Comments on Novant Health Clemmons Outpatient Surgery, LLC's CON Application

submitted by

Surgical Center of Greensboro, LLC

In accordance with N.C. GEN. STAT. § 131E-185(a1)(1), Surgical Center of Greensboro, LLC ("SCG") submits the following comments related to an application to develop an ambulatory surgical facility with two operating rooms and one procedure room in Forsyth County by Novant Health Clemmons Outpatient Surgery, LLC ("NHCOS"). Surgical Center of Greensboro's comments include "*discussion and argument regarding whether, in light of the material contained in the application and other relevant factual material, the application complies with the relevant review criteria, plans and standards*." *See* N.C. GEN. STAT. § 131E-185(a1)(1)(c). In order to facilitate the Agency's review of these comments, SCG has organized its discussion by issue, noting some of the general CON statutory review criteria and specific regulatory criteria and standards creating the non-conformity relative to each issue, as they relate to the following application:

- **Novant Health Clemmons Outpatient Surgery, LLC, Project ID # G-11300-17**

1. The required written statement of the project's plan to assure improved energy efficiency and water conservation does not meet the requirements of Policy GEN-4.

   Section III.4 asks the applicant to demonstrate conformity with the applicable plans in the State Medical Facilities Plan. On pages 47 and 48, NHCOS confirms that all portions of Policy GEN-4 apply to its proposed project. The first portion of Policy GEN-4, for project's like NHCOS's that exceed $2 million, requires applicants to include a written statement with the CON application that describes "the project's plan to assure improved energy efficiency and water conservation." Since the proposed capital cost exceeds $5 million, the applicant is also required by the policy to provide a written plan in the application, and then, if approved, to submit a plan conforming to the Construction Section's rules. According to the Policy, the plan submitted to the Construction Section must be "consistent with the applicant's representation in the written statement" in the CON application. Thus, the plan in the CON application creates the foundation and boundaries for the plan submitted to the Construction Section. In addition, the plan in the CON application is the representation with which the application must remain in material compliance for as long as the facility holds the CON, including under such a condition that the facility were transferred or sold to another owner. Given these factors, the requirement for sufficient documentation in the CON application is warranted.

   The NHCOS application provides no plan for the proposed project related to energy efficiency and water conservation, as required. The application narrative refers to Exhibit 15, which contains the Sustainable Energy Management Plan for Novant Health, which provides information about Novant's goals for energy consumption across the enterprise, but nothing which relates to an actual plan for energy efficiency and water conservation for the proposed project. In fact, based on the data in Exhibit 15, it is clear that Novant's goals are still a work-in-progress. Page 641 of the application shows that despite this plan, not a single one of Novant's 13 hospital facilities met its goal of Energy Star Certification. Notably, none of Novant's ambulatory surgical facilities are listed in the plan, nor is there any evidence that they are

included in the plan, despite the application's statements that this plan will "cover" NHCOS. Finally, page 656 of the application demonstrates that Novant has marked several areas of planning, relating to Policy GEN-4, which need improvement, including some with critical and foundational issues.

Based on the lack of any information in the application regarding the energy efficiency and water conservation plan for this project, as well as the need to ensure ongoing material compliance, **the application has not demonstrated its compliance with Policy GEN-4, and should be found non-conforming with Criteria 1 and 12**.

2. The application's capital costs are not based on reasonable assumptions of costs.

   The capital cost worksheet on page 89 of the application includes several line items that are not part of the architect's certified cost estimate, including $308,235 on line 18. The footnote to this line item states that it is imputed interest, which represents the opportunity cost of using accumulated reserves. While imputed interest may be appropriate for NHCOS' internal cost estimates, it is not a cost that the applicant has or will actually expend for the project. As such, it would be inappropriate for the CON Section to approve the expenditure of these funds, as they will not actually be spent by the applicant. Since these funds will not actually be spent for the project, **the application has failed to demonstrate the need for the proposed capital costs, and should be found non-conforming with Criteria 5 and 12.**

3. The application's pro forma financial statements contain errors.

   The income statement on page 108 projects expenses on the line for professional fees. However, the assumptions following the financial statements (page 113) do not include an explanation of how these fees were determined, and actually states that the fees for the services related to the project "and any other physician professional services will be billed directly to the patient…." Thus, it is unclear why the income statement includes an expense for professional fees.

   The assumptions on page 113 regarding the projected gross revenue for the surgical cases and procedure room cases are identical, except for the language referring to the type of case. However, the gross revenue varies widely across the different payors for surgical cases, while it is identical across all payors for procedure room cases. Thus, while the narrative states that the charges were determined using the same method, this does not appear to be the case and the basis of the charges and their reasonability are therefore unable to be determined.

   Based on these issues, the application fails to demonstrate that the project is based on reasonable estimates of costs and charges, and **it should be found non-conforming with Criterion 5**.

4. The project cannot be developed as proposed.

   The application states that it will be developed on the first floor of a medical office building on the Novant Health Clemmons Medical Center campus. Exhibit 21 includes the exemption letter filed for the medical office building. Although the capital costs include the prorated costs for the shell and upfit of the medical office building, the medical office building Novant proposes is

not exempt from review, per NCGS §131E-184(a)(9). Specifically, the language of that statute provides an exemption:

> *"To develop or acquire a physician office building, regardless of cost, unless a new institutional health service other than defined in G.S. 131E-176(16)(b) is offered or developed in the building."* (emphasis added)

Novant's exemption letter was filed February 2, 2017; the above-referenced application was filed 13 days later, February 15, 2017. Clearly Novant was aware of its intent to develop a new institutional health service—the proposed ambulatory surgical facility—in the proposed medical office building. Since Novant filed an exemption letter for the medical office building, the capital costs for that building are presumably above $2 million. Based on the statute cited above, the medical office building cannot be exempt from review, since the building has not yet been developed, and since Novant's intent is clearly to develop a new institutional health service in the building, beyond the provisions of the statue.

Thus, since it is not exempt from review, Novant must obtain a CON for the entire physician office building it is proposing to develop. Since the total costs for that building are not included in this application, and since no other CON application has been submitted for the non-exempt medical office building, the building that is proposed to house the ASC will not be approved or issued prior to the decision in this application. **As such, the proposed ASC cannot be approved as proposed, and the application should be found non-conforming with Criteria 1, 3, 4, 5, 6, and 12.**

5. The application's fails to demonstrate the need for the proposed project.

The application's utilization projections do not mention or address the potential impact of the Wake Forest Baptist Health – Davie Medical Center ("DMC"), a new replacement hospital in Bermuda Run, Davie County which was approved in 2008 (Project ID # G-8078-08) and is expected to begin offering inpatient services in April 2017 (see Attachment 1). These inpatient services have historically been located in Mocksville, in central Davie County. The new location in Bermuda Run is a six minute drive from NHCOS and Novant Health Clemmons Medical Center ("NHCMC"). According to a press release issued by DMC included in Attachment 1, the top floor of its hospital will be "dedicated to the joint replacement program . . . The new inpatient total joint program brings the expertise of Wake Forest Baptist's faculty and clinicians to Davie County, complementing the existing outpatient surgery and rehabilitation services already offered.

Of note, DMC began offering outpatient surgical services at its Bermuda Run campus with two operating rooms in 2013 and has experienced significant growth over that time. NHCOS's application includes information that demonstrates that DMC's outpatient surgical services have impacted Novant Health facilities since its opening. Exhibit 3, Table 13 demonstrates that DMC's outpatient surgery market share has increased significantly in every ZIP code within NHCOS's service area resulting 6.5 percentage point increase in market share overall from 2012 to 2015 as shown in the excerpted table below.

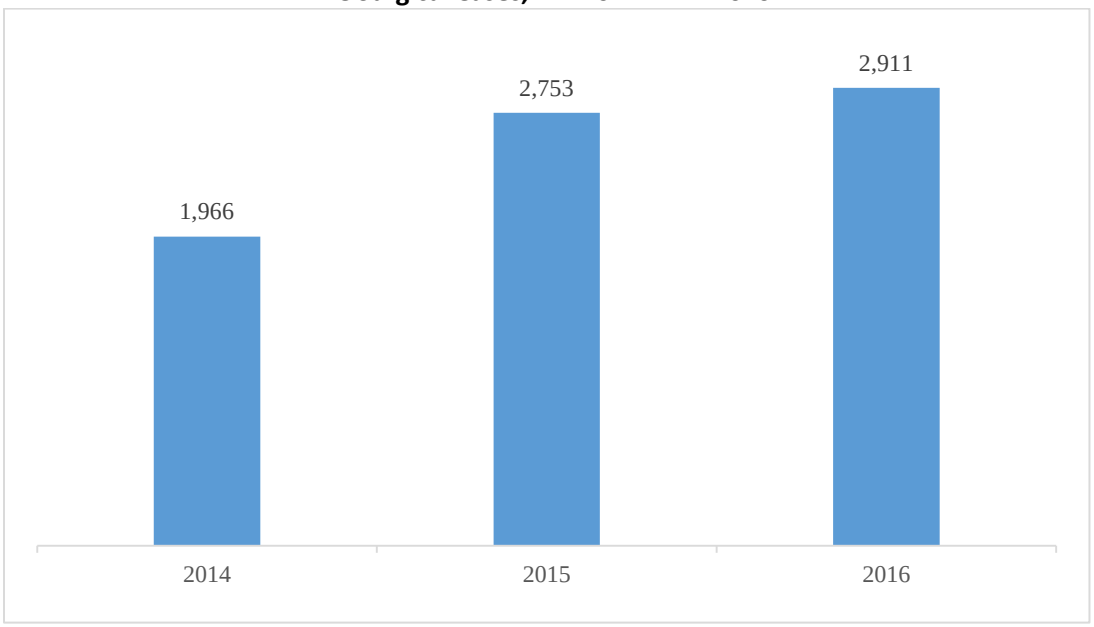
DMC Outpatient Surgical Market Share

	2012	2015	Change
27706-Advance-Davie	3.5%	17.5%	14.0%
27011-Boonville-Yadkin	0.3%	2.3%	2.0%
27012-Clemmons-Forsyth	0.4%	7.6%	7.2%
27014-Mocksville	9.2%	13.2%	4.0%
27018-East Bend-Yadkin	0.4%	4.4%	4.0%
27020-Hamptonville-Yadkin	0.3%	3.1%	2.8%
27023-Lewisville-Forsyth	0.2%	7.1%	6.9%
27028-Mocksville-Davie	9.6%	14.7%	5.1%
27055-Yadkinville-Yadkin	0.6%	5.6%	5.0%
27103-Winston Salem-Forsyth	0.0%	6.9%	6.9%
27127-Winston Salem-Forsyth	0.0%	5.9%	5.9%
28642-Jonesville-Yadkin	0.3%	3.1%	2.8%
Combined ZIP Target Area	**2.0%**	**8.5%**	**6.5%**

Source: NHCOS Application, Exhibit 3, Table 13.

In total, during the first three years of operation, DMC's outpatient surgical volume has increased by almost 1,000 cases or 48%.

DMC Surgical Cases, FFY 2014 – FFY 2016



Source: Davie Medical Center, Project ID # G-11299-17.

