

**Acute Care Committee Agency Report  
Adjusted Need Petition  
for the Wake County the Acute Care Bed Service Area  
in the 2021 State Medical Facilities Plan**

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***Petitioner:***

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***Request:***

Duke University Health System requests an adjusted need determination for 20 acute care beds in Wake County in the *2021 State Medical Facilities Plan (SMFP)*.

***Background Information:***

Chapter Two of the *SMFP* provides that “[a]nyone who finds that the *North Carolina State Medical Facilities Plan* policies or methodologies, or the results of their application, are inappropriate may petition for changes or revisions. Such petitions are of two general types: those requesting changes in basic policies and methodologies, and those requesting adjustments to the need projections.” The annual planning process and timeline allow for submission of petitions requesting adjustments to need projections during the comment period for the proposed *SMFP* in the summer. This includes petitions for adjustments based on a belief that “unique or special attributes of a particular geographic area or institution give rise to resource requirements that differ from those provided by application of the standard planning procedures and policies....” It should be noted that any person might submit a certificate of need (CON) application for a need determination in the Plan. The CON review could be competitive and there is no guarantee that the petitioner would be the approved applicant.

In the standard acute care need methodology in the *SMFP*, a single-county service area is a county that has at least one licensed acute care hospital (hospital). Not each county has a licensed hospital. In such cases, a multicounty service area is created. A multicounty service area is formed by two or more counties that are grouped according to the county(ies) where patients originating from the county without a hospital go to receive inpatient acute care services. The *SMFP* distinguishes between “single” hospitals and “hospitals under common ownership.” Hospitals that are under

common ownership are “owned by the same or a related legal entity as at least one other acute care hospital in the same service area.”

In one step of the methodology, projected inpatient days of care (DOC) are calculated for the projection year. To do this, the percentage change in inpatient DOC over the previous five reporting years is used to determine each service area’s Growth Rate Multiplier. When the multiplier is positive, it is compounded for four years of growth and multiplied by the current year’s reported inpatient DOC. This number is divided by 365.25 and adjusted by an occupancy factor to project the number of beds needed. The occupancy factor is based on each facility’s average daily census (ADC). It is important to note that facilities with higher ADCs have lower occupancy factors. As a result, the adjusted projected number of beds needed decreases as the ADC increases.

Multiple steps are undertaken to determine the number of beds, if any, needed in a service area. First, it is determined whether a single hospital or a group of hospitals under common ownership in the service area has a deficit of beds that equal at least 20 beds or 10% of the single hospital’s or group of hospital’s planning inventory. Next, the deficits of all single hospitals and group of hospitals are added together. From that number, need determinations from prior SMFPs for which CONs have not been issued are subtracted. If this difference is at least 20 beds, or 10% of the planning inventory of a single hospital, or 10% of the inventory of a group of hospitals, then the need determination is equal to the difference.

There are four hospitals that operate in the Wake County service area: Duke Raleigh, operated by the Duke University Health System; Rex Hospital, operated by UNC Health Care System; and WakeMed Hospital and WakeMed Cary Hospital, both operated by the WakeMed System. According the standard need methodology, Rex Hospital and the WakeMed System hospitals project a surplus of acute care beds. Duke Raleigh Hospital shows a deficit of 12 acute care beds. However, based on the methodology and need-triggering thresholds described above, there is not a need for acute care beds in the Wake County service area in the *Proposed 2021 SMFP*.

***Analysis/Implications:***

The Petitioners explain that there had been increases in DOC during the first five months of the 2020 reporting year. However, during the months of March 2020 through May 2020, adjustments that Duke Raleigh had to make due to the COVID-19 pandemic temporarily depressed utilization of inpatient acute care beds. According to the Petition, DOC began rebounding in June. Petitioners are concerned that the growth Duke Raleigh was experiencing will not be adequately reflected in subsequent *SMFPs* due to the interruption in normal operations and utilization.

To determine the potential impact of the momentary decrease in DOC on the triggering of a need in Wake County in the *2022 SMFP*, the Agency applied the standard need determination methodology using DOC for the 2020 reporting year (i.e., October 1, 2019 – September 30, 2020). To calculate total 2020 DOC at Duke Raleigh, the Agency used October to June DOC for the facility as reported in the petition. The DOC reported for June were replicated for each of the remaining months of the reporting period (4,117 DOC x 3 months). Thus, the estimated 2020 DOC for Duke Raleigh total 48,794. To estimate 2020 DOC for the other three hospitals in Wake, the 2019 DOC for each facility were multiplied by Wake County’s Growth Rate Multiplier as

published in the *Proposed 2021 SMFP*. These numbers are listed as “Inpatient Days of Care” in Table 1.

