

**Technology and Equipment Committee
Agency Report
Petition for Adjusted Need Determination for
One Linear Accelerator (LINAC) in Service Area 20
2022 State Medical Facilities Plan**

Petitioner:

WakeMed
3000 New Bern Avenue
Raleigh, NC 27610

Contact:

Thomas Gough
Executive Vice President & Chief Operating Officer
(919) 350-1960
tgough@wakemed.org

Request:

WakeMed requests an adjusted need determination for one additional linear accelerator (LINAC) in Service Area 20, which includes Wake and Franklin counties, in the *2022 State Medical Facilities Plan (SMFP or “Plan”)*.

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 SMFP annual planning process and timeline allow for submission of petitions for changes to policies and methodologies in the spring and petitions requesting adjustments to need projections in the summer. Any person may 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.

The standard LINAC methodology in the SMFP incorporates a geographic accessibility criterion (a population base of 120,000), a criterion aimed at assuring efficient use of megavoltage radiation facilities (when Equivalent Simple Treatment Visits (ESTV) procedures divided by 6,750 minus the number of existing linear accelerators equals at least .25) and, a patient origin criterion that indicates when a service area has 45 percent or more of its patients coming from outside the service area. A need determination is generated when two of the three criteria are met within a service area. Application of the methodology to utilization data in the Proposed 2022 SMFP did not generate a need determination for one additional LINAC in Service Area 20.

Counties are the basic units for the formation of linear accelerator service areas, based on proximity, utilization patterns, and patient origin data. A small percentage of the population lives some distance from a linear accelerator, but the sparsity of population in and around these areas does not provide the population required to support a linear accelerator.

WakeMed submitted a petition for an adjusted need determination to add a LINAC scanner in Service Area 20 for the following reasons: 1) overall population growth; 2) inventory and utilization of existing linear accelerators in Service Area 20; and 3) projected growth in cancer patients.

Analysis/Implications:

Service Area 20 has five LINAC service providers and 11 LINACs. Service Area 20 consists of Wake and Franklin counties (see Table 1). WakeMed currently does not operate a LINAC. Service Area 20 reported 46,285 procedures (ESTVs) in the Proposed 2022 SMFP, for an average of 4,208 per LINAC. This number is well below the need determination threshold and results in a surplus of 4.14 LINACs in the service area. None of the existing providers is operating above the need determination threshold.

Two of the existing LINACs within Service Area 20 are not operational. The equipment at UNC Hospital-Holly Springs is not yet developed, and the LINAC at the Franklin County Cancer Center has not been operational since 2018. The Petitioner suggests removing the nonoperational LINACs and only using the nine operational LINACs to assess need. However, doing so yields 5,241 average procedures per LINAC, which is still below the required 6,750 ESTV threshold for an additional LINAC in Service Area 20. As reported in the Proposed 2022 SMFP, Service Area 20 has experienced 14.72% annual change in ESTVs over the past 5 years, for a compound annual growth rate (CAGR) of 3.49% (see Table 1).

Table 1: Service Area Trends in LINAC ESTVs, Data Years 2016 – 2020

	2018 SMFP	2019 SMFP	2020 SMFP	2021 SMFP	Proposed 2022 SMFP	Total % Change	CAGR
Franklin County Cancer Center	13	8	33	0	0	-100%	-100%
Duke Raleigh (4 LINACs)	17,633	18,146	19,929	21,286	19,985	13.34%	3.18%
Rex Hospital (4 LINACs)	22,699	24,281	22,514	22,493	22,858	0.70%	0.17%
UNC Hospital – Holly Springs	0	0	0	0	0	0	0
UNC Rex Cancer Care	0	275	5,370	3,764	3,443	n/a	n/a
Service Area Totals	40,345	42,709	47,845	47,543	46,285	14.72%	3.49%

Source: 2017 – 2021 License Renewal Applications and Registration and Inventory Forms.

Note: The data in the SMFP is two years earlier than the publication year of the SMFP.

In addition, Service Area 20 is the second highest populated LINAC service area in the state. According to the Proposed 2022 SMFP, Service Area 20 reported a total population of 1,189,588. The two counties that make up Service Area 20 had a steady growth in population over the last four years with a CAGR of 1.57% (see Table 2). With minimal growth in population, 85.22% of current LINAC patients served in Service Area 20 come from Wake County. There is not an influx of patients leaving or coming into the service area for treatments.

Table 2: Population Trends in Service Area 20, 2017 – 2021

	Population					Total % Change	CAGR
	2017	2018	2019	2020	2021		
Service Area 20	1,117,858	1,138,826	1,165,211	1,180,095	1,189,588	6.42%	1.57%
Service Area Annual Change		1.876%	2.32%	1.28%	0.80%		

Source: 2017 – 2021 SMFP

Note: The data in the SMFP is two years earlier than the publication year of the SMFP.

The LINAC methodology uses geography, population and reported ESTV procedures to determine whether additional scanners are needed in a service area. Utilization in the Proposed 2022 SMFP does not reflect immediate or near-term need for an additional scanner. Moreover, LINAC utilization should increase once UNC Hospital - Holly Springs is operational.

The Petitioner also states that having a LINAC would improve the continuity of care for their patients. While this concern may have some validity, there is ample access to LINAC services or patients in Wake County.

Agency Recommendation:

The Agency supports the standard methodology for LINAC equipment in the Proposed 2022 SMFP. However, in consideration of the above, the Agency recognizes the historical and trending LINAC utilization in Service Area 20 does not support an additional LINAC outside of the methodology. Given available information submitted by the August 11, 2021 deadline date for comments and in consideration of factors discussed above, the Agency recommends denial of the petition for an adjusted need determination for an additional LINAC in Service Area 20 in the 2022 SMFP.