In contrast to DMC's experience, NHCMC has provided outpatient surgical services in two operating rooms since 2013 has provided far lower surgical utilization as shown below.

NHCMC Outpatient Surgical Cases

	2013	2014	2015	2016
Outpatient Cases	418	923	1,049	1,083
Surgical Hours	627	1,385	1,574	1,625
ORs Needed	0.3	0.7	0.8	0.9
OR Capacity	2	2	2	2
Surplus/(Deficit)	1.7	1.3	1.2	1.1
% Utilization	13%	30%	34%	35%

Source: NHCOS Application, page 37.

Given DMC's historical growth in market share in NHCMC's identified service area and high utilization, particularly relative to NHCMC, it is reasonable to assume that the imminent development of inpatient services at DMC will have an impact on surgical utilization in the region. Yet, NHCOS's application ignores this factor entirely. In particular, the utilization projections for NHCOS and NHCMC assume that both inpatient and outpatient surgical cases from the defined service area as well as for orthopedics surgery in total at Novant Health Forsyth Medical Center (NHFMC) will continue to grow at historical growth rates. It is unreasonable to assume that these growth rates will continue at their historical levels given the development of inpatient services at DMC and the historical impact of outpatient surgical services at the Bermuda Run location.

In addition to the failure to account for the impact of DMC, NHCOS's utilization projections rely on an unreasonable shift of surgical cases from NHFMC to NHCOS and NHCMC. The application identifies a "potential patient pool" that combines two subsets of patients:

A. All NHFMC inpatient and outpatient surgical cases originating from the identified NHCOS service area (Davie and Yadkin counties as well as four ZIP codes in western Forsyth County) regardless of acuity, service line, or surgeon;

   AND

B. All NHFMC inpatient and outpatient orthopedic surgical cases originating from outside of the identified NHCOS service area regardless of patient origin, acuity, or surgeon.

For inpatient cases, the identified patient pool includes 4,627 cases or 61 percent of total inpatient cases historically performed at NHFMC (7,615 total inpatient NHFMC cases per page 138). NHCOS assumes that 45 percent of the inpatient patient pool will shift to NHCMC. This shift is calculated to result in 2,082 cases to shift from NHFMC to NHCMC which is 27 percent of total inpatient cases historically performed at NHFMC.

For outpatient cases, the identified patient pool includes 5,782 cases or 40 percent of total outpatient cases historically performed at NHFMC (14,440 total outpatient NHFMC cases per page 138). NHCOS assumes that 40 percent of the outpatient patient pool will shift to NHCOS which translates to 16 percent of NHFMC's total historical outpatient cases (16 percent = 40 percent of total NHFMC x 40 percent assumed shift).

NHFMC fails to demonstrate that these shifts of cases are reasonable and supported. As noted above, NHCOS provides no analysis of acuity, service line (for patients from identified service

area), or patient origin (for patients from outside the service area). For example, NHFMC provides no evidence to demonstrate that NHCMC will have physician support for the breadth of inpatient surgical patients that have historically sought care at NHFMC and originate from the identified service area. Similarly, by its definition, the patient pool includes NHFMC orthopedic inpatients and outpatients from areas closer to NHFMC than to NHCOS or NHCMC. For example, the patient pool includes all orthopedic inpatients and outpatients from Winston-Salem. NHCOS fails to demonstrate that it is reasonable to assume that these patients who have historically been served by NHFMC, would choose instead to travel further to Clemmons for care. Similarly, the patient pool includes all orthopedic inpatients and outpatients from Guilford County historically served by NHFMC. NHCOS fails to demonstrate why these patients would drive past NHFMC and other facilities to receive care in Clemmons. Of particular note, the letters of support from orthopedic surgeons and other physicians do not mention a shift of patients from NHFMC to NHCMC or NHCOS. Rather, the letters only reference these surgeons' intention to seek privileges at NHCOS. This substantial shift of a significant portion of entire service line (inpatient and outpatient orthopedic surgery) is not supported by the NHCOS's application, nor is the shift of a substantial portion of all patients from the identified service area.

Notably, outpatient cases historically served at NHCMC are not projected to be impacted by NHCOS. NHCOS does not explain why these patients who have historically sought outpatient surgical care in Clemmons at a hospital-based facility would not be better served at a freestanding facility on the same site, particularly since the hospital is not currently providing inpatient care.

More significantly, the proposed shifts are not supported by NHCMC's historical ability to shift surgical cases from NHFMC. In the 2008 application to develop NHCMC (Project ID # G-8165-08), Novant Health assumed that 55 to 58 percent of outpatient surgical cases historically served by Novant Health for patients originating from four ZIP codes in Davie and Forsyth county would shift to NHCMC (see page 127 of Project ID # G-8165-08 included in Attachment 2). This shift of cases was expected to ramp up over time and result in more than 3,000 outpatient surgical cases by the third year of operation. As noted above, NHCMC has operated since 2013 or more than three full years and provides only ~1,100 outpatient surgical cases or one-third of the amount projected in the original application. NHCOS fails to demonstrate that the currently proposed shifts from NHFMC will be successful given its historic inability to shift cases between the same facilities/locations. In fact, it is unclear whether Novant Health has the ability to shift any additional cases to Clemmons facilities beyond what is currently served at NHCMC. NHCMC currently has more than sufficient capacity in the two existing ORs to serve its patients. As shown below, NHCMC's current utilization indicates a surplus of 1.1 ORs and a utilization rate of 35 percent.

NHCMC Outpatient Surgical Cases

	2013	***2014***	***2015***	***2016***
Outpatient Cases	418	923	1,049	1,083
Surgical Hours	627	1,385	1,574	1,625
ORs Needed	0.3	0.7	0.8	0.9
OR Capacity	2	2	2	2
Surplus/(Deficit)	1.7	1.3	1.2	1.1

% Utilization	13%	30%	34%	35%

Of note, even if all of these cases were shifted from NHCMC to NHCOS where they would be served by a lower cost freestanding ASC at the same location, the proposed NHCOS would not demonstrate the need for the proposed two operating rooms.

Finally, NHCOS assumes that the patient pool will grow at rates consistent with total NHFMC growth rates for inpatient and outpatient cases. NHCOS does not demonstrate why it is reasonable for these patient pool subsets to grow at total NHFMC rates particularly given the historical and projected development of DMC.

Based on these issues, the application fails to demonstrate the need for the project, and **it should be found non-conforming with Criteria 3 and 6**.

Attachment 1

Wake Forest Baptist Opens First New Inpatient Hospital in Davie County in 61 Years

Wake Forest Baptist Medical Center today announced completion of the 50-bed inpatient wing at Wake Forest Baptist Health – Davie Medical Center. When the three-story, 78,220 square foot addition officially opens Monday, April 3, it will consolidate all Davie Medical Center services into one location.

The new $47 million wing's 50 inpatient beds were relocated to Bermuda Run after the Mocksville facility was decommissioned earlier this month.

In addition to the general medical-surgical beds, the new wing offers an inpatient pharmacy, a chapel, a café, rehabilitation facilities, offices for Wake Forest Baptist physicians, therapists and staff, and a history wall that honors the past with key keepsakes, photographs and video memories of the first Davie County Hospital over its more than 60 years of providing care to county residents.

"When we first proposed this new hospital, it was always our intent to have an inpatient wing so people in Davie County could receive care and treatment close to home," said John D. McConnell, M. D., CEO, Wake Forest Baptist Medical Center. "Today marks the fulfillment of that commitment we made to the citizens of Davie County nine years ago."

The new inpatient addition is designed to meet the care needs of Davie County and surrounding communities now and as the region's population grows.

"Davie Medical Center is a hospital for today and the future," said Chad Brown, M.H.A./M.B.A., president, Davie Medical Center. "We have been seeing patients for more than three years in our emergency department, clinics and outpatient departments. Now, that we have inpatient services here, we can deliver a full range of high quality, patient-and family-centered care that serves all ages in our community in one location."

The inpatient services, uniquely fitted to serve the growing community, are located across three floors of the new facility.

Joint replacement program. The top floor is dedicated to the joint replacement program. It offers inpatient hip and knee replacement surgeries. Some of the room designs include lifts to help safely move patients to and from the bed. The lifts also help patients become mobile as soon as possible to assist in their recovery. In addition, the floor features an inpatient rehabilitation gym to aid in recovery.

The new inpatient joint program brings the expertise of Wake Forest Baptist's faculty and clinicians to Davie County, complementing the existing outpatient surgery and rehabilitation services already offered.

ACE unit. The first floor of the inpatient addition houses an acute care for the elderly (ACE) unit. The ACE unit creates a care destination for geriatric patients and leverages Wake Forest Baptist's 25 years of experience in geriatric clinical practice and faculty research.

Wake Forest Baptist Medical Center is home to the J. Paul Sticht Center, an internationally known center for aging. The Davie Medical Center ACE unit will expand capacity at the Sticht Center and bring leading edge geriatric care and research to the bedside at the Davie campus.

The first floor also will have designated medical-surgical beds that allow medical and surgical admissions from Davie Medical Center's emergency department as well as offer an option for those people living nearby to receive care close to home when appropriate.

All patient rooms are private and larger than the former Mocksville hospital rooms, which means family members can sleep close to their loved ones. Each room is equipped with convertible furniture that can be used as a bed, couch or a work station with plugs for electronic devices. There are also small safes in each room so patients and family members can secure items while away from the room.

Inpatient bathrooms feature soft-close, sliding doors to allow safer entry and exit. The showers are step-free to allow handicap access and prevent falls.

New technologies. The **GetWellNetwork** will be available in patient rooms. The interactive video system offers video education, ways to communicate with and recognize hospital staff, television and internet access, on-demand movies and games.

Wake Forest Baptist is the first health system in the region, and one of only two in the state to use this service, which encourages patients and their families to be active participants in their medical care. It supports the Medical Center's commitment to patient- and family-centered care by building relationships with and encouraging collaboration between patients, families and health care teams.

A **Real-time Location System (RTLS)** will be used in the inpatient wing. A RTLS is an indoor GPS linked to small devices worn by staff or tagged to key equipment. The device staff will wear is about the size of a credit card and has up to three "call" buttons on it.

The RTLS is designed to improve the overall patient experience.

The device can be customized by department to maximize staff efficiency and patient visibility, making it easier for personnel to summon a colleague, report a medical problem, contact security or locate equipment.

The system also maintains ideal temperatures in refrigerators and freezers, ensuring the safety and quality of stored items.

History wall. On the lower level there is a café and the history wall. The wall consists of exhibits that depict the start of hospital care in Davie County at the county's first hospital in Mocksville in 1956. The wall also includes a video history with interviews from former health care providers and leaders in the county.

The wall provides insight into how important health care was and is to the community and to the medical center that cares about its community past and present.

There is one historical reminder of the Mocksville hospital that will remain active in the new inpatient wing. The furniture from the Mocksville chapel has been refurbished and the pews, lectern and padded kneelers have been relocated to Davie Medical Center's chapel.

Artwork. Another healing and reflective feature of the new patient wing is the art displayed throughout the building. The artwork was chosen by a community advisory group to reflect the essence of Davie County and the surrounding region.

