WakeMed Health & Hospitals
Comments Regarding CON Applications Submitted for the 2023 Need Determination for 44 Acute Care Beds in Wake County

October 2, 2023

INTRODUCTION

The following certificate need applications were filed in response to the need determination for 44 new acute care beds in Wake County in the 2023 State Medical Facilities Plan ("SMFP"):

- Duke University Health System, Inc. proposes to develop no more than 41 acute care beds at Duke Raleigh Hospital for a total of 245 at project completion, Project ID# J-12412-23.
- Rex Hospital, Inc. proposes to develop no more than 44 acute care beds at UNC Rex Hospital for a total of 480 at project completion, Project ID# J-12417-23.
- WakeMed proposes to develop no more than 9 acute care beds at WakeMed Cary Hospital for a total of 209 at project completion, Project ID# J-12418-23; and
- WakeMed proposes to develop no more than 35 acute care beds at WakeMed North Hospital for a total of 106 at project completion, Project ID# J-12419-23.

These comments are submitted by WakeMed in accordance with North Carolina General Statute § 131E-185(a1) (1) to address the representations in the applications including a comparative analysis and a discussion of conformity with the statutory regulatory review criteria ("the Criteria") in North Carolina General Statue § 131E-183(a) and (b).

In this review cycle, although each applicant is an established Wake County acute care hospital**, the size and services offered at each location vary significantly.** Duke Raleigh Hospital ("DRaH") and WakeMed Cary are both regional referral facilities. They offer higher-acuity services than WakeMed North, a community hospital. However, WakeMed Cary acuity is not comparable to DRaH. The latter has a full cancer center with linear accelerator services. Likewise, DRaH services are not the same as UNC Rex, which is a tertiary hospital, offering cardiac, cancer, neonatal and neurosurgery services.

As a tertiary care hospital, UNC Rex is a resource for and serves patients from many counties, not just Wake. DRaH is part of the Duke University Health System, Inc. ("DUHS") and provides tertiary cancer and cardiac services. As a result, a significant portion of DRaH patients originate from outside Wake County. By contrast, WakeMed Cary serves primarily southern and western Wake County patients. WakeMed North is a community hospital located in an area of Wake County that has no other acute care hospital and adjacent to southern Franklin County which has no acute care beds. While WakeMed North's acuity level has increased steadily over the last five years, it is not comparable to the acuity levels at the other hospitals in this batch. However, WakeMed North's lower acuity does not mean its need for additional beds is less acute than the other facilities in this review.

The disparate nature of the hospitals and related proposed projects creates challenges when comparatively evaluating the applications. These differences make a material difference in the review. Certain comparative metrics used in other reviews of acute care beds are not applicable in this review. **Specifically, any metric related to Medicare and Medicaid coverage will not be uniformly comparable.**

The applicants also used different bases for presenting their financial statements in Forms F.2 and F.3. UNC Rex does not provide good assumptions. However, the proformas do not include all revenue and costs associated with discharges from the acute care beds. This applicant appears to have presented only the inpatient acute care bed stay and related acute care bed nursing component of the stay. Other ancillary services provided during the stay appear to be excluded. DRaH and WakeMed applications present the full cost of the inpatient stay. WakeMed North and WakeMed Cary were the only applications that provided pro formas at the project, facility, and system levels of detail. **Thus, any comparison of financial proforma operating metrics would be inconclusive.**

WakeMed evaluated each competing application and its overall conformity with the Review Criteria. While non-conformities in the competing applications may exist, WakeMed will refrain from perfunctory opposition which does not materially or substantively benefit the Agency in its decision. Instead, WakeMed will provide context which illustrates how its two proposals best meet the needs of Wake County residents identified in the 2023 SMFP.

GENERAL COMMENTS

Wake County has an acute care bed crisis. Rapid population growth in the county and surrounding area is straining capacity of hospitals in the county to provide care for community residents. Residents, physicians, and EMS providers are in a continuous game of "Find-A-Vacant-Bed". This is an important consideration in this review because the problem is reflected in bed utilization data. When beds at WakeMed North and WakeMed Cary are full, patients still need care, and they go to the next nearest available hospital. This does not mean that the next nearest facility was the best choice. In many cases it was the only choice. Thus, even patient utilization history must be carefully evaluated in this review.

