 3, to identify the Emergency Department visits that would not typically be treated at FirstHealth.

**Emergency Department
 Non-FirstHealth ED Visits**

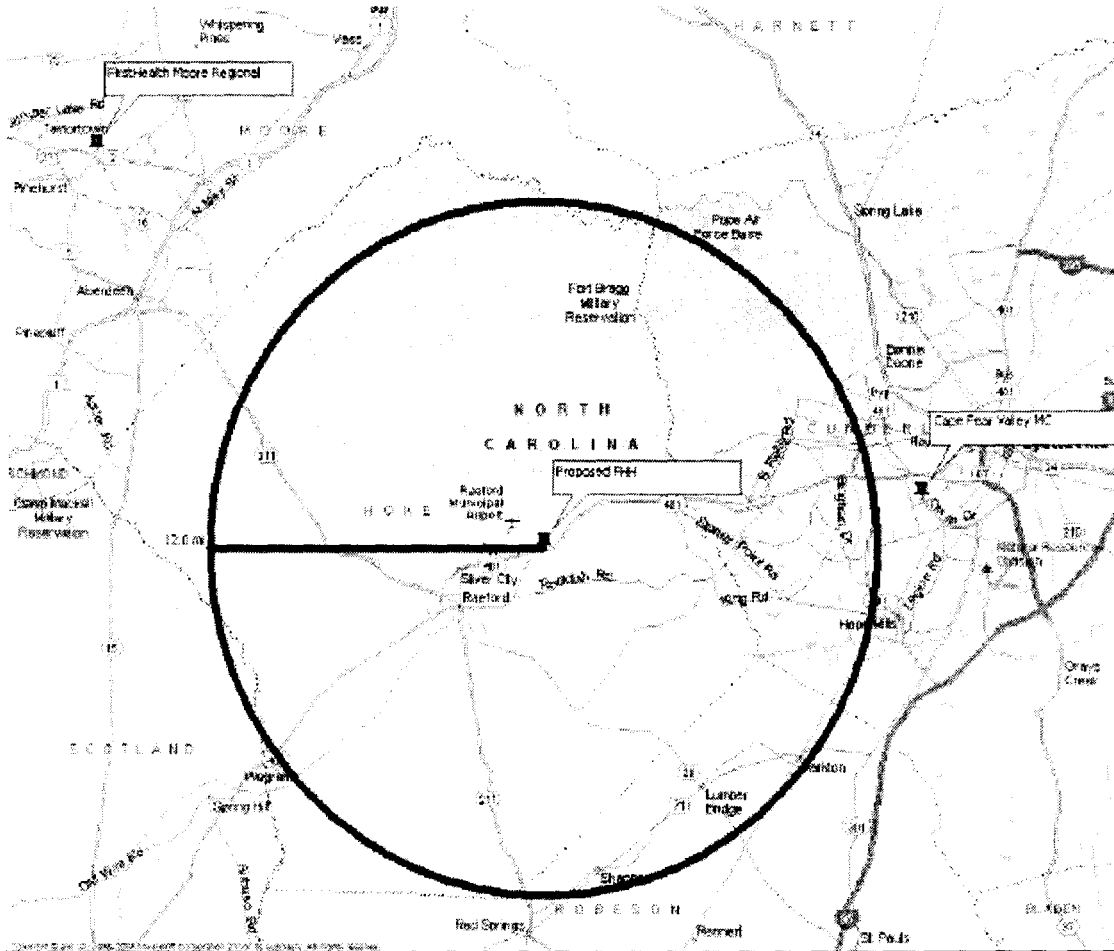
		2013	2014	2015	
Total ED Visits					
Hoke County	28376	13,891	14,305	14,725	A
FMRH ED Visits					
Hoke County	28376	6,759	6,960	7,165	B
Non-FMRH ED Visits					
Hoke County	28376	7,132	7,345	7,560	C

Source: C = (A - B)

FirstHealth applied the following FHCH percentage, based on the phone survey, to the Emergency Department visits not projected to be treated at FMRH to account for Emergency Department visits that will avoid going to Emergency Departments further away from the FHCH. To validate these assumptions, an independent marketing firm, InTandem, performed a phone survey of Hoke County residents to determine the percentage of residents who believe emergency care is important in the local community and to determine the percentage of residents who would use the hospital. FirstHealth used the FHCH Utilization Rate of 65.9 percent, as calculated in Step 5.

FirstHealth concludes that based on the phone survey, it would be valid to assume that 65.9 percent of the Hoke County residents would use the FHCH Emergency Department. As the following map shows, nearly 90% of the Hoke County is located within 12 miles of the proposed FHCH. This decrease in the distance to emergency care is enough to change emergency care patterns of travel, as the phone survey indicates.

**FHCH Emergency Department
12-mile Ring**



Please refer to Exhibit C for larger ring map.

**Emergency Department
 FHCH ED Projections
 Non-FMRH ED Visits to FHCH**

		2013	2014	2015	
Non-FMRH ED Visits					
Hoke County	28376	7,132	7,345	7,560	A
FHCH Utilization					
Hoke County	28376	65.90%	65.90%	65.90%	B
FHCH Non-FMRH ED Visits					
Hoke County	28376	4,700	4,841	4,983	C

Source: C = (A x B)

Step 7.

FirstHealth added the projected FHCH Emergency Department visits from FMRH visits, calculated in Step 5, to the FHCH Emergency Department visits from non-FMRH visits, calculated in Step 6, to identify the total number of projected Emergency Department visits for 2013 through 2015.

**Emergency Department
 Total FHCH ED Projections**

		2013	2014	2015	
FHCH FMRH ED Visits					
Hoke County	28376	4,454	4,587	4,722	A
FHCH Non-FMRH ED Visits					
Hoke County	28376	4,700	4,841	4,983	B
FHCH ED Visits					
Hoke County	28376	9,155	9,428	9,704	C

Source: C = (A + B)

$4,722 / 9,704 = 48.7\%$

Step 8.

Next, FirstHealth calculated the effective market share that the FHCH will achieve. The effective market share was calculated by dividing the projected FHCH Emergency Department visits by the Projected Hoke County ED Demand, calculated in Step 3.

**Emergency Department
 FHCH Effective Market Share**

		2013	2014	2015	
Projected ED Visits					
Hoke County	28376	13,891	14,305	14,725	A
FHCH ED Visits					
Hoke County	28376	9,155	9,428	9,704	B
FHCH Market Share					
Hoke County	28376	65.90%	65.90%	65.90%	C

Source: C = (A / B) x 100

Step 9.

FirstHealth projected the number of Level I through Level V Emergency Department visits that would be generated by the number of FHCH Emergency Department visits calculated in Step 7. FirstHealth did not include the most serious Emergency Department cases, Level VI, in this calculation. Using a sample data pull for FY2007 through FY2009 of Hoke County residents treated at the FMRH Emergency Department, FirstHealth calculated the 3-year average to apply to future projections. The following table shows the 3-year average calculation.

**FMRH Emergency Department
 Hoke County Service Level
 FY2007 – FY2009**

	2007	2008	2009	3-YR AVG
Level I	485	445	394	441
Level II	1,064	1,102	1,055	1,074
Level III	1,670	1,970	1,914	1,851
Level IV	1,822	2,198	2,082	2,034
Level V	13	35	15	21
ED Visits	5,054	5,750	5,460	5,421
Level I	9.6%	7.7%	7.2%	8.1%
Level II	21.1%	19.2%	19.3%	19.8%
Level III	33.0%	34.3%	35.1%	34.1%
Level IV	36.1%	38.2%	38.1%	37.5%
Level V	0.3%	0.6%	0.3%	0.4%
Total	100.0%	100.0%	100.0%	100.0%

FirstHealth then multiplied the FHCH Emergency Department visits calculated in Step 7 by the 3-year Service Level averages calculated in Step 9.