Twenty different artists, 17 of whom are from Davie County and the surrounding area, provided 58 pieces from oils, pastels, photography and metal sculpture to fiber, watercolors and glass.

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Last Updated: 03-28-2017

Attachment 2

G-8165-08

FMC/Clemmons Medical Center
New Community Hospital
CON Application
Filed July 15, 2008
(Forsyth County)
Volume 1 of 4

Copy

Clemmons Medical Center (CLMC) Summary Utilization Statistics

The following table shows summary utilization statistics for all inpatient, surgical, outpatient, emergency, observation, and ancillary services during the first three years of operation of the proposed Clemmons Medical Center (CLMC).

Clemmons Medical Center: Summary Utilization Statistics

CLMC Projected Utilization First Three Project Years: 4/1/2012-3/31/2015			
	PY 1	**PY 2**	**PY 3**
Discharges	4,737	4,820	4,904
Days (Including ICU)	11,438	12,696	13,994
ALOS	4.39	4.39	4.39
ADC	31.3	34.8	38.3
Proposed Med-Surg and ICU Bed Capacity	50	50	50
Med-Surg Occupancy	62.7%	69.6%	76.7%
Acute Days (no ICU)	10,473	11,624	12,813
Acute Beds (no ICU)	46	46	46
Acute Care Occupancy	62.4%	69.2%	76.3%
ICU Days	965	1,071	1,181
Proposed ICU Bed Capacity	4	4	4
ICU Occupancy	66.1%	73.4%	80.9%
CLMC Projected Outpatient and Ancillary Services Utilization: 4/1/2012-3/31/2015			
Total Discharges/Visits	**PY 1**	**PY 2**	**PY 3**
Inpatient Discharges	4,737	4,820	4,904
Outpatient Visits	13,645	16,629	19,715
Outpatient Visits w.o. Outpt Surg	11,067	13,678	16,379
ED Visits	11,020	13,616	16,300
Proposed ED Trmt Bays/Areas	8	10	12
Observation Days	**PY 1**	**PY 2**	**PY 3**
Total Days	1,167	1,295	1,428
Proposed Observation Bed Capacity	6	6	6
Surgery	**PY 1**	**PY 2**	**PY 3**
Inpatient	885	1,012	1,144
Outpatient - MPH Clemmons	2,578	2,951	3,336
Total Surgery	3,462	3,963	4,480
Proposed Shared OR Capacity	5	5	5
GI Endoscopy	**PY 1**	**PY 2**	**PY 3**
Total	1,279	1,464	1,655
Ancillary Procedures	**PY 1**	**PY 2**	**PY 3**
MRI (mobile)-By Contract with 3rd Party Vendor	1,670	1,945	2,230
CT	8,299	9,647	11,041
Nuclear Medicine	2,023	2,305	2,597
Mammogram	1,982	2,431	2,894
Ultrasound	3,120	3,638	4,173
Other Radiology	15,738	18,067	20,474
Pharmacy Units	450,514	474,025	498,233
Lab Tests	115,880	124,905	134,214

Source: *Note: Project Year 1 = 4/1/2012 – 3/30/2013*

Methodologies Used to Project Future Need

CLMC used two basic methodologies to project future utilization for the proposed project.

1. A Use Rate Methodology

Projected Utilization = (Defined Service Area Population x Use Rate x Market Share) + Other Inmigration

was used to project:

- Acute care inpatient discharges, days, and bed need;
- ICU days and ICU bed need;
- Observation bed days and observation bed need;
- Inpatient and outpatient surgical procedures and shared operating room need;
- GI endoscopy procedures and GI endoscopy procedure room need;
- Outpatient visits; and
- Emergency Department visits and emergency treatment rooms need.

This methodology has been substantiated as a reasonable methodology for projecting future beds, operating rooms, emergency services, outpatient and other hospital services as it was utilized in recently approved CON applications for Brunswick Community Hospital (Project I.D. #O-7767-06), Presbyterian Hospital Mint Hill (Project I.D. #F-7448-06) and FMC-Kernersville (Project I.D. #G-7604-06).

2. Ancillary utilization projections were calculated based upon existing ancillary utilization patterns at existing Novant Health community hospitals. Data from other similarly sized Novant community hospitals at Thomasville Medical Center (TMC), Brunswick Community Hospital (BCH), Presbyterian Hospital Matthews (PHM) and Presbyterian Hospital Huntersville (PHH) were averaged to determine rates and ratios for ancillary services. CLMC assumes that projected ancillary utilization at CLMC will imitate current ancillary utilization patterns at these facilities.

This methodology has been substantiated as a reasonable methodology for projecting future beds, operating rooms, emergency services, outpatient and other hospital services as it was utilized in recently approved CON applications for Brunswick Community Hospital (Project I.D. #O-7767-06), Presbyterian Hospital Mint Hill (Project I.D. #F-7448-06) and FMC-Kernersville (Project I.D. #G-7604-06).

Assumptions Consistent Throughout Projections

CLMC utilized the following assumptions throughout the projections.

Zip Code Population Projections

The proposed Clemmons service area consists of two zip codes in Forsyth County and three zip codes in Davie County. Population growth in the defined service area is expected to continue into the next decade. Therefore, population is expected to grow at the same rate through 2015 as reflected in the following table.

Population of Defined Service Area

MPH Clemmons Service Area - Projected Population Growth Rate										
Zip Code	Town	2008	2009	2010	2011	2012	2013	2014	2015	CAGR
27006	Advance	13384	13,693	14,010	14,333	14,664	15003	15,350	15,704	1.023
27012	Clemmons	25089	25,478	25,873	26,275	26,682	27096	27,516	27,943	1.016
27023	Lewisville	11039	11,188	11,340	11,494	11,649	11807	11,967	12,129	1.014
27028	Mocksville	27666	28,161	28,665	29,178	29,700	30232	30,773	31,324	1.018
Total		77,178	78,521	79,888	81,280	82,696	84,138	85,606	87,100	1.017

Source: Claritas;
Note: Zip code 27014 is a PO Box location in Cooleemee which is in Davie County geographically located within the Mocksville zip code, 27028

Other Inmigration Assumption

While not part of the defined service area, CLMC recognizes that patients from other North Carolina counties may choose to travel across service areas to receive services at CLMC, or may end up having to seek hospital services while in the service area for business or pleasure. As a result, 10% of the total projected utilization in each of the project years has been allocated to the category of "Other Inmigration[39]." Other inmigration is expected to come from surrounding zip codes in Forsyth County and other surrounding counties, such as Iredell and Yadkin. In calendar year 2007 residents of Iredell and Yadkin Counties represented a substantial percentage of both FMC and MPH patient origin as reflected in the 2008 Annual Hospital Licensure Renewal Applications. All inmigration to CLMC is assumed to be a shift of patients to CLMC from FMC and MPH. This estimate of inmigration is consistent with other Novant Health CON Applications for new community hospitals based upon zip code level data approved by the CON Section. See e.g., Agency Findings for Presbyterian Hospital Mint Hill (Project I.D. #F-7448-06) (December 2006).

Clemmons Medical Center Utilization Projections

1. Projected Acute Care Inpatient Discharges, Days, and Bed Need

Projected acute care inpatient discharges, days, and bed need were determined as follows:

Three Year Average Acute Care Inpatient Discharge Use Rate

As previously discussed, the proposed CLMC will be a community hospital without obstetric services[40]; therefore, obstetrics, cardiac surgery and other tertiary level services will not be provided. To determine total medical/surgical discharges and patient days at CLMC, zip code level inpatient cases and inpatient days and zip code level acuity adjusted inpatient cases and inpatient days were determined using the Solucient/Thomson database. The term, "acuity adjusted" as used in this application reflects all exclusions referenced in the following table, made from the Solucient/Thomson database of discharges and patient days from the defined service area.

[39] "Other Inmigration" reflects utilization of a facility over and above the historically defined "Primary and Secondary Service Area." A facility's primary and secondary service area is customarily defined as the markets from which 80% to 90% of patient days or utilization originate. This also is known as those markets upon which the hospital depends for its success. Therefore, "Other Inmigration" is historically between 10% to 20% of total utilization. Consistent with the approach taken in the (approved) Presbyterian Hospital Mint Hill application and FMC Kernersville Medical Center, CLMC has used 10% inmigration in this application.

[40] FMC and NCBH have a long standing agreement for the provision of jointly-sponsored obstetrical services on the FMC campus. In addition, the new Women's Pavilion at FMC will be open in February 2008. NCBH also offers specialty pediatric services at Brenner Children's Hospital on a dedicated floor(s) in the NCBH hospital facility.

Solucient/Thomson Database Exclusions
CY 2003-2006

Medical Surgical Exclusions
Mental Health and Drug Abuse DRGs (424-433 and 521-523)
Rehab (462)
Normal Newborns (391)
Delivery DRGs (370-375)
NICU (385-390)
Diagnostic Cardiac Cath (124,125)
DRGs with FY2005 Relative Weight > – 2.0

Source:

CLMC analyzed FFY 2005 – 2007 (10/1/05-9/30/07) zip code level Solucient/Thomson data to determine the acute care inpatient discharge use rate per 1,000 population. The following table shows the three year average (FFY 2005-2007) acute care inpatient discharge use rate per 1,000 population for total patient days in the combined five zip code service area and acuity adjusted patient days in the combined five zip code service area.

Three Year Average Acute Care Inpatient Discharge Use Rate

	2005	2006	2007
Population	71,602	73,000	74,832
Total Discharges - Combined Service Area	6,949	6,975	6,938
Use Rates	97.05	95.55	92.71
3 Yr Average			**95.10**
Population	71,602	73,000	74,832
Total Acuity Adjusted Discharges – Combined Service Area	4,555	4,924	4,908
Discharge Use Rate	63.62	67.45	65.59
3 Yr Average			65.55
Percent Acuity Adjusted Discharges of Total Discharges	65.5%	70.6%	70.7%

Source:
Note: the three year period includes: FFY 2005- FFY 2007

The three year average acute care inpatient discharge use rate, for total discharges, for the combined zip code was used to determine total acute care inpatient discharges for the defined service area for the first three years of the proposed project. The combined service area use rate was used because several zip codes in the service area had limited admissions and using a larger population base results in a more realistic discharge rate with less fluctuation. The previous table also shows that acuity adjusted discharges represented over 70% of total discharges in FFY 2007.

Projected Acute Care Inpatient Market Share in Defined Service Area

Using the Solucient/Thomson FFY 2005 - 2007 inpatient discharge data, CLMC calculated the Novant acute care inpatient market share for each zip code in the defined service area. The following table shows actual Novant acute care inpatient discharges, total acute care inpatient discharges, and Novant acute care inpatient market share for each of the five zip codes in the defined service area and the combined market share for the five zip code service area.