Duke Raleigh Hospital, Project ID# J-12412-23

Duke University Health System, Inc. ("DUHS") proposes to add 41 additional medical/surgical beds at DRaH; 29 beds in the newly completed South Pavilion and/or the North Pavilion and 12 on the 5th floor of the South Pavilion. To forecast beds needed and to be used in the first three project years, this application relies on historical utilization. Two issues make this approach unreliable in this review:

- First is the bed crisis mentioned above. DRaH had empty beds when WakeMed North was full, DRaH is the next closest hospital. The methodology in Section Q is based on the Compound Annual Growth Rate ("CAGR") of days of care between 2019 and 2023. The application calls this conservative. However, CAGR calculations use only two data points. They do not consider points in between.
- Second, and equally important, is the application's failure to account for changes in patient utilization patterns at DRaH that will occur when Duke Green Level Hospital ("DGL") opens. DRaH forecasts end at FY2028 on page 28 and proforma pages 103 -106. The application indicates that DGL will open in FY 2029. Though patients will not shift by DRaH's proposed third operating year, the proforma and utilization forecasts will not hold up after that third year.

  DRaH's proposed new acute care beds will be in service long after the third project year. Placing them in a facility that has stated intent to "shift" patients away in the fourth operating year would not be an effective means of resolving the Wake County bed crisis.

- There is also a logical flaw in the methodology for DRaH. In Step 2, DRaH forecasts that days will increase at a CAGR reflecting the last five years. In Step 3, DRaH notes that the average length of stay ("ALOS") will decline. By extension, DRaH should have adjusted the forecast number of days down to reflect the reduced ALOS. It does not. The ALOS in Step 1, on which the CAGR is based, increased from 5.0 to 5.4 days -- an 8 percent increase. In Step 3, DRaH notes that the ALOS will not continue to increase. In fact, it will drop to 5.3 days. The DRaH methodology does not use a trend to forecast discharges. The DRaH methodology uses the unreliable approach of forecasting days by a CAGR trend, then arbitrarily dividing by an assumed ALOS to forecast discharges.
- The application notes that DRaH could not admit patients in 2022. However, the application provides no information on peak bed occupancy for that year. The emergency department diversion statistics cited could have been the result of staffing availability, not bed unavailability.

Figure 1: From DRaH Methodology Step 3:

Duke Raleigh Hospital
Projected Inpatient Days of Care & Discharges

	Interim Year	Interim Year	Project Year 1	Project Year 2	Project Year 3
	FY2024	FY2025	FY2026	FY2027	FY2028
Inpatient Days of Care	57,222	59,173	61,189	63,275	65,431
Discharges	10,597	11,165	11,545	11,939	12,345
ALOS	5.4	5.3	5.3	5.3	5.3
Licensed Beds	204	245	245	245	245
% Occupancy	76.8%	66.2%	68.4%	70.8%	73.2%