**FMRH Emergency Department
 Hoke County Service Level
 FY2013 – FY2015**

	3-YR AVG	2013	2014	2015
Level I	8.1%	745	767	790
Level II	19.8%	1,813	1,867	1,922
Level III	34.1%	3,126	3,220	3,314
Level IV	37.5%	3,435	3,537	3,641
Level V	0.4%	35	37	38
ED Visits	100.0%	9,155	9,428	9,704

Step 10.

Using the sample data pull for FY2007 through FY2009 of Hoke County residents treated at the FMRH Emergency Department used in Step 9, FirstHealth calculated the percent of observation patients, inpatients, and discharged patients by Service Level to identify the 3-year average to apply to future projections.

Table 1 shows the number, percentage, and 3-year average of observation, inpatients, and discharge patients for FY2007 through FY2009.

Table 2 shows the projected number of observation, inpatients, and discharge patients for FY2013 through FY2015 using the 3-year average observation, inpatient, and discharge patient percentages calculated in Step 9.

Table 1
FMRH Emergency Department
3-Year Average
Observation, Inpatient, and Discharge Percent by Service Level
FY2007 – FY2009

	2007	2008	2009	3-YR AVG		2007	2008	2009	3-YR AVG
Level I	485	445	394	441		9.6%	7.7%	7.2%	8.1%
Level II	1,064	1,102	1,055	1,074		21.1%	19.2%	19.3%	19.8%
Level III	1,670	1,970	1,914	1,851		33.0%	34.3%	35.1%	34.1%
Level IV	1,822	2,198	2,082	2,034		36.1%	38.2%	38.1%	37.5%
Level V	13	35	15	21		0.3%	0.6%	0.3%	0.4%
ED Visits	5,054	5,750	5,460	5,421		100.0%	100.0%	100.0%	100.0%
Observation Patient Volume and Percentage									
Level I	-	1	-	0		0.0%	0.2%	0.0%	0.1%
Level II	-	2	-	0		0.0%	0.2%	0.0%	0.1%
Level III	4	1	1	2		0.2%	0.1%	0.1%	0.1%
Level IV	164	160	104	143		9.0%	7.3%	5.0%	7.0%
Level V	-	-	-	-		0.0%	0.0%	0.0%	0.0%
ED Observation Pts	168	164	105	146					
Inpatient Volume and Percentage									
Level I	1	-	-	0		0.2%	0.0%	0.0%	0.1%
Level II	10	1	3	5		0.9%	0.1%	0.3%	0.4%
Level III	31	28	28	29		1.9%	1.4%	1.5%	1.6%
Level IV	765	831	783	793		42.0%	37.8%	37.6%	39.0%
Level V	9	30	14	18		69.2%	85.7%	93.3%	84.1%
ED Inpatients Pts	816	890	828	845					
Discharge Volume and Percentage									
Level I	484	444	394	441		99.8%	99.8%	100.0%	99.8%
Level II	1,054	1,099	1,052	1,068		99.1%	99.7%	99.7%	99.5%
Level III	1,635	1,941	1,885	1,820		97.9%	98.5%	98.5%	98.3%
Level IV	893	1,207	1,195	1,098		49.0%	54.9%	57.4%	54.0%
Level V	4	5	1	3		30.8%	14.3%	6.7%	15.9%
ED Discharge Pts	4,070	4,696	4,527	4,431					

Table 2
FHCH Emergency Department
Observation, Inpatient, and Discharge Volumes by Service Level
FY2013 – FY2015

	3-YR AVG	2013	2014	2015
Level I	8.1%	745	767	790
Level II	19.8%	1,813	1,867	1,922
Level III	34.1%	3,126	3,220	3,314
Level IV	37.5%	3,435	3,537	3,641
Level V	0.4%	35	37	38
ED Visits	100.0%	9,155	9,428	9,704
Projected Observation Patient Volume				
Level I	0.1%	1	1	1
Level II	0.1%	1	1	1
Level III	0.1%	3	3	4
Level IV	7.0%	241	248	255
Level V	0.0%	-	-	-
ED Observation Pts		246	253	261
Projected Inpatient Volume				
Level I	0.1%	1	1	1
Level II	0.4%	8	8	8
Level III	1.6%	49	50	52
Level IV	39.0%	1,339	1,379	1,419
Level V	84.1%	30	31	32
ED Inpatients Pts		1,426	1,469	1,512
Projected Discharge Volume				
Level I	99.8%	744	766	789
Level II	99.5%	1,804	1,858	1,912
Level III	98.3%	3,074	3,166	3,258
Level IV	54.0%	1,855	1,910	1,966
Level V	15.9%	6	6	6
ED Discharge Pts		7,482	7,706	7,932

Step 11.

The following table summarizes Table 2 from Step 10:

**FHCH Emergency Department
 Observation, Inpatient, and Discharge Volumes Summary
 FY2013 – FY2015**

	2013	2014	2015
Total ED Visits	9,155	9,428	9,704
ED Observation Patients	246	253	261
ED Inpatients	1,426	1,469	1,512
ED Discharges	7,482	7,706	7,932

FirstHealth has determined that it can relocate eight (8) acute care beds from FMRH to the proposed FHCH without impacting the patients who remain at FMRH. In order to accommodate the projected ED Inpatients, specifically those patients who may have higher acuities, FirstHealth assumes that 50.0 percent of the ED Inpatients will be admitted to the inpatient unit and the remaining 50.0 percent will be held in the four observation beds, located on the inpatient unit, until they can be transferred to either FMRH or to CFVMC.

The following table presents the number of adjusted observation patients, which is equal to the number of projected ED Observation Patients plus 50.0 percent of the projected ED Inpatients, and the number of adjusted inpatients, which is equal to 50.0 percent of the projected ED Inpatients.

**FHCH Emergency Department
 Adjusted Observation, Adjusted Inpatient, and Discharge Volumes Summary
 FY2013 – FY2015**

	2012	2013	2014
Total ED Visits	9,155	9,428	9,704
ED Observation Patients	959	988	1,017
ED Inpatients	713	734	756
ED Discharges	7,482	7,706	7,932

Step 12.

Using the sample data pull for FY2007 through FY2009 of Hoke County residents treated at the FMRH Emergency Department used in Step 9, FirstHealth calculated the percent of inpatient surgical cases, imaging procedures, laboratory tests, and other ancillary volumes by observation patient, inpatient, and discharged patient to identify the 3-year average to apply to future projections.

Please refer to Exhibit C, for Table 3, which shows the number, percentage, and 3-year average of inpatient surgical hours, imaging procedures, laboratory tests, and other ancillary volumes associated with the Emergency Department observation, inpatients, and discharge patients for FY2007 through FY2009 from Hoke County.

Table 4 shows the projected number of inpatient surgical cases, imaging procedures, laboratory tests, and other ancillary volumes associated with the Emergency Department observation, inpatients, and discharge patients for FY2013 through FY2015 using the 3-year average observation, inpatient, and discharge patient utilization rates per 100 patients calculated in Step 12, Table 3, Exhibit C. For example, Table 3 shows the 3-year average laboratory tests for discharge patients to be 188.0 laboratory tests per 100 discharged ED patients; this can be further simplified to 1.9 laboratory tests per discharged ED patient. FirstHealth multiplied the 3-year average ancillary volume per 100 patients by the number of projected Emergency Department patients by observation, inpatient, or discharge divided by 100.