Novant Inpatient Market Share in Defined Service Area
FFY 2005 - 2007

Hospital	2005		2006		2007	
	Cases	Mkt Share	Cases	Mkt Share	Cases	Mkt Share
27006 - Davie						
Forsyth Memorial Hospital	847	69.0%	794	64.1%	768	63.8%
Medical Park Hospital	43	3.5%	42	3.4%	27	2.2%
Total 27006	1,228		1,238		1,204	
27012 - Forsyth						
Forsyth Memorial Hospital	1,340	68.1%	1,421	70.3%	1,455	69.7%
Medical Park Hospital	74	3.8%	62	3.1%	86	4.1%
Total 27012	1,967		2,022		2,089	
27023 - Forsyth						
Forsyth Memorial Hospital	575	69.9%	553	70.6%	557	68.3%
Medical Park Hospital	39	4.7%	24	3.1%	37	4.5%
Total 27023	823		783		815	
28014 - Davie						
Forsyth Memorial Hospital	63	25.4%	49	26.3%	68	29.6%
Medical Park Hospital	1	0.4%	1	0.5%	-	0.0%
Total 27014	248		186		230	
27028 - Davie						
Forsyth Memorial Hospital	1,176	43.8%	1,164	42.4%	1,106	42.5%
Medical Park Hospital	67	2.5%	48	1.7%	57	2.2%
Total 27028	2,683		2,746		2,600	
Total Novant	4,225	61%	4,158	60%	4,161	60%
Total All 5 Zip Codes	6,949		6,975		6,938	

Source: Solucient/Thomson; Exhibit 5, Table 7

The market share for the combined zip code service area was used to determine acute care inpatient discharges by zip code in the defined service area for the first three years of the proposed project.

Projected Acute Care Inpatient Discharges in Defined Service Area

CLMC projected total acute care inpatient discharges for the first three years of operation for the combined service area using the following methodology:

Projected Acute Care Inpatient Discharges = (Defined Service Area Population x Three Year Average Acute Care Inpatient Discharge Use Rate x Market Share)

The resulting total projected acute care inpatient discharges for the CLMC service area are reflected in the following table.

Total Projected Acute Care Inpatient Discharges

	2012	2013	2014	2015
Total CLMC Service Area Population	82,696	84,138	85,606	87,100
Service Area Non-Acuity Adjusted Inpatient Discharge Use Rate	95.10	95.10	95.10	95.10
Projected Inpatient Cases Total Service Area	7,865	8,002	8,141	8,284
Novant Market Share	60%	60%	60%	60%
Projected Total Novant Service Area Inpatients	4,717	4,799	4,883	4,968

Source: Exhibit 5, Table 6

CLMC is projected to be operational April, 2012. CLMC converted projected discharges to project years in the following table.

Total Projected Acute Care Inpatient Discharges
April 2012 – March 2015

PY 1 Apr12-Mar13	PY2 Apr13-Mar14	PY3 Apr14-Mar15
4,737	4,820	4,904

Source:

Projected CLMC Acuity Adusted Inpatient Discharges

CLMC assumed 65 % of total projected acute care inpatient discharges would be appropriate for a proposed community hospital based upon historical Solucient/Thomson data. The following table reflects acuity adjusted discharges for the combined five zip code service area as a percent of total discharges.

Three Year Acute Care Inpatient Discharges

	2005	2006	2007
Total Discharges – Combined Service Area	6,949	6,975	6,938
Total Acuity Adjusted Discharges – Combined Service Area	4,555	4,924	4,908
Percent Acuity Adjusted Discharges of Total Discharges	65.5%	70.6%	70.1%

Source:
Note: the three year period includes: FFY 2005- FFY 2007

As shown in the previous table, approximately 70 % of total discharges fit the CLMC definition of acuity adjusted discharges without obstetrical services.

CLMC assumed that volume for the new hospital would come from existing Novant market share and that market share would remain constant for the first three years of operation of the new community hospital. CLMC also assumed that the proposed volume shift from FMC and MPH would occur gradually over the first three years of operation, shifting 55% in Project Year 1, 60% in Project Year 2, and 65% in Project Year 3 as reflected in the following table.

CLMC Projected Discharges
April 2012 – March 2015

	PY 1 Apr12-Mar13	PY2 Apr13-Mar14	PY3 Apr14-Mar15
Total Projected Service Area Discharges	4,737	4,820	4,904
Percent Shifted from Existing Facilities (70% Acuity Less than 2.0 = Appropriate for Shifting;)	55%	60%	65%
Clemmons Medical Center Inpatient Discharges	2,606	2,892	3,188

Source

Total projected acute care inpatient discharges reflected in the previous table for April 2012 - March 2015 were used to project total acute care inpatient days for CLMC.

Projected Acute Care Inpatient Days and Bed Need in Defined Service Area

FFY 2007 Solucient/Thomson Novant acuity adjusted acute care inpatient discharge and inpatient day data specific to the defined zip code service area was used to determine an acuity adjusted average length of stay

of 4.39 days for the service area. Actual data is included in [illegible]. Annual total acute care acuity-adjusted inpatient discharges were multiplied by average length of stay to project acute care bed need in each of the three project years.

Projected Acute Care Inpatient Days and Bed Need

	PY 1 Apr12 – Mar13	PY 2 Apr13 – Mar14	PY 3 Apr14 – Mar15
Total Acute Care Inpatient Discharges	2,606	2,892	3,188
Average Length of Stay	4.39	4.39	4.39
Total Inpatient Days	11,438	12,696	13,994
ADC	31.3	34.8	38.3
Acute Care Bed Need @ 66.7% Occupancy	47.0	52.1	57.5
Proposed Total Acute Care Beds	50.0	50.0	50.0
Occupancy @ 50 Acute Care Beds	62.7%	69.6%	76.7%

Source: [illegible]

The previous table reflects projected acute care bed need based upon the State Medical Facilities Plan Acute Care Bed Need Methodology planning occupancy target of 66.7% for facilities with an average daily census less than 100 patients. The application of the state's SMFP new acute bed need method results in an acute care bed need at CLMC of 57 acute care beds in 2015. The proposed 50 acute care bed hospital is projected to achieve an occupancy level of 76.7% in 2015.

2. Projected ICU Days and Bed Need

Projected ICU beds were determined using total projected inpatient days and FFY 2007 ICU utilization data from North Carolina hospitals. CLMC reviewed historical ICU utilization for all hospitals in North Carolina reporting ICU utilization. This data is included in [illegible]. ICU patient days as a percent of Total Acute Inpatient Patient Days (less neonatal days) for all North Carolina hospital reporting ICU data averaged 13.1% in FFY 2007, well over the percentage used to project CLMC ICU days. The range for ICU days as a percent of total days for all North Carolina hospitals is 30% at the high end and 3.4% at the low end. The same data reflect a median value for ICU patient day utilization as a percent of Total Patient Days (less neonatal days) of 11.0%.

Based upon the total North Carolina ICU database, CLMC ICU days were projected assuming that 8.4% of total patient days would be ICU days. This percent represents the average ICU days as a percent of total days for North Carolina hospitals in the lower 50% ranking of ICU days as a percent of total days as reflected in [illegible].

For community hospitals with total patient days in a range similar to the projected patient days for CLMC, the percent of total days that were ICU days in FFY 2007 was 11.3%. Therefore, the CLMC projected ICU days reflects a conservative estimate of total days. CLMC elected to be conservative as the proposed satellite hospital is projected to offer a full-service suburban community hospital level of care (based on DRG acuity weights of less than 2.0) for residents of the Clemmons service area. The following table shows projected ICU patient days and the resulting ICU bed need for CLMC.

CLMC
Projected ICU Patient Days and Bed Need

	PY 1 Apr12 – Mar13	PY 2 Apr13 – Mar14	PY 3 Apr14 – Mar15
Total Inpatient Days	11,438	12,696	13,994
Projected ICU Days (8.4%)	965	1,071	1,181
Average Daily Census	2.6	2.9	3.2
ICU Bed Need @ 60% Occupancy	4.4	4.9	5.4
Occupancy @ 4 ICU Beds	66.1%	73.4%	80.9%

Source:

The previous table reflects projected ICU patient days and ICU bed need based upon the CON Criteria And Standards ICU performance standard of 60% for facilities with small ICUs, which results in a need at CLMC of 4 ICU beds in PY 3 (April 2014 – March 2015). The proposed 4 bed ICU unit is projected to achieve an occupancy level of 80.9% in PY 3.

3. Projected Observation Patient Days and Bed Need

CLMC reviewed historical utilization of observation beds and days for all hospitals in North Carolina reporting observation days in the 2008 Hospital Licensure Renewal Application. This data is included in . Utilization of observation days was varied across hospital sizes and services. However, at hospitals with designated observation units, the mean ratio of acute inpatient days to observation days was 1:14.3, the median ratio was 1:10.3, and the data was bi-modal with modes at 1:9.8 and 1:9.0 acute care days. CLMC used 9.8 acute care days to one observation day to project future observation bed need at CLMC.

Furthermore, the FFY 2007 observation day utilization data from BCH, TMC, PHM and PHH reflect ratio of 9.0 acute care days to one observation day. The average of these four facilities is a reasonable assumption consistent with previously approved CON applications. However, CLCM utilized the more conservative ratio, 9.8 acute care days per 1 observation day based upon the review of 2008 LRAs to project observation bed need at CLMC. The following table shows projected observation patient days and the resulting observation bed need.

CLMC
Projected Observation Patient Days and Bed Need

	PY 1 Apr12 – Mar13	PY 2 Apr13 – Mar14	PY 3 Apr14 – Mar15
Total Inpatient Days	11,438	12,696	13,994
Projected Observation Patient Days (Ratio = 1:9.8)	1,167	1,295	1,428
Average Daily Census	3.2	3.5	3.9
Observation Bed Need @ 66.7% Occupancy	5	5	6

Source:
Note: Observation Bed Need calculation = 3.9 ADC/66.7% target occ rate = 5.8 beds needed

The previous table reflects projected observation patient days and bed need based upon the *State Medical Facilities Plan* Acute Care Bed Need Methodology planning occupancy target of 66.7% for facilities with an average daily census less than 100 patients, which results in a need for 6 observation beds at CLMC in PY 3 (April 2014 – March 2015).

4. Projected Surgical Cases and Shared Operating Room Need

Projected surgical cases and shared operating room need were determined as follows:

2007 Inpatient and Outpatient Surgical Use Rates Forsyth and Davie County

Inpatient and outpatient surgical cases from Forsyth and Davie County were aggregated from the 2008 Hospital Licensure Renewal Applications and the 2008 Freestanding Ambulatory Surgery Center Annual Licensure Renewal Applications. County population estimates for 2007 were obtained from the North Carolina Office of State Demographics[41]. Inpatient and outpatient surgical use rates for 2007 were calculated for Forsyth and Davie Counties, respectively, and are shown in the following table.

2007 Inpatient and Outpatient Surgical Use Rates

Zip Code	City	County	Inpatient Surgical Use Rate	Outpatient Surgical Use Rate
27006	Advance	Davie	32.5	77.73
27012	Clemmons	Forsyth	32.98	67.54
27023	Lewisville	Forsyth	32.98	67.54
27028	Mocksville	Davie	32.5	77.73

Source:

Inpatient Surgical use rate were within a narrow range for the CLMC proposed service area zip codes. However, outpatient surgical use rates for the CLMC proposed service area zip codes varied significantly between Forsyth and Davie County zip codes in 2007. Use rate variations reflect different surgical practice patterns in the two counties and may reflect a lack of local access to the full continuum of outpatient surgical services. The county specific surgical use rate for each zip code was used to determine total inpatient and outpatient surgery in the defined service area for the first three years of the proposed project.