Source: DRaH application p. 104

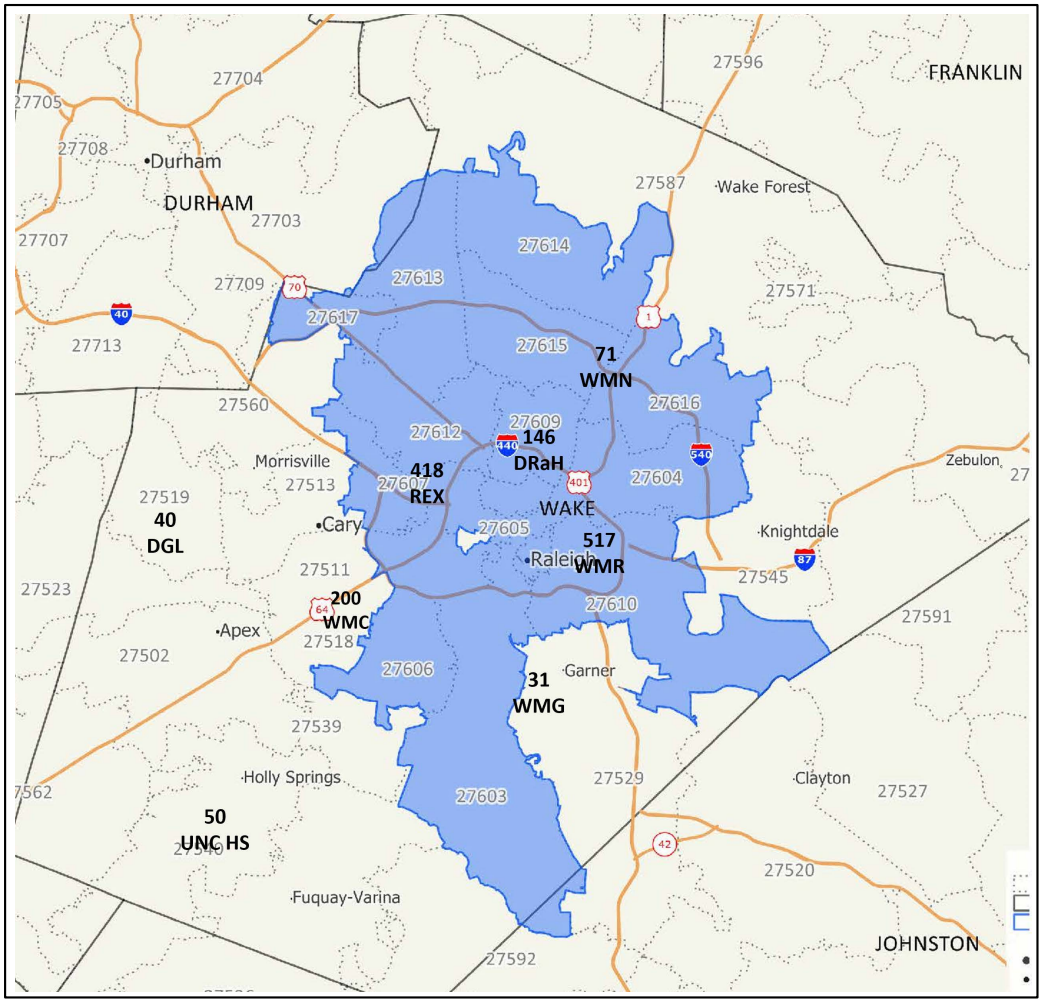
UNC Rex Hospital, Project ID# J-12417-23

Rex Hospital, Inc. ("UNC Rex") proposes to develop 44 additional acute care beds at the UNC Rex Hospital Main Campus in Raleigh by using existing space in the main patient bed tower on its main campus in Raleigh. All 44 beds identified in the application currently operate as non-licensed Observation beds: 30 beds on the west wing of the 4th floor and 14 will be on the east wing of the 3rd floor.

The UNC Rex application does not provide patient origin by ZIP Code. However, the methodology justification for the proposed additional beds at UNC Rex is based on forecast population growth of what the application deems "central Raleigh ZIP Codes." These were determined "thru ESRI" for any ZIP Code that ESRI identified as "Raleigh". The application contains no maps of the ZIP Codes and no raw data. It is impossible to determine how many UNC Rex patients have originated from these ZIP Codes.

To understand the UNC Rex need methodology, WakeMed used Maptitude 2023 mapping software to plot the ZIP Codes identified in the UNC Rex methodology. Figure 2 below compares the ZIP Codes to the location of existing and approved Wake County acute care hospital campuses. Several ZIP Codes with Raleigh addresses are geographically much closer to other hospitals, including UNC Holly Springs. Moreover, it is hard to accept that ZIP Code 27614 is "Central" when most of that ZIP Code is in northern Wake County, adjacent to Wake Forest. WakeMed North is in ZIP Code 27614. And 27603 is not really "Central;" a portion of it is in Johnston County.

Figure 2. UNC Rex "Raleigh" ZIP Codes Compared to Wake County Hospital Locations



This map of the ZIP Code boundaries, provided by Maptitude 2023 software illustrates the importance of the missing hospital location data, especially locations of UNC Rex, UNC Holly Springs and WakeMed North. While indeed, patients from these ZIP Codes may have used UNC Rex in the past; the real question is whether they will have access to and use other acute care bed options in the future.

COMPARATIVE FACTORS

Given the diversity of applicants in this review, it is very difficult to adequately assess the various types of applications in a comparative way for many of the factors typically used by the Agency. For example, capital costs cannot be equally compared, particularly when comparing the cost of constructing a new tower to renovation of existing observation beds. WakeMed has identified seven areas that can be compared:

- Geographic accessibility,
- Need for acute care beds,
- Historical utilization of approved beds,
- Reduction of Services – Observation Beds
- Access by underserved groups,
- Physician Support, and
- Regulatory barriers.