Table 4
FHCH Emergency Department
Ancillary Volumes by Observation, Inpatient, and Discharge Patient
FY2013 – FY2015

	Units	3-YR AVG	2013	2014	2015
Projected Ancillary Volumes by Discharge Patient					
ED Discharge Patients			7,482	7,706	7,932
Laboratory	Tests	188.0	14,064	14,483	14,908
Pharmacy	Units	193.2	14,454	14,885	15,322
General Radiology	Procedures	41.2	3,080	3,171	3,264
CT Scanner	Scans	19.3	1,444	1,487	1,531
MRI Scanner	Scans	0.6	43	44	45
Ultrasound	Procedures	8.2	611	629	647
Nuclear Medicine	Procedures	-	-	-	-
Operating Room	Hours	0.1	4.2	4.3	4.4
Projected Ancillary Volumes by Observation Patient					
Adjusted ED Observation Patients			959	988	1,017
Laboratory	Tests	1,394.1	13,371	13,770	14,174
Pharmacy	Units	2,413.7	23,151	23,842	24,541
General Radiology	Procedures	190.8	1,830	1,885	1,940
CT Scanner	Scans	53.3	511	527	542
MRI Scanner	Scans	7.8	75	77	79
Ultrasound	Procedures	17.6	169	174	179
Nuclear Medicine	Procedures	39.8	98	101	104
Operating Room	Hours	4.8	11.7	12.1	12.4
Projected Ancillary Volumes by Inpatient					
Adjusted ED Inpatients			713	734	756
Laboratory	Tests	2,659.6	18,967	19,533	20,106
Pharmacy	Units	10,050.0	71,673	73,812	75,977
General Radiology	Procedures	761.4	5,430	5,592	5,756
CT Scanner	Scans	83.9	599	616	635
MRI Scanner	Scans	17.7	126	130	134
Ultrasound	Procedures	46.4	331	341	351
Nuclear Medicine	Procedures	8.6	61	63	65
Operating Room	Hours	25.1	178.9	184.3	189.7

Step 13.

FirstHealth summed the projected FHCH ancillary service volumes for adjusted observation, adjusted inpatients, and discharge patients, calculated in Step 12, to identify the total FHCH ancillary service volumes for FY2013 through FY2015.

**FHCH Emergency Department
 Total Ancillary Volumes
 FY2013 – FY2015**

	Units	2013	2014	2015
Total Ancillary Service Volumes				
Laboratory	Tests	46,401	47,786	49,188
Pharmacy	Units	109,278	112,539	115,840
General Radiology	Procedures	10,340	10,649	10,961
CT Scanner	Scans	2,554	2,631	2,708
MRI Scanner *	Scans	70	72	74
Ultrasound	Procedures	1,110	1,144	1,177
Nuclear Medicine	Procedures	159	164	169
Operating Room	Hours	195	201	206

* MRI scans represent 28.6% of MRI scans that ED patients would generate based on the availability of the mobile MRI scanner on the FHCH campus.

Even without considering the clear need for ancillary services given the Emergency Department utilization projections, every Emergency Department needs to have these services readily available as part of the basic standard of care for patients presenting to an Emergency Department. In the American College of Emergency Physicians publication, **Emergency Department Design** (pages 163 and 164); imaging, laboratory, and pharmacy services are detailed in their inclusion in the design for Emergency Departments. Furthermore, to be licensed as a hospital in North Carolina, a facility must have at least two acute care beds and ancillary services such as lab, imaging and pharmacy. See 10A NCAC 13B.3201.

Step 14.

FirstHealth converted the number of observation patients and inpatients into “days of care,” and operating hours into inpatient surgical cases.

FirstHealth assumes that an observation patient will occupy an observation bed for less than 23 hours, but that the observation bed will only be available to one patient per day.

**FHCH
 Observation Bed Utilization**

	2013	2014	2015	
Adjusted Observation Patients	959	988	1,017	A
Observation Days per Adjusted Observation Patient	1	1	1	B
Total Observation Days	959	988	1,017	A x B
Observation Beds	4	4	4	C
Available Days per Bed	365	365	365	D
Available Observation Days of Care	1,460	1,460	1,460	C X D
Observation Bed Utilization	65.7%	67.7%	69.6%	(A x B) / (C X D)

Using the sample data pull for FY2007 through FY2009 of Hoke County residents treated at the FMRH Emergency Department used in Step 9, FirstHealth calculated the average length of stay per inpatient to be 3.1 days.

**FHCH
 Inpatient Bed Utilization**

	2013	2014	2015	
Adjusted Inpatients	713	734	756	A
Inpatient Days per Adjusted Inpatient Patient	3.1	3.1	3.1	B
Total Inpatient Days	2,211	2,277	2,344	A x B
Inpatient Beds	8	8	8	C
Available Days per Bed	365	365	365	D
Available Inpatient Days of Care	2,920	2,920	2,920	C X D
Inpatient Bed Utilization	75.7%	78.0%	80.3%	(A x B) / (C X D)

Using the SMFP standard of 3.0 hours per inpatient case, FirstHealth calculated the number of inpatient surgical cases:

FHCH
Inpatient Surgical Cases

	2012	2013	2014	
Inpatient Surgical Hours	195	201	206	A
Inpatient Surgical Hours per Case	3.0	3.0	3.0	B
Total Inpatient Surgical Cases	65	67	69	A / B

Step 15.

FirstHealth projected the number FHCH CT scans by HECT unit for CT scans generated by Emergency Department patients by using the current FMRH Emergency Department breakdown of CT scans by type, as presented in the following tables:

**FHCH
 FY2013 (Emergency Department)
 CT Scanner**

	Type of CT Scan	No. of Scans						Conver. Factor		HECT Units
		Q1	Q2	Q3	Q4	Total				
1	Head scan without contrast	183	183	183	183	733	X	1.00	=	733
2	Head scan with contrast	-	-	-	-	-	X	1.25	=	-
3	Head scan without and with contrast	3	3	3	3	13	X	1.75	=	24
4	Body scan without contrast	211	211	211	211	842	X	1.50	=	1,264
5	Body scan with contrast	161	161	161	161	646	X	1.75	=	1,130
6	Body scan without and with contrast	77	77	77	77	308	X	2.75	=	846
7	Biopsy in addition to body scan with or without contrast	3	3	3	3	12	X	2.75 plus body scan HECTs	=	32
8	Abscess drainage in addition to body scan with or without contrast	-	-	-	-	-	X	4.00 plus body scan HECTs	=	-
		639	639	639	639	2,554		Totals		4,029

Totals may not foot due to rounding.

**FHCH
 FY2014 (Emergency Department)
 CT Scanner**

	Type of CT Scan	No. of Scans						Conver. Factor		HECT Units
		Q1	Q2	Q3	Q4	Total				
1	Head scan without contrast	189	189	189	189	755	X	1.00	=	755
2	Head scan with contrast	-	-	-	-	-	X	1.25	=	-
3	Head scan without and with contrast	3	3	3	3	14	X	1.75	=	24
4	Body scan without contrast	217	217	217	217	868	X	1.50	=	1,301
5	Body scan with contrast	166	166	166	166	665	X	1.75	=	1,164
6	Body scan without and with contrast	79	79	79	79	317	X	2.75	=	872
7	Biopsy in addition to body scan with or without contrast	3	3	3	3	12	X	2.75 plus body scan HECTs	=	33
8	Abscess drainage in addition to body scan with or without contrast	-	-	-	-	-	X	4.00 plus body scan HECTs	=	-
		658	658	658	658	2,631		Totals		4,149

Totals may not foot due to rounding.

FHCH
 FY2015 (Emergency Department)
 CT Scanner

	Type of CT Scan	No. of Scans						Conver. Factor	=	HECT Units
		Q1	Q2	Q3	Q4	Total				
1	Head scan without contrast	194	194	194	194	777	X	1.00	=	777
2	Head scan with contrast	-	-	-	-	-	X	1.25	=	-
3	Head scan without and with contrast	4	4	4	4	14	X	1.75	=	25
4	Body scan without contrast	223	223	223	223	893	X	1.50	=	1,340
5	Body scan with contrast	171	171	171	171	685	X	1.75	=	1,198
6	Body scan without and with contrast	82	82	82	82	326	X	2.75	=	897
7	Biopsy in addition to body scan with or without contrast	3	3	3	3	12	X	2.75 plus body scan HECTs	=	34
8	Abscess drainage in addition to body scan with or without contrast	-	-	-	-	-	X	4.00 plus body scan HECTs	=	-
		677	677	677	677	2,708		Totals		4,271

Totals may not foot due to rounding.