Projected Surgical Market Share in the Defined Service Area

Using FFY 2007 inpatient and outpatient surgical case data from 2008 Hospital Licensure Renewal Application, CLMC calculated the Novant surgical market share for each county. Data is included in . The following table shows actual Novant inpatient and outpatient surgical cases, total inpatient and outpatient surgical cases, and Novant market share for each of the five zip codes in the defined service area.

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Novant Surgical Market Share in the Defined Service Area: FFY 2007

Zip Code	County	Novant Surgical Cases	Total Surgical Cases	Novant Market Share
Inpatient				
27006	Advance	243	721	57.6%
27012	Clemmons	536	799	67.1%
27023	Lewisville	230	342	67.1%
27028	Mocksville	511	887	57.6%
Outpatient				
27006	Advance	555	1007	55.2%
27012	Clemmons	944	1636	57.7%
27023	Lewisville	405	701	57.7%
27028	Mocksville	1170	2121	55.2%

Source: Solucient/Thomson;

CLMC also assumed that the proposed market shift from FMC and MPH in Winston-Salem will occur gradually over the first three years of CLMC operation, realizing 70% of projected market share in Project Year 1, 85% in Project Year 2, and 100% in Project Year 3. The proposed market share shift from FMC and MPH to CLMC is reflected in the following table.

Inpatient and Outpatient Market Share Shift
From FMC and MPH to CLMC

NHTR Mkt Share	2007	Percent Shift	PY 1 Apr12 – Mar13	PY 2 Apr13 – Mar14	PY 3 Apr14 – Mar15
Davie Inpatient	57.6%	59%	80%	90%	100%
Davie Outpatient	55.2%	85%	80%	90%	100%
Forsyth Inpatient	67.1%	59%	80%	90%	100%
Forsyth Outpatient	57.7%	85%	80%	90%	100%

Source: Solucient/Thomson;

The projected market share for each zip code was used to determine projected inpatient and outpatient surgical cases by zip code in the defined service area for the first three years of the proposed project.

Projected Surgical Cases in Defined Service Area

CLMC projected surgical utilization for the first three years of operation using the following methodology:

Projected Inpatient Surgical Cases = (Defined Service Area Population x Inpatient Surgical Use Rate x Market Share) + "Other Inmigration"

AND

Projected Outpatient Surgical Cases = (Defined Service Area Population x Outpatient Surgical Use Rate x Market Share) + "Other Inmigration"

CLMC projected surgical cases by zip code are reflected in the following table. Projected inmigration and total surgical cases also are included.

CLMC Projected Surgical Cases
Project Years 1 – 3

Inpatient	Town	County	PY 1 Apr12 – Mar13	PY 2 Apr13 – Mar14	PY 3 Apr14 – Mar15
27006	Advance	Davie	130	150	171
27012	Clemmons	Forsyth	280	320	361
27023	Lewisville	Forsyth	122	139	157
27028	Mocksville	Davie	264	302	342
Inmigration 10%			88	101	114
Total Inpatient			885	1012	1144
Outpatient	**Town**		**PY 1 Apr12 – Mar13**	**PY 2 Apr13 – Mar14**	**PY 3 Apr14 – Mar15**
27006	Advance	Davie	430	495	563
27012	Clemmons	Forsyth	710	811	915
27023	Lewisville	Forsyth	310	353	398
27028	Mocksville	Davie	870	996	1127
Inmigration 10%			258	295	334
Total Outpatient			2578	2951	3336

Source:

Total projected surgical cases reflected in the previous table were used to project shared operating rooms needed for CLMC.

Projected Shared Operating Room Need in the Defined Service Area

Projected inpatient and outpatient surgical cases were used to project shared operating rooms needed at CLMC using the case weighting and operating room capacity assumptions used in the State Medical Facilities Plan Operating Room need methodology. The following table reflects the operating rooms needed.

Projected Shared Operating Room Need at CLMC
Project Years 1-2-3

	PY 1 Apr12 – Mar13	PY 2 Apr13 – Mar14	PY 3 Apr14 – Mar15
Total Inpatient Surgical Cases	885	1,012	1,144
Total Outpatient Surgical Cases	2,578	2,951	3,336
Weighted Procedures	6,521	7,463	8,437
OR Need @ Planning Capacity	3.5	4.0	4.51
OR Need Upon Rounding	4	4	5

Source:

The previous table shows projected inpatient and outpatient surgical cases and the resulting shared operating rooms needed based upon the State Medical Facilities Plan Surgical Operating Room Need Methodology, inpatient surgical case weighting of 3.0 hours per case, outpatient surgical case weighting of 1.5 hours per case, and a planning capacity target of 1,872 operating hours per year, which results in a need at CLMC for 5 shared surgical operating rooms in 2015.

Surgery market volume shift for years one and two were projected slightly less as the facility is new and time is allowed for the volume to grow. The following factors were considered important to the determination of the percent of market volume projected to shift from the zip code service area.

- Surgical scheduling for all NTR surgical facilities is centralized and surgical administration works with physicians and patients to maximize utilization of surgical resources.
- CLMC is closer to all areas of each of the five zip codes than existing NHTR Winston Salem facilities as reflected in [illegible] and [illegible];
- There currently are four NMG-Forsyth employed practices in the defined service area: Medical Associates of Davie/Mocksville-27028 & Medical Associates of Davie/Hillsdale-27006 (7 MDs, 5 extenders); Clemmons Family Practice/Clemmons-27012 (3 MDs, 2 extenders), Family Medical Associates of Lewisville/Lewisville-27023 (5 MDs); and West Forsyth Family Medicine/Clemmons-27012 (1 MD, 2 extenders); a total of 28 medical providers with established practices and satisfied patients;
- These established physician practices and other nearby NMG practices combined have existing doctor-patient relationships with 45,200 patients that reside in the CLMC 5-Zip Code service area for the most recent 12-month period (June 1, 2007 – May 31, 2008). NMG patient visits during that same time period for the these residents of Clemmons, Lewisville, and Davie County were over 150,000;
- Additional physician offices with easier access will be developed in the future on the CLMC campus;
- Congestion and traffic on I-40 into Winston Salem will increase;
- CLMC offers a choice for surgical services closer to home;
- The proposed location of CLMC adjacent to I-40 and the Harper Rd. interchange, just two miles from the Davie County border, will result in ease of access to the existing population in the defined zip code service area;
- Some patients will continue to seek care at other existing surgical facilities, therefore 100% of the demand for services in the five zip codes will not shift to CLMC;
- Based upon an analysis of both acuity-adjusted inpatient surgery as a percent of total surgery at FMC and MPH and as a percent of total surgery for the service area at FMC and MPH, 65% to 70% of total surgery performed at FMC and MPH is appropriate for the proposed surgical services program at CLMC.

5. Projected GI Endoscopy Procedures and GI Endoscopy Procedure Room Need

Projected GI endoscopy cases, cases per procedure, and GI endoscopy procedure room need were determined as follows:

2007 GI Endoscopy Use Rate Forsyth and Davie County

GI endoscopy cases from Forsyth and Davie County were aggregated from the 2008 Hospital Licensure Renewal Applications and the 2008 Freestanding Ambulatory Surgery Center Annual Licensure Renewal Applications. County population estimates for 2008 were obtained from the North Carolina Office of State Demographics[42]. The GI endoscopy use rate per 1,000 population for 2007 was calculated for Forsyth and Davie County, respectively, and is reflected in the following table.

42 [illegible]

2007 GI Endoscopy Use Rates: CLMC Service Area

Zip Code	City	County	GI Endoscopy Use Rate
27006	Advance	Davie	59.15
27012	Clemmons	Forsyth	59.52
27023	Lewisville	Forsyth	59.52
27028	Mocksville	Davie	59.15

Source:

GI endoscopy utilization varied slightly between Forsyth and Davie Counties in 2007. Use rate variations reflect different medical practice patterns in the two counties. Also of note is that existing FMC-affiliated gastroenterology practices periodically offer GI endoscopy services in Yadkin & Davie Counties. The county specific GI endoscopy use rate was used to determine total GI endoscopy cases by zip code in the defined service area for the first three years of the proposed project. Total GI endoscopy cases projected in the defined service area are reflected in the following table.

Projected GI Endoscopy Cases

Zip	Town	County	PY 1 Apr12-Mar13	PY2 Apr13-Mar14	PY3 Apr14-Mar15
27006	Advance	Davie	872	893	913
27012	Clemmons	Forsyth	1,594	1,619	1,644
27023	Lewisville	Forsyth	696	705	715
27028	Mocksville	Davie	1,765	1,796	1,828
Total Cases			4,927	5,013	5,100

NOTE: Projected Endoscopy Volume is Based upon County Use Rate and Converted to Project Years
Source:

Projected GI Endoscopy Novant Market Share in the Defined Service Area

Using 2007 GI endoscopy case data from the hospital licensure renewal applications, CLMC calculated the Novant market share for both Forsyth and Davie County in the defined CLMC service area. Data is included in and is reflected in the following table.

Novant Current and Projected GI Endoscopy Market Share

County	2007	Projected Market Share Increase	Projected Market Share
Davie	17.0%	15.0%	32.0%
Forsyth	22.1%	15.0%	37.1%

Source:

CLMC GI endoscopy projections reflect an increase in market share to reflect a percent market share increase as shown in the previous table. Currently the only GI endoscopy procedure room in the service area is located in Mocksville. Projected GI endoscopy volume in the service area can justify 4.4 additional GI endoscopy rooms in the future based population growth and upon 1,500 procedures annually per room, the State required performance standard for additional GI endoscopy rooms, as shown in the following table.

CLMC Service Area
Projected GI Endoscopy Procedure Rooms Needed

Zip	Town	County	PY 1 Apr12-Mar13	PY2 Apr13-Mar14	PY3 Apr14-Mar15
27006	Advance	Davie	872	893	913
27012	Clemmons	Forsyth	1,594	1,619	1,644
27023	Lewisville	Forsyth	696	705	715
27028	Mocksville	Davie	1,765	1,796	1,828
Total Cases			4,927	5,013	5,100
Procedures = Cases x 1.29			6,356	6,466	6,579
GI Endoscopy Rooms at 1500 Procedures Each			4.2	4.3	4.4

Source:

CLMC also assumed that the proposed market shift, 85% of total volume currently at FMC, will occur gradually over the first three years of operation, realizing 80% of projected market share in Project Year 1, 90% in Project Year 2, and 100% in Project Year 3.

Projected GI Endoscopy Cases in Defined Service Area

CLMC projected GI endoscopy cases for the first three years of operation using the following methodology:

Projected GI Endoscopy Cases = (Defined Service Area Population x GI Endoscopy Use Rate x Market Share) + "Other Inmigration"

CLMC projected GI Endoscopy Cases by zip code are reflected in the following table. Projected "Other Inmigration" and total GI endoscopy cases also are included.