Table 1: Applicants' Summary of Best Meeting the Identified Need in the 2023 SMFP

Applicant	Conclusion
Duke Raleigh; 41 Beds	Does not best meet the need.
UNC Rex, 44 Beds	Does not best meet the need.
WakeMed North, 35 Beds	Better meets the need.
WakeMed Cary, 9 Beds	Better meets the need.

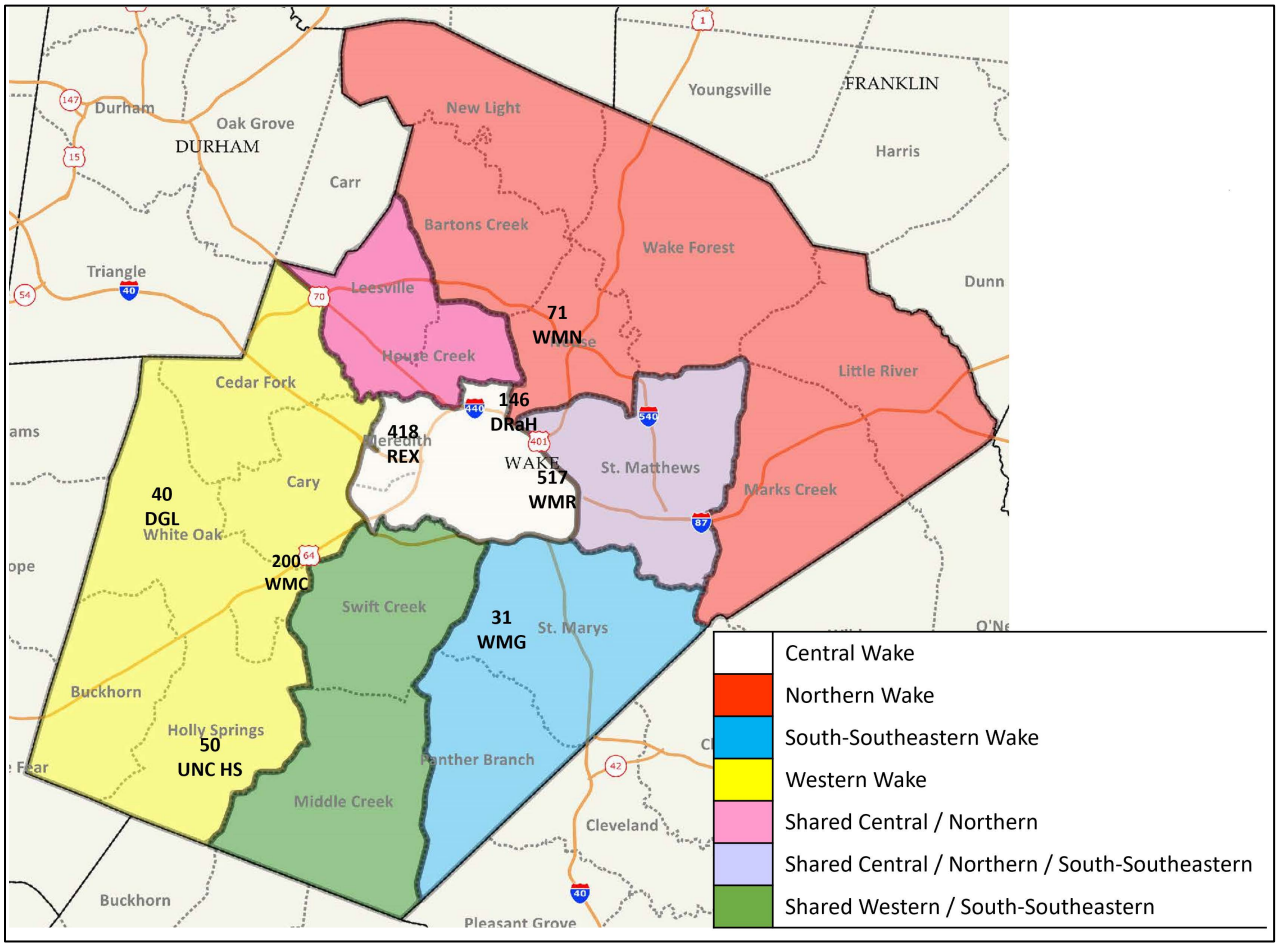
Geographic Accessibility

The 2023 SMFP set the service area for the need determination as Wake County. Wake County currently has six acute care hospitals and two additional facilities under development. In this review, each applicant proposes to develop the new beds at existing hospital locations. Therefore, it is imperative that the proposed new beds are awarded to an area of Wake County with the lowest level of access to acute care beds.