Need Methodology

Outpatient Departments

FirstHealth used the following need methodologies to project FHCH surgical cases and outpatient imaging procedures.

Please refer to Exhibit C for population sources and for need methodology sources.

Step 1.

Outpatient surgical cases were projected by identifying the total number of outpatient surgical cases performed on Hoke County residents in FY2009, as highlighted in the following table:

**FY2009
 Hoke County Patients
 Outpatient Surgical Cases**

OP Surgical Cases	2009
Fayetteville ASC	342
FMRH	276
Surgery Center of Pinehurst	275
CFVMC	264
Eye Center of Carolinas	120
Highsmith-Rainey	89
Scotland Memorial	31
SRMC	12
Duke	6
Sandhills Regional	5
UNC Hospitals	2
Totals	1,422

Source: 2010 Hospital and ASC License Renewal Applications

FirstHealth identified the counties of similar size to identify the average percentage of outpatient surgical cases that remain at the local county hospital. The six counties closest in size were Beaufort, McDowell, Richmond, Stokes, Vance, and Watauga. With the exception of Richmond County, each county only has one hospital performing surgical cases, no ambulatory surgery centers, and each county has more than 3 operating rooms.

The following table shows the county hospitals comparison and their percentage of the FY2007 outpatient surgical market for county patients:

County	Hospital	Operating Rooms	% of County Outpatient Surgical Cases
Beaufort	Beaufort County Hospital	5	60.5%
McDowell	McDowell Hospital	3	28.9%
Richmond	Richmond Memorial	3	20.5%
Richmond	Sandhills Regional	3	17.6%
	<i>Richmond County Total</i>	6	38.1%
Stokes	Stokes-Reynolds	4	6.4%
Vance	Maria Parham	5	62.5%
Watauga	Watauga Medical Center	6	73.6%
Average		4.8	45.0%

FirstHealth assumes that with a new operating room, with no patient waitlist, and immediate surgical case scheduling that it will achieve just below the six-county average calculated in the previous table by Year 3. For the purpose of remaining conservative in its volume projections, FirstHealth assumes no increase in the number of outpatient surgical cases, but that patients will seek referral to FirstHealth Hoke Hospital and surgeons will schedule surgical cases at the new hospital during their established block times, rather than requiring Hoke County patients to travel outside of Hoke County outpatient surgeries.

The following table identifies the number of outpatient surgical cases projected to be performed during the first three years of operation:

	2013	2014	2015
County Outpatient Surgical Cases	1,422	1,422	1,422
FHCH Market Share	27.6%	33.1%	38.7%
FHCH Outpatient Surgical Cases	393	471	550

Step 2.

FirstHealth used outpatient imaging use rates by age and sex per 1000 population that were included in an Imaging Economics, June 2005 article titled **Radiology 2005: State of the Industry**. The outpatient imaging use rates were developed by National Imaging Associates and represent patients imaged between 2000 and 2004. FirstHealth is using these outpatient imaging use rates because they address the utilization implications of an aging population. FirstHealth believed it best to utilize this data, even though it is five years old, so that the relatively young population of Hoke County does not impact projected outpatient imaging cases by over projecting them based on the utilization of older residents.

Please refer to Exhibit C for the Imaging Economics article.

**Outpatient Imaging Procedure Use Rates
 By Age and Sex**

	0-19		20-44		45-64		65+	
	F	M	F	M	F	M	F	M
CT Scan	26	28	71	56	132	111	237	251
Fluoroscopy	5	5	18	14	34	26	61	54
General Radiology	256	318	289	281	574	449	1,127	933
Mammography	3	0	157	0	668	1	568	2
MRI Scan	18	18	54	44	95	75	103	92
Ultrasound	18	13	47	22	82	62	127	173

Source: Imaging Economics, June 2005, Radiology 2005: State of the Industry.

**NCOSBM Hoke County
 Population Projection by Age and Sex**

	0-19		20-44		45-64		65+		Total	
	F	M	F	M	F	M	F	M	F	M
2012	7,727	8,314	8,671	9,052	5,972	6,124	2,358	2,014	24,728	25,504
2013	7,845	8,488	8,800	9,137	6,198	6,359	2,448	2,116	25,291	26,100
2014	7,986	8,632	8,883	9,230	6,444	6,603	2,542	2,231	25,855	26,696

Source: NC State Office of Budget and Management, September 2009.

FirstHealth multiplied the outpatient imaging procedure use rates by age and sex by the NCOSBM Hoke County population projection by age and sex divided by 1,000 to calculate the number of outpatient imaging procedures that a population that mirrors Hoke County's population would generate.

**Hoke County Projected Outpatient Imaging Procedures
 By Age and Sex**

2012	0-19		20-44		45-64		65+		Total		Total
	F	M	F	M	F	M	F	M	F	M	
CT Scan	201	233	616	507	788	680	559	506	2,164	1,925	4,089
Fluoroscopy	39	42	156	127	203	159	144	109	542	436	978
General Radiology	1,978	2,644	2,506	2,544	3,428	2,750	2,657	1,879	10,569	9,816	20,386
Mammography	23	-	1,361	-	3,989	6	1,339	4	6,713	10	6,723
MRI Scan	139	150	468	398	567	459	243	185	1,418	1,193	2,610
Ultrasound	139	108	408	199	490	380	299	348	1,336	1,035	2,371

2013	0-19		20-44		45-64		65+		Total		Total
	F	M	F	M	F	M	F	M	F	M	
CT Scan	204	238	625	512	818	706	580	531	2,227	1,986	4,213
Fluoroscopy	39	42	158	128	211	165	149	114	558	450	1,008
General Radiology	2,008	2,699	2,543	2,567	3,558	2,855	2,759	1,974	10,868	10,096	20,964
Mammography	24	-	1,382	-	4,140	6	1,390	4	6,936	11	6,946
MRI Scan	141	153	475	402	589	477	252	195	1,457	1,226	2,684
Ultrasound	141	110	414	201	508	394	311	366	1,374	1,072	2,446

2014	0-19		20-44		45-64		65+		Total		Total
	F	M	F	M	F	M	F	M	F	M	
CT Scan	208	242	631	517	851	733	602	560	2,291	2,051	4,343
Fluoroscopy	40	43	160	129	219	172	155	120	574	465	1,039
General Radiology	2,044	2,745	2,567	2,594	3,699	2,965	2,865	2,082	11,175	10,385	21,560
Mammography	24	-	1,395	-	4,305	7	1,444	4	7,167	11	7,178
MRI Scan	144	155	480	406	612	495	262	205	1,497	1,262	2,759
Ultrasound	144	112	418	203	528	409	323	386	1,412	1,111	2,523

Finally, to remain conservative in its outpatient imaging procedure projections FirstHealth does not project to perform more than 20.0 percent of projected outpatient imaging procedure at FHCH. The following tables show a ramped up outpatient imaging service increasing from 10.0 percent in FY2013 to 20.0 percent in FY2015.

**FHCH Outpatient Imaging Procedures
 FY2013-FY2015**

Projected Hoke County Imaging Procedures				
	2013	2014	2015	
CT Scan	4,089	4,213	4,343	A
Fluoroscopy	978	1,008	1,039	
General Radiology	20,386	20,964	21,560	
Mammography	6,723	6,946	7,178	
MRI Scan	2,610	2,684	2,759	
Ultrasound	2,371	2,446	2,523	

FHCH Market Share	10.0%	15.0%	20.0%	B
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Projected FHCH Imaging Procedures				
	2013	2014	2015	
CT Scan	409	632	869	C
Fluoroscopy	98	151	208	
General Radiology	2,039	3,145	4,312	
Mammography	672	1,042	1,436	
MRI Scan	261	403	552	
Ultrasound	237	367	505	

Source: C = A x B

Step 3.