CLMC Projected GI Endoscopy Cases
Project Years 1 – 3

Zip	Town	County	PY 1 Apr12-Mar13	PY2 Apr13-Mar14	PY3 Apr14-Mar15
27006	Advance	Davie	190	219	248
27012	Clemmons	Forsyth	402	459	518
27023	Lewisville	Forsyth	175	200	225
27028	Mocksville	Davie	384	440	497
Inmigration 10%			128	146	166
Total GI Endo Room Cases			1,279	1,464	1,655

Source:

Total projected GI endoscopy cases reflected in the previous table for April 2012 – March 2015 were used to project GI endoscopy procedures and GI endoscopy procedure rooms needed for CLMC.

Projected GI Endoscopy Procedures and GI Endoscopy Procedure Room Need in the Defined Service Area

CLMC reviewed 2008 Hospital Licensure Renewal Application GI endoscopy data, included in , to determine that 6.1% of endoscopy cases in GI endoscopy rooms are for bronchoscopy and other non-GI endoscopy procedures and that 1.29 GI endoscopy procedures are performed per endoscopy case at existing Novant Health community hospitals. Projected GI endoscopy cases were adjusted to delete

non-GI endoscopy procedures and were then multiplied by average 1.29 procedures per case to determine projected GI endoscopy procedures and GI endoscopy procedure rooms needed at CLMC as shown in the following table.

Projected GI Endoscopy Cases
Project Years 1 – 3

Zip	PY 1 Apr12-Mar13	PY2 Apr13-Mar14	PY3 Apr14-Mar15
Total CLMC Projected GI Endo Room Cases	1,279	1,464	1,655
Total GI Endo Cases – Total Cases minus 6.1 % Non GI Endo Cases	1,201	1,375	1,554
Total Procedures - GI Only Procedures x 1.29 Procedures per Case	1,546	1,770	2,000
GI Endo Rooms Needed @ 1500	1.0	1.2	1.3

Source:

The previous table reflects total GI endoscopy procedures, and GI endoscopy procedure room need based upon CON Criteria and Standards GI Endoscopy planning standard of 1,500 procedures per room, which results in a need at CLMC for 1 GI endoscopy procedure room in 2015.

6. *Projected Hospital Outpatient Visits*

Projected hospital outpatient visits were determined as follows:

2006 North Carolina Hospital Outpatient Visit Use Rate

CLMC used the North Carolina Hospital Outpatient Visit Use Rate for community hospitals defined by the American Hospital Association (AHA) [43] to project CLMC outpatient visits. Data compiled from the AHA Annual Survey are used to calculate state specific utilization rates. This rate includes emergency visits but not outpatient surgery.

The 2006 North Carolina Hospital Outpatient Visit Use Rate, adjusted to remove emergency visits, was 150.1 visits per 1,000 population as reflected in . This is the most current outpatient visit rate that is publicly available. CLMC used the 2005 North Carolina Hospital Outpatient Visit Use Rate to determine total outpatient visits and NHTR market share by zip code in the defined service area for the first three years of the proposed project. This methodology is the same methodology used to project outpatient visits for Presbyterian Hospital Mint Hill, previously approved by the CON Section.

Current Outpatient Visits and Market Share in the Defined Service Area

Using calendar year outpatient visit data from the NHTR internal Trendstar database, CLMC calculated the NHTR market share for each zip code in the defined service area. Relevant data is included in . The following table shows NHTR outpatient visits, total outpatient visits, and NHTR market share for zip codes in the defined service area.

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Novant Health Hospital Outpatient Market Share in the Defined Service Area
April 2012 – March 2015

Zip Code	County	NH Winston Salem Outpatient Visits	Total Outpatient Visits	NH Winston Salem Market Share
27006	Davie	3,396	19,442	17.5%
27012	Forsyth	6,012	36,350	16.5%
27023	Forsyth	2,651	15,580	17.0%
27028 (Includes 28014 Volume)	Davie	5,382	40,950	13.1%

Source:

Market Volume Shift and Market Share Assumptions

The following assumptions related to the percent market volume shift from FMC and MPH in Winston-Salem to CLMC in Clemmons and resulting market share for the proposed CLMC are used in the projections. The following percent market volume shift was used to project outpatient visit volume at CLMC.

Percent Market Volume Shift from
Existing NHTR Winston Salem Facilities to CLMC

Zip Code	Percent Market Volume Shift
27006	75.0%
27012	75.0%
27023	75.0%
27028 (Includes 28014 Volume)	75.0%

Source:

The proposed facility will be located near the border of these two zip codes; CLMC will be located about 2 miles from the Forsyth-Davie County border. The following factors were considered important in the determination of the projected market share of hospital outpatient visits from each zip code:

- The new hospital will be a community hospital and will have a full range of outpatient services including imaging, laboratory, pharmacy, physical therapy, etc., in addition to surgical services. There is currently no full service community hospital in the proposed service area.
- CLMC will treat a variety of patients as inpatients, emergency patients and patients referred from local physicians with asthma, strokes, orthopedic injuries and other diagnosis which require outpatient therapy services such as physical therapy, speech therapy, occupational therapy, respiratory therapy; utilization of these outpatient are included in these outpatient projections.
- Much of FMC's outpatient imaging volume is referred to other NHTR/Excel Imaging and MedQuest freestanding imaging facilities in Winston-Salem, such as Maplewood Imaging Center, Salem MRI Center, The Breast Clinic, and Piedmont Imaging; therefore, this volume was not included in the calculation of current hospital outpatient visit market share.
- CLMC is closer to areas of each of the five zip codes than existing NHTR Winston Salem facilities as reflected in ;
- New physician offices with easier access will be developed in the future on and near the CLMC campus;
- Congestion and traffic on I-40 into Winston Salem will increase;
- CLMC offers a choice for outpatient services closer to home;

- The proposed location of CLMC adjacent to I-40 at the Harper Rd. interchange will result in ease of access to the existing population in the defined zip code service area;
- Interstate I-40 will result in population growth in the defined zip code service area;
- Some patients will continue to seek care at other NHTR Winston Salem hospitals, therefore 100% of the demand for services in the five zip codes will not shift to CLMC.

CLMC also assumed that the proposed market share shift will occur gradually over the first three years of operation, realizing 70% of projected market share in Project Year 1, 85% in Project Year 2, and 100% in Project Year 3. The projected market share for each zip code was used to determine projected outpatient visits by zip code in the defined service area for the first three years of the proposed project.

Projected Hospital Outpatient Visits in the Defined Service Area

CLMC projected hospital outpatient visits for the first three years of operation using the following methodology:

Projected Hospital Outpatient Visits = (Defined Service Area Population x North Carolina Hospital Outpatient Visit Use Rate x Market Share) + "Other Inmigration"

CLMC projected hospital outpatient visits by zip code in the defined service area are shown in the following table. Projected "Other Inmigration" and total outpatient visits also are included.

MPH Clemmons
Projected Hospital Outpatient Visits
Project Years 1 – 3

Zip Code	PY 1 Jul11-Jun12	PY 2 Jul12-Jun13	PY 3 Jul13-Jun14
27006	2,687	3,356	4,060
27012	4,658	5,730	6,829
27023	2,059	2,519	2,985
27028 (Includes 28014 PO Box Volume)	4,295	5,316	6,375
Other Inmigration (10%)	1,522	1,880	2,250
Total Outpatient Visits	15,221	18,800	22,499

Source:
**"Other Inmigration represents volume from outside of the proposed zip code service area, surrounding zip codes in surrounding counties as discussed in responses to Question III.1.a.*

The previous table reflects total hospital outpatient visits at CLMC in the defined service area for the first three years of the proposed project.

The need for additional ancillary and outpatient services at CLMC is substantiated by the existing utilization of services at FMC. As reflected in the following table inpatient and emergency department utilization at FMC are at an all time high. Over the last several years, inpatient demands have resulted in FMC shifting outpatient services to other providers. The following table illustrates the decrease in hospital outpatient utilization at FMC. This shift has been the result of direct efforts of FMC to provide outpatient services in settings less complex than a tertiary care hospital. For example, with the consummation of the Excel Imaging outpatient imaging joint venture (between FMC and Forsyth Radiological Associates) in April 2007, there is a single, centralized outpatient imaging scheduling phone number and outpatient with imaging needs can be directed to numerous Excel Imaging freestanding outpatient imaging sites in Forsyth County such as Winston-Salem Health Care's Radiology Department, The Breast Clinic, Greystone Imaging Center, Maplewood Imaging Center, and Salem MRI Center, in addition to the outpatient

imaging available in the FMC hospital radiology department, which is often reserved for the more medically complex or higher risk outpatients. The FMC COO concurs that many types of hospital outpatient visits have migrated off the FMC tertiary hospital campus during the past few years. In addition, certain elective outpatient services are subject to getting delayed or re-scheduled if a higher acuity or emergent need intervenes. The FMC COO agrees that hospital outpatient services are needed at CLMC, in the more accessible local community hospital setting, where there are routinely fewer emergent cases such as cardiac catheterizations, high-risk obstetrical cases, or complex trauma cases . Thus, the proposed hospital in Clemmons will provide another location for needed outpatient services in the community setting and away from the higher intensity tertiary campus at FMC. In the future, this will prove to be more satisfying and simple to access for residents of the service area.

Forsyth Medical Center
Historical Utilization

FFY	2004	2005	2006	2007	CAGR
Inpatient Days	200,063	206,071	207,044	210,427	
		3.0%	0.5%	1.6%	1.7%
Emergency Visits	77,533	86,118	89,941	97,685	
		11.1%	4.4%	8.6%	8.0%
Outpatient Visits	27,190	29,596	26,876	23,321	
		8.8%	-9.2%	-13.2%	-4.5%

Source: Annual Hospital LRAs

This position is consistent with the Basic Principles included on page 34 of the *2008 SMFP,* regarding goals related to Acute Care Hospitals, which states "To encourage the substitutions of less expensive for more expensive services whenever feasible and appropriate," which includes the use of outpatient diagnostic studies and other elective outpatient services.

The proposed CLMC outpatient services will have a positive impact on existing services at FMC, by relieving the pressure building up at FMC as a result of increasing inpatient utilization.

7. Projected Emergency Department Visits and Emergency Treatment Rooms

Projected emergency department visits and emergency treatment rooms were determined as follows.

2006 North Carolina Emergency Department Visit Use Rate

CLMC used the North Carolina Emergency Department Visit Use Rate for community hospitals defined by the American Hospital Association (AHA)[44] to project emergency department visits. Data compiled from the AHA Annual Survey are used to calculate state specific utilization rates. The 2005 North Carolina Emergency Department Visit Use Rate was 434.0 visits per 1,000 population as reflected in [illegible]. The 2006 NC Emergency Department Visit Use Rate is the most current data that is publicly available. The 2006 North Carolina Emergency Department Visit Use Rate was held constant for purposes of these projections, even though literature suggests the increasing use of emergency services in North Carolina and nationally[45]. The projected North Carolina Emergency Department Visit Use Rate

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44 [illegible]

45 American College of Emergency Physicians, "The National Report Card on the State of Emergency Medicine" [illegible]; included in [illegible], Emergency Department Projections; The Advisory Board Company, "Future of EDs", June 11, 2005; "A Growing Hole in the Safety Net: Physician Charity Care Declines Again," Center for Health System Change, [illegible]; American College of Physicians-American Society of Internal Medicine, [illegible]

was used to determine total emergency department visits and NHTR Winston Salem market share by zip code in the defined service area for the first three years of the proposed project.