**Table 1. Estimates for Table 5A in the 2022 SMFP**

License Number	Facility Name	Licensed Acute Care Beds	Adj. for CONs/ Previous Need	Inpatient Days of Care	County Growth Rate Multiplier	Projected Days of Care	Projected 2024 Average Daily Census (ADC)	Projected 2024 Deficit or Surplus (surplus shows as a "-")	2024 Need Determination
H0199	WakeMed	628	36	167,243	1.0285	187,121	512	656	-8
H0276	WakeMed Cary	178	30	49,172	1.0285	55,017	151	211	3
	<b>WakeMed</b>	806	66			242,138	663	867	-5
H0065	Rex Hospital	439	50	120,123	1.0285	134,401	368	489	0
H0238*	Duke Raleigh	186	0	48,794	1.0285	54,594	149	209	23

Based on the data and calculations shown in Table 1, the Wake County service area is expected to show a need for 23 beds in the *2022 SMFP*.

In addition to owning Duke Raleigh in Wake County, the Duke University Health System owns Duke Regional Hospital and Duke University Hospital (DUH) in the Durham/Caswell multicounty service area. The Petitioner notes that a sizeable and growing percentage of patients served in acute care beds at DUH in the Durham/Caswell service area are residents of Wake County. The Petitioner posits that Wake County’s average daily census (ADC) would be greater if Wake County residents going to DUH could be served in Wake County. In other words, the Petitioner asserts that Wake County needs more beds so that Wake County residents can be served in Wake County rather than utilizing DUH. The Agency notes that, according to data provided on the *2020 License Renewal Application*, Duke Raleigh currently has ADC of 132.6. Even if more DUH patients who are residents of Wake County were served at Duke Raleigh, the highest ADC possible for Duke Raleigh is equal to 186, its number of licensed beds. In the standard methodology, the corresponding occupancy factor for an ADC of 186 is 1.40. This same occupancy factor is applied to any facility with an ADC between 100 and 200. Thus, an increased ADC would have no impact on the calculation of the bed deficit for Duke Raleigh.

The Agency also examined the out-migration patterns of residents of Wake County utilizing DUH in the Durham/Caswell County service area. Since data year 2015, Duke Raleigh’s utilization has been increasing as evidenced by its decreasing bed surplus over four years and the 12-bed deficit occurring most recently in the fifth year. However, during the same time period, the percentage of Wake County patients being served at DUH has not changed significantly. In other words, out-migration to DUH does not appear to be dependent upon the bed surpluses or deficits experienced by Duke Raleigh (see Table 2).

**Table 2. Patient Outmigration and Acute Bed Surpluses/Deficits\***

Patient Origin Report Data Year	% Wake Patients Outmigration to Duke University Hospital	Duke Raleigh Bed Surplus/Deficit in Wake
2019	13.49%	12
2018	13.32%	-7
2017	12.17%	-11
2016	12.55%	-38
2015	12.37%	-34

Sources: 2016 – 2020 Patient Origin reports; 2017 – 2020 SMFPs; 2021 Proposed SMFP

\*surpluses show as a "-"

In comparison to Duke Raleigh, DUH offers access to a more extensive list of services. Thus, it is more plausible that the need for particular services, rather than a deficit of beds in Wake County, is what draws Wake County patients to DUH.

As an alternative to the proposal to solely adjust Wake County’s need, the Petitioner proposes decreasing Durham/Caswell service area’s need determination and increasing Wake’s to 20 beds. In considering this alternative, the Agency notes that any healthcare provider within a service area can submit a CON application for acute care beds in a need determination. In reviewing the DOC trends for Wake and Durham/Caswell, the Agency found that Wake’s DOC between data years 2015 and 2019 have grown at a rate similar to the State’s overall. Meanwhile, Durham/Caswell’s is almost twice that of the State (see Table 3), suggesting that Durham/Caswell’s need determination appropriately reflects growing utilization - not only for hospitals in the Duke University Health System, but for the general service area as well.

**Table 3. Growth in Days of Care, Data Years 2015 – 2019**

Service Area		Data Year					Average Annual Change Rate	CAGR
		2015	2016	2017	2018	2019		
Durham/Caswell	DOC	338,319	336,584	350,176	357,425	368,312	2.16	2.15
	Annual Growth Rate		-0.51	4.04	2.07	3.05		
Wake	DOC	365,752	344,874	364,851	364,253	381,908	1.19	1.09
	Annual Growth Rate		-5.71	5.79	-0.16	4.85		
State	DOC	4,501,142	4,453,154	4,550,906	4,599,703	4,727,633	1.25	1.23
	Annual Growth Rate		-1.07	2.20	1.07	2.78		

***Agency Recommendation:***

The Petitioner has requested an adjusted need determination of 20 acute care beds in the Wake County service area. Based on the data provided by the Petitioner, it is reasonable to believe that the standard need methodology will trigger a need for acute care beds in this service area in the 2022 *SMFP*. Further, out-migration patterns to Duke University's Health System Hospitals in the Durham/Caswell service area by patients from Wake County do not have an impact on the calculations of projected need in the Wake County service area, nor do these patterns appear to be influenced by bed deficits at Duke Raleigh Hospital. Thus, given available information and comments submitted by the August 12, 2020 deadline, and in consideration of factors discussed above, the Agency recommends denial of the petition to adjust the acute care bed need determination for the Wake County service area in the 2021 *SMFP*.