FirstHealth projected the number of outpatient CT scans that would be provided at the FHCH. FirstHealth projected the number of FHCH outpatient CT scans by HECT unit by using the current FMRH outpatient imaging breakdown of CT scans by type, as presented in the following tables:

**FHCH
 FY2013 (Outpatient)
 CT Scanner**

Type of CT Scan		No. of Scans						Conver. Factor	=	HECT Units
		Q1	Q2	Q3	Q4	Total				
1	Head scan without contrast	29	29	29	29	117	X	1.00	=	117
2	Head scan with contrast	-	-	-	-	-	X	1.25	=	-
3	Head scan without and with contrast	1	1	1	1	2	X	1.75	=	4
4	Body scan without contrast	34	34	34	34	135	X	1.50	=	202
5	Body scan with contrast	26	26	26	26	103	X	1.75	=	181
6	Body scan without and with contrast	12	12	12	12	49	X	2.75	=	135
7	Biopsy in addition to body scan with or without contrast	0	0	0	0	2	X	2.75 plus body scan HECTs	=	5
8	Abscess drainage in addition to body scan with or without contrast	-	-	-	-	-	X	4.00 plus body scan HECTs	=	-
		102	102	102	102	409		Totals		645

Totals may not foot due to rounding.

**FHCH
 FY2014 (Outpatient)
 CT Scanner**

Type of CT Scan		No. of Scans						Conver. Factor	=	HECT Units
		Q1	Q2	Q3	Q4	Total				
1	Head scan without contrast	45	45	45	45	181	X	1.00	=	181
2	Head scan with contrast	-	-	-	-	-	X	1.25	=	-
3	Head scan without and with contrast	1	1	1	1	3	X	1.75	=	6
4	Body scan without contrast	52	52	52	52	208	X	1.50	=	313
5	Body scan with contrast	40	40	40	40	160	X	1.75	=	280
6	Body scan without and with contrast	19	19	19	19	76	X	2.75	=	209
7	Biopsy in addition to body scan with or without contrast	1	1	1	1	3	X	2.75 plus body scan HECTs	=	8
8	Abscess drainage in addition to body scan with or without contrast	-	-	-	-	-	X	4.00 plus body scan HECTs	=	-
		158	158	158	158	632		Totals		997

Totals may not foot due to rounding.

FHCH
 FY2015 (Outpatient)
 CT Scanner

	Type of CT Scan	No. of Scans					Total		Conver. Factor	=	HECT Units
		Q1	Q2	Q3	Q4						
1	Head scan without contrast	62	62	62	62	249	X	1.00	=	249	
2	Head scan with contrast	-	-	-	-	-	X	1.25	=	-	
3	Head scan without and with contrast	1	1	1	1	5	X	1.75	=	8	
4	Body scan without contrast	72	72	72	72	286	X	1.50	=	430	
5	Body scan with contrast	55	55	55	55	220	X	1.75	=	384	
6	Body scan without and with contrast	26	26	26	26	105	X	2.75	=	288	
7	Biopsy in addition to body scan with or without contrast	1	1	1	1	4	X	2.75 plus body scan HECTs	=	11	
8	Abscess drainage in addition to body scan with or without contrast	-	-	-	-	-	X	4.00 plus body scan HECTs	=	-	
		217	217	217	217	869		Totals		1,370	

Totals may not foot due to rounding.

Step 4.

Finally, FirstHealth combined the Emergency Department and Outpatient CT scans:

**FHCH
 FY2013 (Combined)
 CT Scanner**

Type of CT Scan		No. of Scans						Conver. Factor	=	HECT Units
		Q1	Q2	Q3	Q4	Total				
1	Head scan without contrast	213	213	213	213	851	X	1.00	=	851
2	Head scan with contrast	-	-	-	-	-	X	1.25	=	-
3	Head scan without and with contrast	4	4	4	4	16	X	1.75	=	27
4	Body scan without contrast	244	244	244	244	977	X	1.50	=	1,466
5	Body scan with contrast	187	187	187	187	749	X	1.75	=	1,311
6	Body scan without and with contrast	89	89	89	89	357	X	2.75	=	982
7	Biopsy in addition to body scan with or without contrast	3	3	3	3	14	X	2.75 plus body scan HECTs	=	38
8	Abscess drainage in addition to body scan with or without contrast	-	-	-	-	-	X	4.00 plus body scan HECTs	=	-
		741	741	741	741	2,963		Totals		4,674

Totals may not foot due to rounding.

**FHCH
 FY2014 (Combined)
 CT Scanner**

Type of CT Scan		No. of Scans						Conver. Factor	=	HECT Units
		Q1	Q2	Q3	Q4	Total				
1	Head scan without contrast	234	234	234	234	936	X	1.00	=	936
2	Head scan with contrast	-	-	-	-	-	X	1.25	=	-
3	Head scan without and with contrast	4	4	4	4	17	X	1.75	=	30
4	Body scan without contrast	269	269	269	269	1,076	X	1.50	=	1,614
5	Body scan with contrast	206	206	206	206	825	X	1.75	=	1,443
6	Body scan without and with contrast	98	98	98	98	393	X	2.75	=	1,081
7	Biopsy in addition to body scan with or without contrast	4	4	4	4	15	X	2.75 plus body scan HECTs	=	41
8	Abscess drainage in addition to body scan with or without contrast	-	-	-	-	-	X	4.00 plus body scan HECTs	=	-
		816	816	816	816	3,263		Totals		5,146

Totals may not foot due to rounding.

FHCH
 FY2015 (Combined)
 CT Scanner

	Type of CT Scan	No. of Scans						Conver. Factor	=	HECT Units
		Q1	Q2	Q3	Q4	Total				
1	Head scan without contrast	257	257	257	257	1,027	X	1.00	=	1,027
2	Head scan with contrast	-	-	-	-	-	X	1.25	=	-
3	Head scan without and with contrast	5	5	5	5	19	X	1.75	=	33
4	Body scan without contrast	295	295	295	295	1,180	X	1.50	=	1,769
5	Body scan with contrast	226	226	226	226	904	X	1.75	=	1,582
6	Body scan without and with contrast	108	108	108	108	431	X	2.75	=	1,185
7	Biopsy in addition to body scan with or without contrast	4	4	4	4	16	X	2.75 plus body scan HECTs	=	45
8	Abscess drainage in addition to body scan with or without contrast	-	-	-	-	-	X	4.00 plus body scan HECTs	=	-
		894	894	894	894	3,576		Totals		5,641

Totals may not foot due to rounding.

Please refer to Exhibit C for need methodology supporting resources.

Step 5.

FirstHealth summed the imaging procedures generated by Emergency Department visits as calculated in Step 13 of the Emergency Department need methodology to the outpatient imaging procedures calculated in Step 2 to identify total projected imaging procedures from FY2013 through FY2015.

**FHCH
Total Imaging Procedures
FY2013-FY2015**

	2013	2014	2015
General Radiography	12,379	13,794	15,273
CT Scan	2,963	3,263	3,576
MRI Scan	331	475	626
Ultrasound	1,348	1,510	1,682
Mammography	672	1,042	1,436
Nuclear Medicine	159	164	169

IV.2. For each type of medical equipment proposed, provide the annual maximum capacity per unit if the SMFP or the certificate of need regulatory review criteria do NOT provide a standard. Provide all assumptions and the specific methodology used to determine the annual maximum capacity.

The proposed FHCH will operate 24 hours per day, 7 days per week; however, for the purposes of identifying a reasonable annual maximum capacity, FirstHealth is utilizing a 9-hour day, which better reflects the time period that most of the scheduled patients will access FHCH.