Current Emergency Department Visits and Market Share in the Defined Service Area

Using April 2007 – March 2008 emergency visit data from the NHTR internal Trendstar database, CLMC calculated the NHTR market share for each zip code in the defined service area. Relevant data is included in . The following table shows NHTR emergency visits, total defined service area emergency visits, and NHTR market share for zip codes in the defined service area.

Novant Health Outpatient Market Share in the Defined Service Area
July 2006 - June 2007

Zip Code	County	NH Winston Salem Emergency Visits	Total Emergency Visits	NH Winston Salem Market Share
27006	Davie	1,721	5,809	29.6%
27012	Forsyth	4,220	10,889	38.8%
27023	Forsyth	1,585	4,791	33.1%
27028 (Includes 28014 Volume)	Davie	2,133	12,007	28.8%

Source:

Market Volume Shift and Market Share Assumptions

The following assumptions related to the percent market volume shift are used in the projections.

a. Percent Market Volume Shift to CLMC

The following percent market volume shift from FMC to CLMC was used to project emergency visit volume at CLMC.

Percent Market Volume Shift from
Existing NHTR Winston Salem Facilities to CLMC

Zip Code	Percent Market Volume Shift
27006	85.0%
27012	85.0%
27023	85.0%
27028 (Includes 28014 Volume)	85.0%

Source:

b. Market Share Resulting From Proposed Project

CLMC expects a market share increase in emergency visits once CLMC becomes operational in Clemmons, its home zip code, and the adjacent Advance zip code, as shown in the following table.

Projected Increase in CLMC ED Visit Market Share

Zip Code	Projected Market Share Increase
27006	30.0%
27012	30.0%
27023	0.0%
27028 (Includes 28014 Volume)	0.0%

Source:

CLMC projects a 30% increase in emergency visit market share from only the two adjacent service area zip codes, Clemmons 27012 and Advance 27006. The proposed facility will be located near the border (only two miles) of these two zip codes. For a Davie County resident traveling eastbound on I-40 the Harper Rd. Exit, where CLMC will be located, is the first I-40 Exit after entering Forsyth County from Davie County.

The following factors were considered important to the determination the projected CLMC market share of emergency visits from each zip code:

- **The new hospital will bring a new emergency service to a growing population;**
- **As a community hospital patients will avoid the confusion and wait times associated with larger trauma centers and busy urban emergency departments.**
- **CLMC is closer to areas of each of the five zip codes than existing NHTR Winston Salem facilities as reflected in and resulting in shorter travel time for emergency services;**
- **The proposed location of CLMC adjacent to I-40 at the Harper Rd. interchange will result in ease of access for the existing population in the defined zip code service area;**
- **Some patients will choose to seek emergency care at other NHTR Winston Salem hospitals, and the protocols for emergency care defined by FMC with area ambulance providers will result in bypassing CLMC emergency department less than 5% of the time[46], therefore 100% of the demand for services in the five zip codes will not shift to CLMC.**

Furthermore, as previously discussed, according to a recent American College of Emergency Physicians (ACEP) report, The National Report Card on the State of Emergency Medicine, North Carolina earned a "C-overall for its support of emergency care" and there is a need for additional emergency departments in North Carolina. The proposed project will provide increased accessibility to emergency medicine facilities for residents of a growing market located in western Forsyth and Davie Counties.

Actual NHTR Winston Salem market share for ED visits was adjusted to reflect the percent market shift and the projected increase in market share. The following table shows CLMC's future market share of emergency services (ED visits) in the defined service area.

[46] In 2006, in preparation for FMC-Kernersville CON Application, the following method was used to determine the percent of patient bypassing the proposed emergency department. Based upon input from the FMC Emergency Department Administrator, the percent of inpatients at FMC with Level V and Level VI conditions was multiplied by the percent of inpatients arriving by ambulance. Projections ranged from 0.8 % to 4.0%. As a result, it is estimated that less than 5.0% of patients would by-pass the proposed facility. CLMC used the same assumption to determine patients bypassing the proposed emergency department.

CLMC Projected Emergency Dept Visit Market Share
Project Year 3

Zip Code	Town	Current NHTR Winston Salem Mkt Share	Percent Market Share Shift	Projected Market Share Increase	CLMC Market Share PY 3
		A	B	C	D = A + B + C
27006	Advance	29.6%	85.0%	10.0%	55.2%
27012	Clemmons	38.8%	85.0%	10.0%	62.9%
27023	Lewisville	33.1%	85.0%	10.0%	28.1%
27028 (Includes 28014 Volume)	Mocksville	28.8%	85.0%	10.0%	15.1%

Source:

CLMC also assumed that the proposed market share shift will occur gradually over the first three years of operation, realizing 70% of projected market share in Project Year 1, 85% in Project Year 2, and 100% in Project Year 3.

CLMC Emergency Dept Visit Market Share
Project Years 1 -- 3

Zip Codes	Town	PY 1 Jul11-Jun12	PY 2 Jul12-Jun13	PY 3 Jul13-Jun14
27006	Advance	38.6%	46.9%	55.2%
27012	Clemmons	44.1%	53.5%	62.9%
27023	Lewisville	19.7%	23.9%	28.1%
27028 (Includes 28014 Volume)	Mocksville	10.6%	12.8%	15.1%

Source:

The projected market share for each zip code was used to determine projected emergency visits by zip code in the defined service area for the first three years of the proposed project.

Projected Emergency Department Visits and Emergency Department Treatment Room Need in the Defined Service Area

CLMC projected emergency department visits for the first three years of operation using the following methodology:

Projected Emergency Department Visits = (Defined Service Area Population x North Carolina Hospital Emergency Department Visit Use Rate x Market Share) + "Other Inmigration"

CLMC projected emergency department visits by zip code in the defined service area are reflected in the following table. Projected "Other Inmigration" and total emergency department visits also are included.

CLMC Projected Emergency Department Visits
Project Years 1 – 3

Zip Code	PY 1 Jul11-Jun12	PY 2 Jul12-Jun13	PY 3 Jul13-Jun14
27006	2,458	3,054	3,676
27012	5,102	6,292	7,517
27023	995	1,225	1,460
27028 (Includes 28014 Volume)	1,362	1,684	2,017
Other Inmigration (10%)	1,102	1,362	1,630
Total Emergency Department Visits	11,020	13,616	16,300
Emergency Treatment Rooms Needed @ Planning Capacity	8.3	10.2	12.2

Source:
**"Other Inmigration represents volume from outside of the proposed zip code service area, surrounding zip codes in surrounding counties as discussed in responses to Question III.1.a.*

The previous table reflects total emergency department visits, and emergency department treatment rooms needed based upon American College of Emergency Physicians emergency planning capacity of 1,333 Emergency Visit per Treatment Room for Emergency Departments reflected in [illegible], which results in a need at CLMC for 12 emergency treatment rooms in the third year of operation.

The need for emergency services at CLMC is further substantiated by the future need for additional emergency services in the entire Forsyth-Davie County service area. The following table calculates area Emergency Department need projections for the three county area, Forsyth, Davie and Yadkin. As shown in the following table there will be a significant need for additional ED treatment space in the combined three county area by the third year of operation of the proposed MPH Clemmons.

The following table presents the historic growth rate of emergency department visits at the four hospitals in the three county area.

Historical ED Utilization
Forsyth, Davie and Yadkin Counties

Hospital	2003	2004	2005	2006	2007
Forsyth Memorial Hospital	76,126	77,533	86,118	89,941	97,685
North Carolina Baptist Hospital	62,119	69,066	74,768	81,790	87,772
Hoots Memorial Hospital	6,958	7,076	6,774	6,806	7,516
Davie County Hospital	11,573	11,419	12,579	12,389	11,866
Total Forsyth.Davie.Yadkin ED Visits	156,776	165,094	180,239	190,926	204,839
Annual Growth		5.3%	9.2%	5.9%	7.3%
CAGR					6.9%

Source: LRAs;

As reflected in the previous table ED growth in the three county region averaged almost 7% growth annually. This is consistent with data and information presented in this application regarding the growth of emergency services in the service area, North Carolina and nationally.

A review of emergency department growth in the eight counties included in Forsyth Medical Center's primary and secondary service area is presented in the following table.

Historical ED Utilization
Forsyth Medical Center Primary and Secondary Service Area*

Hospital	2003	2004	2005	2006	2007
	Total	Total	Total	Total	Total
Forsyth Memorial Hospital	76,126	77,533	86,118	89,941	97,685
North Carolina Baptist Hospital	62,119	69,066	74,768	81,790	87,772
Thomasville Medical Center	21,545	21,813	22,059	22,917	27,558
Lexington Memorial Hospital	27,000	27,461	29,555	31,732	31,577
Stokes-Reynolds Memorial Hospital	10,666	11,280	10,847	10,709	12,863
Hugh Chatham Memorial Hospital	17,072	18,000	19,692	26,548	23,869
Northern Hospital of Surry County	31,839	34,046	35,753	36,099	38,799
High Point Regional Health System	53,764	55,927	57,335	57,501	57,902
Moses Cone Health System	110,327	114,325	111,333	112,412	114,564
Wilkes Regional Medical Center	24,681	28,291	30,257	31,391	32,000
Hoots Memorial Hospital	6,958	7,076	6,774	6,806	7,516
Davie County Hospital	11,573	11,419	12,579	12,389	11,866
Total FMC Sv Area ED Visits	453,670	476,237	497,070	520,235	543,971
Annual Growth		5.0%	4.4%	4.7%	4.6%
CAGR					4.6%

Source: LRAs;
**Includes: Forsyth, Davie, Yadkin, Davidson, Guilford, Surry, Stokes and Wilkes*

As reflected in the previous table ED growth in the eight county region averaged over 4.5% growth annually. Again this is consistent with data and information presented in this application regarding the growth of emergency services in the service area, North Carolina and nationally that ED use is growing faster than population growth.

To determine if the existing and approved ED treatment room capacity at FMC, FMC-Kernersville, NCBH and DCH was sufficient to meet the future ED need in the three county region CLMC projected future ED need using both the three county and eight county historical growth rates, as presented in the following table.

Projected ED Treatment Rooms Needed
Forsyth, Yadkin and Davie Counties

	Growth Rate	2008	2009	2010	2011	2012	2013	2014	2015
Projected ED Need Using Forsyth.Davie.Yadkin ED Growth Rate	6.9%	219,022	234,187	250,402	267,739	286,277	306,099	327,293	349,955
ED Beds Needed Visits per Room at High Range	1,350	162	173	185	198	212	227	242	259
Current ED Bed Inventory Forsyth.Davie.Yadkin		133	147	147	192	192	192	192	192
ED Beds/Treatment Rooms Additional Need		29	26	38	6	20	35	50	67
Projected ED Need Using FMC SA ED Growth Rate	4.6%	214,350	224,302	234,716	245,613	257,017	268,950	281,437	294504
ED Beds Needed Visits per Room at High Range	1,350	159	166	174	182	190	199	208	218
Current ED Bed Inventory Forsyth.Davie.Yadkin		133	147	147	192	192	192	192	192
ED Beds/Treatment Rooms Additional Need		26	19	27	-12	-2	7	16	26

Assumptions: FMC Kville -12 new treatment rooms come on line 2009;
NCBH -- new ED comes on line in 2011 increasing ED treatment space at NCBH by 31 as reflected in Project I.D. G-7691-06; however, only one progress report has been filed to date with the State and it is unclear if and when NCBH intends to move forward with the project.
Includes existing and approved ED treatment rooms at all hospitals in Forsyth, Davie and Yadkin Counties.