An analysis of access within Wake County for Wake County residents is best done by using townships. Like ZIP Codes, townships separate the county into smaller communities; however, unlike ZIP Codes, all township population demographics are limited to people residing within the county borders.

In previous Wake County Acute Care bed reviews, the Agency evaluated geographic access by splitting the county into four markets: Northern, Central, Western, and South-Southeastern. WakeMed used townships to map these same markets. WakeMed recognizes that some townships, like Leesville in northwest Wake County and Swift Creek in southwest Wake, are likely to utilize services in two markets. Likewise, St. Matthews Township spans the North, Central and South-Southeast markets. For these townships, WakeMed assumes an equal split among markets and considers them "Shared." See Figure 3 below.

Figure 3: Wake County Acute Care Beds by Hospital by Market, 2023



Low Ratio of Beds per 1,000 Population

According to the World Health Organization the United States average for acute care beds per 1,000 population is 2.87. Of all applicants, **only WakeMed is proposing to increase acute care bed geographic access in areas with less than one bed per 1,000 population**. Table 2 summarizes this and accounts for all awarded beds, including those awarded in July 2023. For completeness, the table includes the 31 beds approved for Garner. No applicant proposes beds for Garner. Color references in the table reference Figure 3 above.

Table 2: Wake County Existing and Approved Acute Care Beds by Hospital by Market, 2023

Market	Total Population	Beds Available	Beds / 1K Population
North and Shared (pink)	349,448	71	0.20
West and Shared (green)	398,604	290	0.73
Central and Shared (pink and lavender)	243,289	1,117	4.59
Southeast and Shared (blue, green, and lavender)	190,299	31	0.16
Total Wake County	1,181,640	1,509	1.28

Sources: Population by township, national demographer Claritas, accessed July 2023; Beds available Table 5A, 2023 SMFP.
Note: Color references tie to Figure 3 above.

Clearly, Wake County residents in north and west townships have the biggest deficits regarding approved acute care beds. **The WakeMed proposals alone propose to locate beds in North and West markets. Other applications in the review would increase bed capacity in Central Wake.**

In fact, 74 percent of the Wake County Acute Care bed planning inventory is located in Central Wake, which is comprised of Raleigh and Meredith Townships, within 1 mile of the Interstate 440 Beltline. Growing traffic congestion on major highways in Wake County means long travel times throughout Wake County, but traffic congestion has become particularly problematic between the county periphery and I- 440. While travel into Raleigh or outside Wake County for certain tertiary-level acute care services may be warranted and unavoidable, Wake County residents should have ready access to community hospital acute inpatient beds closer to their homes. The access is especially important for residents of Northern Wake County where, as illustrated in Table 2, the bed-to-population ratio is dramatically lower than the rest of the county.

Growing Population in Northern and Western Wake County

Townships in Northern and Western Wake County are growing faster than Central and Southeastern townships. Both percent growth and raw population are higher in these markets, as illustrated in Table 3 below.

Table 3: Population Growth by Market, 2023 to 2028

Market	CY23 Population	CY28 Population	CAGR%	Net New Residents
Northern and Shared	349,448	372,763	1.30%	23,315
Western and Shared	398,604	433,313	1.68%	34,709
Central and Shared	243,289	255,773	1.01%	12,484
South-Southeastern and Shared	190,299	203,239	1.32%	12,941
Total Wake	1,181,640	1,265,087	1.37%	83,447

Sources: Population by township, national demographer Claritas; accessed July 2023; Shared townships assume equal split between markets.

Table 4 shows that townships Wake Forest in North Wake and White Oak in West Wake, have the largest total populations in Wake County. In fact, demographers forecast that White Oak Township, which includes Apex and surrounding communities, will have the largest net increase of new residents by 2028. Wake Forest Township is projected to have the second-highest net increase. Their expected growth is significantly higher than that forecast for Raleigh.