TABLE IV.2	# of Rooms	Visit Capacity per Room	Total Projected Capacity
Inpatient Services	8	365 days	2,920 days
Observation Services	4	365 days	1,460 days
Surgical Services	1	1,872 hours	1,872 hours
Emergency Service	8	1,250 visits	10,000 visits

TABLE IV.2 DIAGNOSTIC TESTING	Days per Week	Weeks per Year	Hours per Day	Total Available Hours	# of Units	Total Unit Hours Available	Procedures per Hour	Total Projected Capacity
CT Scanner	7	52	9	3,276	1	3,276	1	3,276
MRI Scanner	1	52	8	416	1	416	1.5	626
General Radiography	7	52	9	3,276	2 *	6,552	2	13,104
Fluoroscopy	7	52	9	3,276	2 **	6,552	1	6,552
Ultrasound	7	52	9	3,276	1	3,276	1	3,276
Nuclear Medicine	5	52	3	780	1	780	0.33	260
Mammography	5	52	3	780	1	780	2	1,560

* includes a mobile x-ray unit in the Emergency Department

** includes a mobile fluoroscope in the Surgical Department

Attachment 3

COPY
N-8838-12

FirstHealth of the Carolinas, Inc

CERTIFICATE OF NEED APPLICATION

Acute Care Bed Expansion

Hoke County, NC

June 15, 2012

IV. UTILIZATION

IV.1. Using the format of Table IV below, provide annual utilization data for the following time periods:

- (a) Historical annual utilization data for the two full fiscal years prior to the submission of the application for each service component included in this application. Provide the dates for the fiscal years in the following format: Month/Date/Year to Month/Date/Year.
- (b) Projected annual utilization data for each fiscal year from the time the application was submitted through the fiscal year the project is complete for each service component included in this application.

Not applicable. FHCH does not have any historical utilization data and does not propose to be operation prior to the completion.

- (c) Projected annual utilization data for each service component in this application, for the first three full fiscal years after completion of the proposed project.
- (d) Provide all assumptions and the specific methodology used for projected utilization for each service component in this application.

Table IV Acute Care Beds	First Full FY	Second Full FY	Third Full FY
	FY2015	FY2016	FY2017
General Acute Care Beds			
# of beds	32	32	32
# of Discharges	1,233	1,635	2,046
# of Patient Days	5,309	7,038	8,771
ICU Beds			
# of beds	4	4	4
# of Discharges	152	201	252
# of Patient Days	564	745	932
Total Acute Care Beds			
# of beds	36	36	36
# of Discharges	1,385	1,836	2,298
# of Patient Days	5,873	7,763	9,703

FirstHealth used the following projection methodology to project the number of inpatient days of care to be treated during the first three years of operation for the 36-bed acute care unit:

FirstHealth used the Thomson North Carolina State Inpatient Database for FY2011 and North Carolina Office of State Budget and Management (May 2012 projections) to generate the data used in the following projection methodology.

Step 1.

FirstHealth identified the population projection for the 4-county service area, which includes Cumberland, Hoke, Robeson, and Scotland counties, for 2011 through 2018.

County	2011	2012	2013	2014	2015	2016	2017	2018
Cumberland	327,643	330,958	333,106	334,892	336,378	337,612	338,641	339,494
Hoke	49,065	50,347	51,629	52,908	54,190	55,471	56,754	58,033
Robeson	134,651	134,829	135,003	135,180	135,356	135,531	135,707	135,884
Scotland	36,029	35,588	35,082	34,572	34,067	33,557	33,049	32,543
Total	547,388	551,722	554,820	557,552	559,991	562,171	564,151	565,954

Step 2.

FirstHealth calculated the annual population change for the 4-county service area for 2011 through 2018.

County	2011	2012	2013	2014	2015	2016	2017	2018
Cumberland		1.0%	0.6%	0.5%	0.4%	0.4%	0.3%	0.3%
Hoke		2.6%	2.5%	2.5%	2.4%	2.4%	2.3%	2.3%
Robeson		0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Scotland		-1.2%	-1.4%	-1.5%	-1.5%	-1.5%	-1.5%	-1.5%
Total		0.8%	0.6%	0.5%	0.4%	0.4%	0.4%	0.3%

Step 3.

FirstHealth identified the number of patients and days of care provided to the residents of the 4-county service area; Cumberland, Hoke, Robeson, and Scotland counties, by all hospitals in North Carolina. The identified patients and days of care in the table exclude patients and days of care related to admissions for chemical dependency (CD), normal newborns, psychiatric, and rehabilitation services.

	Cumberland		Hoke		Robeson		Scotland		Total	
	Patients	Days	Patients	Days	Patients	Days	Patients	Days	Patients	Days
All NC Hospitals	27,872	163,628	3,742	19,085	19,988	95,167	5,071	22,927	56,673	300,807

Source: FY2011 Thomson North Carolina State Inpatient Database

Note: Patients equals admissions.

Step 4.

FirstHealth projected the number of admissions from the 4-county service area, excluding patients related to admissions for chemical dependency (CD), normal newborns, psychiatric, and rehabilitation services, using the volume of patients identified in Step 3 and the annual population change calculated in Step 2 for 2012 through 2018. This projection assumes that the discharge rate for these admission types remains constant over the projection period.

County	2011	2012	2013	2014	2015	2016	2017	2018
Cumberland	27,872	28,154	28,337	28,489	28,615	28,720	28,808	28,880
Hoke	3,742	3,840	3,938	4,035	4,133	4,231	4,328	4,426
Robeson	19,988	20,014	20,040	20,067	20,093	20,119	20,145	20,171
Scotland	5,071	5,009	4,938	4,866	4,795	4,723	4,652	4,580
Total	56,673	57,017	57,252	57,456	57,635	57,792	57,932	58,057

Step 5.

FirstHealth identified the number of patients and days of care provided to the residents of the 4-county service area: Cumberland, Hoke, Robeson, and Scotland counties, by all hospitals in North Carolina. The identified patients and days of care in the table that excluded patients and days of care related to admissions for chemical dependency (CD), normal newborns, psychiatric, rehabilitation, OB deliveries, neonatology, trauma, open heart, surgical cardiology, neurosurgery, and thoracic surgery.

	Cumberland		Hoke		Robeson		Scotland		Total	
	Patients	Days	Patients	Days	Patients	Days	Patients	Days	Patients	Days
All NC Hospitals	21,110	122,394	2,803	14,089	16,157	75,449	4,169	17,255	44,239	229,187

Source: FY2011 Thomson North Carolina State Inpatient Database

Step 6.

FirstHealth projected the number of admissions from the 4-county service area, excluding patients related to admissions for chemical dependency (CD), normal newborns, psychiatric, rehabilitation, OB deliveries, neonatology, trauma, open heart, surgical cardiology, neurosurgery, and thoracic surgery, using the volume of patients identified in Step 5 and the annual population change calculated in Step 2 for 2012 through 2018. The projection assumes the admission rate for these types of patients remains constant throughout the projection period.

County	2011	2012	2013	2014	2015	2016	2017	2018
Cumberland	21,110	21,324	21,462	21,577	21,673	21,752	21,819	21,874
Hoke	2,803	2,876	2,949	3,023	3,096	3,169	3,242	3,315
Robeson	16,157	16,178	16,199	16,220	16,242	16,263	16,284	16,305
Scotland	4,169	4,118	4,059	4,000	3,942	3,883	3,824	3,766
Total	44,239	44,496	44,670	44,820	44,952	45,067	45,169	45,259

Step 7.

FirstHealth identified the number of patients and days of care provided to the residents of the 4-county service area: Cumberland, Hoke, Robeson, and Scotland counties, **by only FirstHealth Moore Regional Hospital** that excluded patients and days of care related to admissions for chemical dependency (CD), normal newborns, psychiatric, rehabilitation, OB deliveries, neonatology, trauma, open heart, surgical cardiology, neurosurgery, and thoracic surgery.

By excluding services that are not planned to be provided at FHCH because of the capacity of the hospital, the availability of a medical or surgical specialists, and/or the need for the patient to receive care at a tertiary care facility; FirstHealth is decreasing the number of inpatient and inpatient days of care that are available to “shift” to FHCH.

