

**Technology and Equipment Committee  
Agency Report  
Petition to Add Need Determination for  
One Linear Accelerator (LINAC) in Service Area 7  
2021 State Medical Facilities Plan**

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**Petitioner:**

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**Request:**

The Charlotte-Mecklenburg Hospital Authority d/b/a Atrium Health requests an adjusted need determination for one additional linear accelerator (LINAC) in Service Area 7 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 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. 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.

The standard methodology uses counties as the basic units for the formation of LINAC service areas. It incorporates: a geographic accessibility criterion (a population base of 120,000); a criterion aimed at assuring efficient use of megavoltage radiation facilities, i.e., when Equivalent Simple Treatment Visit (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 at least 45% or more of a service area’s LINAC patients come from outside that service area. Service Area 7 consists of Anson, Mecklenburg and Union counties. 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 2021 SMFP did not generate a need determination for one additional LINAC in Service Area 7.

Atrium Health submitted a petition for an adjusted need determination to add a LINAC in Service Area 7 for the following reasons: 1) increased growth of population in the service area, 2) increase in the number of LINAC procedures performed, and 3) “high” utilization of Atrium’s existing LINACs in the service area.

**Analysis/Implications:**

Service Area 7 has 11 operational LINACs, 10 in Mecklenburg County and one in Union County. Atrium Health operates five in Mecklenburg County and one in Union County. Novant Health operates four at its hospitals and one at Matthews Radiation Oncology Center (through a joint venture). In addition, Matthews Radiation Oncology Center has one CON-approved LINAC not yet in operation.

Service Area 7 leads the state in population and utilization of LINACs. The Proposed 2021 SMFP shows that the Atrium Health facilities have a high volume of LINAC procedures. Four of the six facilities in Service Area 7 are operating LINACs with average procedures that exceed the 6,750 ESTV threshold. Three of those are Atrium Health facilities. Atrium Health has experienced positive overall growth over the past five years. However, the annual changes have been both positive and negative (see Table 1). As reported in the Proposed 2021 SMFP, Atrium Health facilities had 6% growth over the past five years, while Service Area 7 had 14.32% growth over the same period. Atrium Health shows that their LINACs are well utilized, but the compound annual growth rate (CAGR) for all Atrium facilities is 1.47%, which is substantially lower than the 4.15% CAGR for all providers in the service area (see Table 1).

**Table 1: Service Area and Statewide Trends in LINAC ESTVs, Data Years 2015 - 2019**

	2017 SMFP	2018 SMFP	2019 SMFP	2020 SMFP	Proposed 2021 SMFP	Total % Change	CAGR
<b>Atrium Health Pineville</b>	9,699	10,892	10,070	7,133	10,451	7.75%	1.88%
<b>Carolinas Medical Center</b>	19,694	16,602	18,946	19,210	18,602	-5.54%	-1.42%
<b>Atrium Health</b>	7,620	7,154	7,420	8,164	8,428	10.60%	2.55%
<b>Atrium Health Union</b>	6,633	7,739	8,072	8,988	8,783	32.41%	7.27%
<b>Atrium Health Totals</b>	43,646	42,387	44,508	43,495	46,264	6%	1.47%
<b>Atrium Health Facilities Annual Change</b>		-2.88%	5.00%	-2.28	6.37%		
<b>Service Area Totals</b>	64,034	63,589	64,866	65,901	75,340	17.66%	4.15%
<b>Service Area Annual Change</b>		-0.69%	2.01%	1.60%	14.32%		

Source: 2016 – 2020 License Renewal Applications

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

In addition, Service Area 7 is the most populated LINAC service area in the state, with a total population of 1,378,507, as reported in the Proposed 2021 SMFP. Mecklenburg County makes up 81% of the population in Service Area 7. The three counties that make up Service Area 7 have experienced population growth over the last four years, but the annual percentage growth rate has slowed (see Table 2).

**Table 2: Population Trends in Service Area 7, Data Years 2016 - 2019**

	2016 Population	2017 Population	2018 Population	2019 Population	Total % Change	CAGR
<b>Service Area 7</b>	1,306,187	1,332,095	1,357,435	1,378,507	5.54%	1.81%
<b>Service Area Annual Change</b>		1.98%	1.90%	1.55%		

*Source: 2017 – 2020 SMFP*

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

In the Proposed 2021 SMFP, Service Area 7 is close to triggering a need determination for an additional LINAC. However, the Matthews Radiation Oncology Center has recently received a CON for an additional LINAC. Based on the historical utilization in Service Area 7 and the recently approved LINAC, the Agency sees no immediate need for an additional LINAC.

**Agency Recommendation:**

The agency supports the standard methodology for LINAC equipment in the Proposed 2021 SMFP. Given available information submitted by the August 12, 2020 deadline and in consideration of factors discussed above, the agency recommends denial of the petition for an adjusted need determination for an additional LINAC for Service Area 7 in the 2021 SMFP.