Table 4: CY2023 and CY2028 Population by Wake County Township Comparison
Sorted in Descending Order by Number of "Net New" Residents

Township	Market	CY23 Population	CY28 Population	CAGR %	Net New Residents
White Oak	West	122,397	134,789	1.90%	12,392
Wake Forest	North	101,062	110,385	1.80%	9,323
Raleigh	Central	139,173	146,711	1.10%	7,538
Cedar Fork	West	64,505	71,029	1.90%	6,524
Middle Creek	West and Southeast	65,767	72,192	1.90%	6,425
Holly Springs	West	57,255	63,449	2.10%	6,194
St. Matthews	Central, Southeast, North	85,637	91,001	1.20%	5,364
St. Mary's	Southeast	71,731	76,126	1.20%	4,395
Neuse	North	83,717	87,582	0.90%	3,865
Swift Creek	West and Southeast	57,993	61,239	1.10%	3,246
Cary	West	80,937	83,604	0.70%	2,667
Marks Creek	North	28,933	31,446	1.70%	2,513
House Creek	Central and North	62,697	64,796	0.70%	2,099
Buckhorn	West	11,630	13,726	3.40%	2,096
Panther Branch	Southeast	28,142	30,064	1.30%	1,922
Leesville	North and Central	47,070	48,784	0.70%	1,714
Little River	North	17,002	18,714	1.90%	1,712
New Light	North	11,482	12,766	2.10%	1,284
Meredith	Central	20,687	21,938	1.20%	1,251
Bartons Creek	North	23,823	24,746	0.80%	923

Source: Population by township, national demographer Claritas
Townships shared between markets assume equal split in population

Awarding the 2023 Wake County Acute Care beds to the WakeMed proposals will benefit all applicants. Additional Acute Care bed capacity in Northern and Western Wake County will mean fewer Find-A-Bed days in those areas when the patient volume puts pressure on other hospitals.

All applicants are dealing with some degree of EMS diversion in their emergency departments, but WakeMed North is the only facility that has no Observation bed capacity to relieve the pressure when acute care beds are full. Thus, expanding acute inpatient bed capacity at WakeMed North will minimize the overflow that now shows up in bed days at DraH and UNC Rex.

Need for Acute Care Beds According to SMFP Methodology

As detailed in Section C.4 "WakeMed System, Calculated Bed Deficit" in both WakeMed proposals, WakeMed as a system has ***by far*** the greatest need for additional bed capacity when compared to other existing acute inpatient bed providers in Wake County. In fact, after considering the recent beds awards for the 2022 Need Determination, as well as updated data for the *Proposed 2024 SMFP*, WakeMed is the only system with a calculated deficit in planning year 2025 according to the standard SMFP methodology. Duke Health and UNC Rex systems have calculated surpluses of 1 and 3 beds, respectively, in 2025.

Table 5 below is an excerpt from both WakeMed proposals. It demonstrates the calculated acute care beds deficit among the three systems. It shows not only the calculated deficit for the WakeMed System, but also demonstrates that if the Agency were to award 35 beds to WakeMed North and 9 to WakeMed Cary, the WakeMed System will still have a deficit of 4 beds (48-44=4).

Table 5: Adjusted Table 5A, Acute Care Bed Need Projections After Distribution of 2022 Need Determination, 2023 SMFP

Lic #	Facility Name	Lic. Acute Care Beds	Adj. for CONs/ Previous Need	Inpatient Days of Care	Projected Days of Care	2025 Projected ADC	2025 Beds Adj. for Target Occ.	Projected 2025 Deficit or (Surplus)
a	b	c	d	e	f	g	h	i
	Duke Green Level Hospital	0	40	0	0	0	0	(40)
H0238	Duke Raleigh Hospital	186	(22)	50,580	53,035	145	203	39
	Duke University Health Sys	204	18	50,580	53,035	145	203	**(1)**
H0065	Rex Hospital	418	68	126,505	132,645	363	483	**(3)**
H0199	WakeMed	574	45	177,096	185,691	508	651	32
H0276	WakeMed Cary Hospital	200	0	53,859	56,473	155	216	16
	WakeMed Health & Hospitals	774	45	230,955	242,164	663	867	**48**

Source: Section C.4, "WakeMed System Calculated Deficit," WakeMed North (p.49, Table 3) and WakeMed Cary (p.44, Table 3) applications.