	Cumberland		Hoke		Robeson		Scotland		Total	
	Patients	Days	Patients	Days	Patients	Days	Patients	Days	Patients	Days
FMRH	369	1,360	1,514	6,538	1,091	4,449	629	2,578	3,603	14,925

Source: FY2011 Thomson North Carolina State Inpatient Database

Step 8.

FirstHealth projected the number of admissions **to FirstHealth Moore Regional Hospital from the 4-county service area**, excluding patients related to admissions for chemical dependency (CD), normal newborns, psychiatric, rehabilitation, OB deliveries, neonatology, trauma, open heart, surgical cardiology, neurosurgery, and thoracic surgery, using the volume of patients identified in Step 7 and the annual population change calculated in Step 2 for 2012 through 2018. This step again assumes that admission rates for these types of admissions remain constant throughout the projection period. Further, these projections assume that FMRH's market share for these services remains constant throughout the time period.

County	2011	2012	2013	2014	2015	2016	2017	2018
Cumberland	369	373	375	377	379	380	381	382
Hoke	1,514	1,554	1,593	1,633	1,672	1,712	1,751	1,791
Robeson	1,091	1,092	1,094	1,095	1,097	1,098	1,100	1,101
Scotland	629	621	612	604	595	586	577	568
Total	3,603	3,640	3,675	3,709	3,742	3,776	3,809	3,842

Step 9.

FirstHealth projected the number of days of care to FirstHealth Moore Regional Hospital from the 4-county service area, excluding days of care related to admissions for chemical dependency (CD), normal newborns, psychiatric, rehabilitation, OB deliveries, neonatology, trauma, open heart, surgical cardiology, neurosurgery, and thoracic surgery.

FirstHealth used the 2011 days of care by county identified in Step 7 and divided by patient admissions by county (also in Step 7) to calculate the average length of stay for 2012 through 2018, for each county.

County	2011	ALOS
Cumberland	1,360	3.7
Hoke	6,538	4.3
Robeson	4,449	4.1
Scotland	2,578	4.1

FirstHealth multiplied the projected number of admissions by county projected in Step 8 by the ALOS calculated in Step 9 to project the number of days of care associated with patient admissions to FirstHealth Moore Regional Hospital from the 4-county service area, excluding days of care related to admissions for chemical dependency (CD), normal newborns, psychiatric, rehabilitation, OB deliveries, neonatology, trauma, open heart, surgical cardiology, neurosurgery, and thoracic surgery.

County	2011	2012	2013	2014	2015	2016	2017	2018
Cumberland	1,360	1,374	1,383	1,390	1,396	1,401	1,406	1,409
Hoke	6,538	6,709	6,880	7,050	7,221	7,392	7,563	7,733
Robeson	4,449	4,455	4,461	4,466	4,472	4,478	4,484	4,490
Scotland	2,578	2,546	2,510	2,474	2,438	2,401	2,365	2,329
Total	14,925	15,084	15,233	15,380	15,527	15,672	15,817	15,960

Step 10.

FirstHealth identified the number of patients and days of care by medical and surgical admission for 2011 provided to the residents of the 4-county service area; Cumberland, Hoke, Robeson, and Scotland counties, **by only FirstHealth Moore Regional Hospital that** excluded patients and days of care related to admissions for chemical dependency (CD), normal newborns, psychiatric, rehabilitation, OB deliveries, neonatology, trauma, open heart, surgical cardiology, neurosurgery, and thoracic surgery. FirstHealth used the 2011 patients and days of care data identified in Steps 8 and 9.

County		2011 Patients	2011 Days of Care	ALOS	% of Patients
Cumberland					
	Surgical	187	626	3.3	50.7%
	Medical	182	734	4.0	49.3%
Hoke					
	Surgical	269	1,085	4.0	17.8%
	Medical	1,245	5,453	4.4	82.2%
Robeson					
	Surgical	410	1,674	4.1	37.6%
	Medical	681	2,775	4.1	62.4%
Scotland					
	Surgical	223	1,055	4.7	35.5%
	Medical	406	1,523	3.8	64.5%
Total					
	Surgical	1,089	4,440	4.1	
	Medical	2,514	10,485	4.2	

Step 11.

FirstHealth multiplied the projected number of admissions by the medical and surgical admission percentages calculated in Step 10 to project the surgical and medical admissions to FirstHealth Moore Regional Hospital from the 4-county service area, excluding patients related to admissions for chemical dependency (CD), normal newborns, psychiatric, rehabilitation, OB deliveries, neonatology, trauma, open heart, surgical cardiology, neurosurgery, and thoracic surgery.

County	2011	2012	2013	2014	2015	2016	2017	2018
Cumberland								
Surgical	187	189	190	191	192	193	193	194
Medical	182	184	185	186	187	188	188	189
Hoke								
Surgical	269	276	283	290	297	304	311	318
Medical	1,245	1,278	1,310	1,343	1,375	1,408	1,440	1,473
Robeson								
Surgical	410	411	411	412	412	413	413	414
Medical	681	682	683	684	685	685	686	687
Scotland								
Surgical	223	220	217	214	211	208	205	201
Medical	406	401	395	390	384	378	372	367
Total								
Surgical	1,089	1,096	1,101	1,107	1,112	1,117	1,122	1,127
Medical	2,514	2,544	2,573	2,602	2,630	2,659	2,687	2,715

Step 12. Surgical Inpatients

FirstHealth projected the number of surgical inpatients that would receive care at FHCH, rather than at FMRH. FirstHealth made the assumption that patients seeking care at FirstHealth are more likely to seek care at a closer FirstHealth hospital, especially if their current physician provides services in Hoke County.

Using the experience of its administrative and outreach teams, FirstHealth assumes that 60.0 percent of FMRH patients from Hoke County (excluding patients from the following services - chemical dependency (CD), normal newborns, psychiatric, rehabilitation, OB deliveries, neonatology, trauma, open heart, surgical cardiology, neurosurgery, and thoracic surgery) who would have travelled to FMRH for care will instead receive care at FHCH; this percentage will ramp-up over a three year period.

FirstHealth also assumes that 40.0 percent of the same medical surgical specialty patients from Cumberland and Robeson counties and 20.0 percent of the same medical surgical specialty patients from Scotland County who would have travelled to FMRH for care will instead receive care at FHCH; again, these percentages will ramp-up over a three year period.

This projected "shift" in existing patients takes into account patient preference and patient acuity. Higher acuity surgical specialties have already been excluded from the need methodology and an additional 40.0 to 80.0 percent of remaining current FMRH patients from the 4-county service area have been identified as not receiving care at FHCH.

	Surgical Patient Shift		
	2015	2016	2017
Cumberland	20.0%	30.0%	40.0%
Hoke	30.0%	45.0%	60.0%
Robeson	20.0%	30.0%	40.0%
Scotland	10.0%	15.0%	20.0%
Total	20.8%	31.3%	41.9%

As the table indicates, FirstHealth projects that in Year 1 approximately 21.0 percent of patients from the non-excluded medical and surgical specialty categories will receive care at FHCH rather than at FMRH. FirstHealth projects that in Year 3 approximately 42.0 percent of patients from the non-excluded medical and surgical specialty categories will receive care at FHCH rather than at FMRH. These percentages clearly allows for patient preference and patients with a higher acuity to remain at FMRH.

The following table highlights the projected number of inpatient surgical cases. FirstHealth multiplied the surgical admissions for 2015 through 2017 projected in Step 11 by the patient shift rate projected in Step 12.

	Surgical Patients		
	2015	2016	2017
Cumberland	38	58	77
Hoke	89	137	187
Robeson	82	124	165
Scotland	21	31	41
Total	231	350	470

The following table highlights the projected number of inpatient surgical days of care.

	Surgical Days of Care		
	2015	2016	2017
Cumberland	129	194	259
Hoke	359	552	753
Robeson	337	505	675
Scotland	100	147	194
Total	924	1,398	1,880

Step 13. Medical Inpatients

FirstHealth projected the number of medical inpatients that would receive care at FHCH, rather than at FMRH. FirstHealth made the assumption that patients seeking care at FirstHealth are more likely to seek care at a closer FirstHealth hospital.