Source:

As reflected in the previous table, a need for additional ED treatment rooms is projected in Forsyth, Yadkin and Davie Counties using either the historical ED growth rate from just these three counties or using the historical ED growth rate from the eight county FMC service area. Both methodologies project that additional ED treatment space will be needed in Forsyth, Davie and Yadkin Counties by 2014. This analysis takes into account the expansion of NCBH ED (+31 rooms), approved in Project I.D. G-7691-06 and the new ED treatment space (16 rooms) approved for FMC Kernersville. This analysis also provides additional support for the proposed ED located at CLMC, since the service area should add more ED capacity now to prepare for future demand. As previously noted, the applicant is informed that NCBH's proposed ED/ICU tower project is on hold, so that project should not be viewed as a reason disapprove ED capacity in Clemmons.

In addition, residents of Lewisville, Clemmons and Advance have not historically sought emergency services at the DCH ED in Mocksville. The current location of the DCH ED treatment rooms is further from the majority of the proposed population than the existing ED at FMC. Furthermore, inpatient services available at DCH are limited. Therefore, it would be unreasonable to assume that many residents of the proposed service area would go to DCH for emergency care when historically Davie residents often commute out of Davie County to Forsyth County for not only medical care, but also for employment, entertainment, and shopping. Many of the use patterns of the market are to go to Forsyth County for services and jobs, rather to Mocksville. See the Commuter Map included in

8. *Projected Ancillary Services Utilization*

As previously discussed, CLMC will be a community hospital with a full range of inpatient and outpatient services. The following projections for ancillary services reflect the need for the equipment at CLMC. Previous projections for outpatient visits at CLMC reflect the number of patients seeking ancillary and other outpatient treatments or services. Total outpatient visits are utilized in the financial ProFormas to determine the financial feasibility of the proposed project. These ancillary projections reflect total procedures, scans or individual tests completed by department or services, not total patients. In most cases a patient receives services from more than one department or has more than one test or procedure at one visit. The following projected ancillary volumes substantiate the need for equipment routinely found in a community hospital.

Equipment planning for the proposed CLMC was completed by Novant Health's Director of Capital Equipment, a professional with considerable experience in hospital equipment planning. Included in [redacted] is a letter from the experienced Novant Health Equipment Planning Director, which documents his experience and the need for the following equipment at CLMC. See also the articles which are attached to his letter for further explanation.

CLMC will have a comprehensive array of diagnostic equipment including:

- A full-service laboratory;
- A full-service pharmacy;
- A new 16-slice CT scanner;
- A contract with vendor for mobile MRI scanner service.
- Other imaging equipment including:
    - One digital routine x-ray unit/room
    - One digital combination x-ray/fluoro unit/room
    - One nuclear medicine camera (no coincidence circuitry)
    - One 64-slice digital CT scanner
    - One digital mammography unit
    - One digital ultrasound unit
    - Two portable, digital x-ray units for use on the patient floors, ED, and ORs
    - One Mini C-Arm unit—for use in the ED for Post-Reduction studies (x-ray after the fracture is casted)
    - Two multi-purpose C-Arm units for use in the ORs
    - PACS system within NHTR connecting CLMC to FMC

A complete list of diagnostic imaging equipment valued at more than $10,000 is included in [redacted].

In addition, a substantial amount of laboratory and pharmacy equipment will be needed at CLMC. A complete list of laboratory equipment valued at more than $10,000 is included in [redacted].

Additional equipment itemized in [redacted] includes equipment needed for physical therapy, speech therapy, and respiratory therapy services available for inpatients and outpatients. CLMC will treat a variety of patients as inpatients, emergency patients and patients referred from local physicians with asthma, strokes, orthopedic injuries and other diagnosis which require outpatient therapy services such as physical therapy, speech therapy, occupational therapy, respiratory therapy.

Ancillary utilization projections were calculated based upon existing ancillary utilization patterns at existing Novant Health community hospitals: Thomasville Medical Center (TMC), Brunswick Community Hospital (BCH), Presbyterian Hospital Matthews (PHM) and Presbyterian Hospital Huntersville (PHH). CLMC assumes that projected ancillary utilization at CLMC will imitate current ancillary utilization

patterns at TMC, BCH, PHM and PHH. This methodology has been used in previously approved by the Agency in a community hospital CON application (Presbyterian Hospital Mint Hill) submitted by Novant Health in mid-2006.

Relevant data was acquired from Hospital Licensure Renewal Applications from FFY 2003 to 2007 as available for PHH, PHM, TMC and most recently BCH. BCH was acquired by Novant Health in 2006 and FFY 2006 was the first full year of operation by Novant. This data is included in [illegible] and [illegible]. Data was averaged to determine the relationship between ancillary volumes and inpatient, outpatient and ED volumes. Inpatient ancillary volumes for CLMC were projected using total average data across the facilities and the years. High and low values were deleted from the average. The resulting average was used to calculate ancillary services at CLMC.[47] Outpatient ancillary volumes were projected using the average percent of total outpatient and ED visits as shown in the following table.

[47] Ratios for laboratory, pharmacy and ultrasound were calculated based upon historical utilization at FMC and MPH. The resulting projections, when compared to the community hospital ratios used in the PHMH application, were very high. Therefore, CLMC utilized the ratios used in the PHMH application to project future laboratory, pharmacy and ultrasound volumes in this application.

Projected Ancillary Service Utilization: CLMC

Ancillary Service	ALL Hospitals and Years Minus Hi/Lo	Projected Utilization		
		PY 1	PY2	PY3
MRI*				
Inpatient - % Discharges	10.3%	487	496	505
Outpatient - % Outpatient + ED	4.8%	1,178	1,444	1,720
Total MRI		1,670	1,945	2,230
CT				
Inpatient - % Discharges	53.5%	2,536	2,581	2,626
Outpatient - % Outpatient + ED	23.4%	5,763	7,067	8,415
Total CT		8,299	9,647	11,041
Nuclear Medicine				
Inpatient - % Discharges	17.7%	840	855	870
Outpatient - % Outpatient + ED	4.8%	1,183	1,450	1,727
Total Nuclear Medicine		2,023	2,305	2,597
Mammograms				
Inpatient - % Discharges	0.0%	0	0	0
Outpatient - % Outpatient + ED	8.0%	1,982	2,431	2,894
Total Mammograms		1,982	2,431	2,894
Other Radiology				
Inpatient - % Discharges	124.5%	5,897	5,999	6,104
Outpatient – % Outpatient + ED	39.9%	9,841	12,068	14,370
Total Other Radiology		15,738	18,067	20,474
Ultrasound				
Inpatient - Ratio to Discharges	0.19	900	916	932
Outpatient - Ratio to Outpatient + ED	0.09	2,220	2,722	3,241
Total Ultrasound		3,120	3,638	4,173
Pharmacy				
Inpatient - Ratio to Discharges	79.27	375,531	382,080	388,746
Outpatient - Ratio to Outpatient + ED	3.04	74,983	91,946	109,487
Total Pharmacy		450,514	474,025	498,233
Laboratory				
Inpatient - Ratio to Discharges	17.38	82,335	83,771	85,233
Outpatient - Ratio to Outpatient + ED	1.36	33,545	41,134	48,981
Total Laboratory		115,880	124,905	134,214

Source: CLMC CON Application;

The above table reflects total ancillary services utilization at CLMC in the defined service area for the first three years of the proposed project.

Projected Impact of Clemmons Medical Center on Other Acute Care Providers in Forsyth and Davie Counties

As part of the CLMC utilization analysis, CLMC defined hospital service areas and projected future acute care bed need for the following North Carolina Hospitals in the Forsyth/Davie County area.

- **Forsyth Medical Center**
- **North Carolina Baptist Hospital**
- **Davie County Hospital**

Data from Solucient/Thomson and Annual Hospital Licensure Renewal Applications for these hospitals were used to calculate current and projected service areas and market shares. The potential for CLMC to have a material impact on the volume of services at each hospital was considered. CLMC projected April 2012 to March 2015 bed need using county specific population growth rates for each hospital including the impact of the proposed CLMC. This allowed the applicant to determine CLMC's projected impact on each existing hospital.

CLMC did not include any projected shift in market share in patient days from NCBH or DCH to the proposed Clemmons Medical Center as part of the volume projections for the proposed project. In addition, projection for each facility determined that the positive impact of continued population growth in the region exceeded any negative impact of the proposed project on existing facilities.

The proposed project is for the relocation of existing beds and operating rooms to serve a market that currently is well-served by FMC and MPH and its physicians. The market shift impacts only FMC as no increase in market share was projected. Total FMC projected utilization and the impact of CLMC on Novant hospitals is included in the Impact Analysis included in [illegible] and [illegible] of [illegible].

Future acute care bed need projections for North Carolina Baptist Hospital and Davie County Hospital are based upon county specific population growth rates, which is the same methodology used to project CLMC and FMC bed need. These projections are presented in [illegible] and [illegible]. These projections reflect a decreasing surplus in acute care beds at North Carolina Baptist Hospital and continued use of Davie County Hospital as a Critical Access Hospital.

Conclusion

The reasonableness of locating a new community hospital in the Clemmons area is shown by the projected need for services due to significant population growth experienced over the past years and projected to continue in the foreseeable.

Upon completion, CLMC can begin to meet the growing acute care needs in the defined service area. The table below shows the projected patient days and occupancy rates for CLMC in the first three years of operation. Note that CLMC's projected occupancy rate will be greater than the target occupancy rate required by Policy AC-5 – Replacement of Acute Care Capacity in the *2008 State Medical Facilities Plan*. As the Clemmons area continues to grow, its future acute health care needs can be met by the development and expansion of CLMC.

Average Daily Census, Licensed Number of Beds and
Occupancy Percentage for CLMC
First Three Years of Operations

	PY 1 Jul11-Jun12	PY 2 Jul12-Jun13	PY 3 Jul13-Jun14
Total Acute Care			
Days	11,438	12,696	13,994
ADC	47.0	52.1	57.5
Beds	50	50	50
Occupancy	62.7%	69.6%	76.7%

Source: Clemmons Medical Center Summary Statistics

The relocation of 50 acute care beds and 5 existing licensed operating rooms from FMC and MPH to CLMC will result in increased access to high quality patient care services in a local community that has depended on NHTR inpatient facilities and physicians for many years. In addition, the proposed project also results in maximizing utilization of existing NHTR Forsyth County resources. The proposed project responds to one of