The same bed deficit cannot be said of the other two applicant hospitals. The SMFP standard methodology forecasts excess capacity for DraH because it includes the relief provided by DGL beds and the 18 additional beds awarded from the 2022 Wake County Acute Care Bed review. The difference between UNC Rex and the SMFP calculation is the result of UNC Rex methodology choice of an artificial population in need.

Finally, WakeMed asks the Agency to consider the forecast beds not occupied at each institution in 2028, using data as presented by each application in their respective Forms C.1 b. All applications are aligned to the same year for comparability. WakeMed North and WakeMed Cary applications demonstrate greater use of the available 44 beds in 2028 than the other applicants. The two WakeMed applications also demonstrate better geographic distribution of available beds.

Table 6 Projected Acute Care Beds Not in Use, FY 2028

Hospital	Number of Licensed Beds[1]	Projected Occupancy Rate 2028	Beds Not Occupied (a)
WakeMed North	106	73.3%	28.3
WakeMed Cary	209	74.3%	53.7
UNC Rex Main	480	86.9%	56.3
Duke Raleigh	245	73.2%	65.6

Source: Form C.1.b from each application.
*Note (a): Calculation: multiply licensed beds by 1 minus projected occupancy rate to obtain beds not occupied. Example: WakeMed North: 106 *0.267 = 0.283 = 28.3%.*

Conformity with Criterion 3a - Reduction or Elimination of Services

The DraH, UNC Rex and WakeMed Cary applications propose to convert some of their unlicensed Observation beds to licensed Acute Care beds. (As previously mentioned, WakeMed North currently has no Observation beds.) Observation beds are not specifically regulated under the CON Statute and have no utilization standard, but they serve an important role in patient throughput and hospital operations. These beds can be used to manage emergency department overflow and also provide a holding area for post-procedural patients awaiting discharge or admission. In terms of appearance, they may be indistinguishable from licensed beds.

Because space in an acute care hospital is finite, Observation beds taken out of service for other uses, even if converted to licensed Acute Care beds, reduces a hospital's capacity to treat patients who are not "admitted" as inpatients. Neither DraH nor UNC Rex described their current Observation bed capacity, or how many Observation beds would remain in their respective facilities following project completion. Given that both DraH and UNC Rex cited increasing emergency department utilization and how additional licensed acute bed capacity would help alleviate ED overcrowding, it was not clear how, if at all, their Observation patients would be accommodated going forward. By contrast, the WakeMed Cary application provided the current and proposed number of Observation beds, as well as a projection method for utilization. While WakeMed North currently does not have Observation beds, WakeMed provided its proposed total (15 beds), as well as utilization projections. DraH and UNC Rex do not conform with Review Criterion 3a.

[1] Licensed beds at project completion.

Access by Underserved Groups

As noted earlier, because the four applicants propose very different mix of services, it is not possible or reasonable to compare Medicare and Medicaid percentages or days. This is consistent with prior Agency Decisions in both the Wake County Acute Care Bed Review in 2022 and Buncombe/ Yancey /Swain /Graham Bed Review in 2022.

Physician Support

Both WakeMed North's and WakeMed Cary's proposed projects are highly supported by physicians and members of the community. More than 300 letters were submitted by physicians and members of the public in support of WakeMed Cary's request for 9 Acute Care beds. Separately, more than 300 letters were submitted in support of WakeMed North's request for 35 Acute Care beds and 15 Observation beds. Additional letters of support received during the Public Comment Period for both projects are being submitted with these comments.

Regulatory Barriers

One applicant in the review cycle, WakeMed North Hospital, cannot build necessary infrastructure to support growth without approval of the proposed CON. WakeMed North is not a "main campus" as defined in G.S. 131E-176(14n). Consequently, it cannot take advantage of the construction and development exemption available to other applicants in this review cycle under G.S. 131E-184(g). WakeMed North, as a satellite campus of WakeMed, can only be exempted from review for capital projects that do not exceed the current CON capital threshold of $4.216 million.

Approval of the WakeMed North Hospital application is the only way the Agency can permit WakeMed North to develop relief for its consistently overcrowded Emergency Department and highly-utilized Acute Care beds. At a minimum, WakeMed North needs CON approval to develop infrastructure and Observation bed capacity.

WakeMed North is also the only applicant in the review that has no available space to renovate for Acute Care beds or Observation beds. The proposed project is the only long-term option to optimize the site for additional capacity.