Using the experience of its administrative and outreach teams, FirstHealth assumes that 65.0 percent of FMRH patients from Hoke County (excluding patients from the following services - chemical dependency (CD), normal newborns, psychiatric, rehabilitation, OB deliveries, neonatology, trauma, open heart, surgical cardiology, neurosurgery, and thoracic surgery) who would have travelled to FMRH for care will instead receive care at FHCH; this percentage will ramp-up over a three year period.

FirstHealth also assumes that 45.0 percent of the same medical surgical specialty patients from Cumberland and Robeson counties and 25.0 percent of the same medical surgical specialty patients from Scotland County who would have travelled to FMRH for care will instead receive care at FHCH; again, these percentages will ramp-up over a three year period.

This projected "shift" in existing patients takes into account patient preference and patient acuity. Higher acuity surgical specialties have already been excluded from the need methodology and an additional 35.0 to 75.0 percent of remaining current FMRH patients from the 4-county service area has been identified as not receiving care at FHCH.

	Medical Patient Shift		
	Year 1	Year 2	Year 3
Cumberland	25.0%	35.0%	45.0%
Hoke	35.0%	50.0%	65.0%
Robeson	25.0%	35.0%	45.0%
Scotland	15.0%	20.0%	25.0%
Total	28.8%	40.8%	52.9%

As the table indicates, FirstHealth projects that in Year 1 approximately 29.0 percent of patients from the non-excluded medical and surgical specialty categories will receive care at FHCH. FirstHealth projects that in Year 3 approximately 53.0 percent of patients from the non-excluded medical and surgical specialty categories will receive care at FHCH. This percentage clearly allows for patient preference, including preference for CFVHS's 41-bed Hoke County hospital, and patients with a higher acuity to remain at FMRH or another tertiary hospital.

The following table highlights the projected number on inpatient medical cases.

	Medical Patients		
	2015	2016	2017
Cumberland	47	66	85
Hoke	481	704	936
Robeson	171	240	309
Scotland	58	76	93
Total	757	1,085	1,423

The following table highlights the projected number on inpatient medical days of care.

	Medical Days of Care		
	2015	2016	2017
Cumberland	188	265	341
Hoke	2,108	3,082	4,100
Robeson	697	978	1,259
Scotland	216	284	349
Total	3,210	4,608	6,049

Step 14.

In its approved CON application, Project ID# N-8497-10, page 215, FirstHealth's need methodology projected Hoke County Emergency Department inpatient admissions "shifting" from non-FMRH facilities. FirstHealth assumes a 5.0 percent increase for the 2014 projection and a 1.0 percent annual increase for 2016 and 2017 and then a 50 percent decrease, as the following table shows:

	Total Patients					
	2012	2013	2014	2015	2016	2017
Previous Need	713	734	756			
% Increase				5.0%	1.0%	1.0%
Potential Need				794	802	810
% Decrease				50.0%	50.0%	50.0%
Total Need				397	401	405

Step 15.

FirstHealth calculated the total number of inpatient cases and inpatient days of care by adding the volumes projected in Steps 12, 13, and 14.

	Total Patients		
	2015	2016	2017
Cumberland	85	123	162
Hoke	967	1,242	1,528
Robeson	254	364	474
Scotland	79	107	134
Total	1,385	1,836	2,298

	Total Days of Care		
	2015	2016	2017
Cumberland	317	458	600
Hoke	4,206	5,391	6,627
Robeson	1,034	1,483	1,933
Scotland	316	431	543
Total	5,873	7,763	9,703

Step 16.

In the following table, FirstHealth calculates the daily census and occupancy rate for the 36-bed unit. This results in an occupancy rate of 87.4 percent at the end of Year 3.

	Total Days of Care		
	2015	2016	2017
Total	5,873	7,763	9,703
Days	365	365	365
Daily Census	16.1	21.3	26.6
Beds	36	36	36
Occupancy	44.7%	59.1%	73.8%

Step 16.

In the following table, FirstHealth calculates number of ICU days of care and inpatients. FirstHealth used the medical/surgical ICU days of care as a percentage of total medical/surgical days of care at FirstHealth Moore Regional Hospital (7,058 ICU days of care / 73,181 days of care = 9.6 percent) as the proxy for FHCH.

FirstHealth Richmond Memorial Hospital is similar to the proposed expanded FHCH in that both are located in smaller, more rural counties, and both have a smaller number of acute care beds. FirstHealth Richmond Memorial Hospital has 99 acute care beds, and the proposed expanded FHCH would have 36 acute care beds. The percentage of total medical/surgical days of care at FirstHealth Richmond Memorial Hospital that were medical/surgical ICU days of care is over 14.0 percent. FirstHealth could have used this experience as the basis for its projection of ICU days of care and ICU inpatients.

However, in order to be more conservative in its projections, FirstHealth used the percentage of total medical/surgical days of care at FirstHealth Moore Regional Hospital that were medical/surgical ICU days of care, which was 9.6 percent. ICU patient origin by county is expected to remain consistent with the inpatient origin by county.

	Total ICU Days of Care		
	2015	2016	2017
Total	5,873	7,763	9,703
ICU Rate	9.6%	9.6%	9.6%
Total ICU Days	564	745	932
Days/Year	365	365	365
Daily Census	1.5	2.0	2.6
ICU Beds	4	4	4
Occupancy	38.6%	51.0%	63.8%
ALOS	3.7	3.7	3.7
ICU Patients	152	201	252

Step 17.

FirstHealth calculated the effective market share that FHCH would have in the four counties that make up the service area. The market share of patients was calculated by dividing the number of patients projected to be treated at FHCH in Step 15, by the total number of patients (excluding chemical dependency (CD), normal newborns, psychiatric, and rehabilitation patients and days of care) identified in Step 4 for the service area in FY2011. FirstHealth believes that this is a reasonable means to calculate the effective market share as the calculation does not project an increase in the total number of patients or days of care in the 4-county service area, which results in a “higher” market share than would be expected if overall patients and days of care also increased over the next five years.

	Patient Market Share		
	2015	2016	2017
Cumberland	0.3%	0.4%	0.6%
Hoke	23.4%	29.3%	35.3%
Robeson	1.3%	1.8%	2.4%
Scotland	1.6%	2.3%	2.9%
Total	2.4%	3.2%	4.0%

This table indicates that FirstHealth is conservative in both the number of patients and days of care that it projects to serve in the 4-county service area. The largest effective market share that FirstHealth projects is in Hoke County, where if this CON application is approved, FHCH will operate 47.0 percent of the acute care beds within Hoke County, but only projects an effective market share of approximately 35.0 percent. This means that adding 28 beds to FHCH will not adversely impact Cape Fear Valley's proposed hospital in Hoke County.

Step 18.

Finally, FirstHealth calculated the patient origin that FHCH projects in the first three years of operation. The patient origin was calculated by dividing the number of patients by county by the total number of patients projected for each year. These values were projected in Step 15.

	Total Patients		
	2015	2016	2017
Cumberland	85	123	162
Hoke	967	1,242	1,528
Robeson	254	364	474
Scotland	79	107	134
Total	1,385	1,836	2,298

	Patient Origin		
	2015	2016	2017
Cumberland	6.1%	6.7%	7.0%
Hoke	69.9%	67.6%	66.5%
Robeson	18.3%	19.8%	20.6%
Scotland	5.7%	5.8%	5.8%
Total	100.0%	100.0%	100.0%

Please refer to Exhibit 28 for methodology documents.

IV.2. For each type of medical equipment proposed, provide the annual maximum capacity per unit if the SMFP or the certificate of need regulatory review criteria do NOT provide a standard. Provide all assumptions and the specific methodology used to determine the annual maximum capacity.

Not applicable. FirstHealth does not propose any major medical equipment in this CON application. The only medical equipment proposed in the 36-bed wing is included in Exhibit 42.