

**Technology and Equipment Committee  
Agency Report  
Adjusted Need Petition for  
One Linear Accelerator in Service Area 20  
Proposed 2014 State Medical Facilities Plan**

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***Petitioner:***

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***Request:***

Duke Raleigh Hospital requests an adjusted need determination in Service Area 20 (Wake and Franklin Counties) for one linear accelerator, to meet a perceived unmet demand for additional linear accelerator capacity in the service area.

***Background Information:***

The Proposed 2014 State Medical Facilities Plan (SMFP) provides standard need determination methodology for linear accelerators that incorporates three criteria: geographic accessibility, efficiency (utilizing the concept of an Equivalent Simple Treatment Visit (ESTV) for radiation treatments) and patient origin parameters. A need determination is generated when two of the three criteria are met within the service area. A fourth criterion stands alone to address the exception that, regardless of whether two of the first three criteria are met, if a county population reaches 120,000 or more and there is no linear accelerator in that county, a need is determined for one linear accelerator for that county. That county then becomes a separate, new linear accelerator service area.

Service Area 20 previously included Wake, Franklin and Harnett Counties. For the Proposed 2014 SMFP, Harnett County's population exceeded 120,000 with no linear accelerator in the county. Based upon the methodology, Harnett County will no longer be in Service Area 20 (now Wake and Franklin Counties) but will become Service Area (21) and show a need determination for one linear accelerator. Application of the standard methodology to utilization data in the

Proposed 2014 SMFP does not generate a need determination for a linear accelerator in Service Area 20 (Wake and Franklin Counties).

Chapter Two of the North Carolina Proposed 2014 SMFP allows persons to petition for an adjusted need determination in consideration of "...unique or special attributes of a particular geographic area or institution..." if they believe their needs are not addressed by the standard methodology. Duke Raleigh Hospital has submitted a petition to adjust the need determination in Service Area 20 to reflect what they believe to be unmet need for additional linear accelerator capacity within the service area. Duke Raleigh Hospital believes this need is unmet due to "two machines included in the inventory that are not meaningfully contributing to meeting the need in the area."

***Analysis/Implications:***

The methodology in the Proposed 2014 SMFP derives a total number of linear accelerators by summing the number of operational linear accelerators, the number of approved linear accelerators not yet operational but for which a certificate of need has been awarded and the linear accelerator need determinations from previous years if a certificate of need (CON) has not yet been awarded.

As shown in Table 9H in the Proposed 2014 SMFP, Area 20 has a total of nine linear accelerators, including one approved linear accelerator not yet operational but awarded a certificate of need based on a need determination from the 2007 SMFP. With a total of 45,119 adjusted ESTV procedures and an average of 5,013 adjusted procedures per accelerator in the Proposed 2014 SMFP, Area 20 does not exceed the threshold of 6,750 ESTV procedures per accelerator. The data shows that Duke Raleigh Hospital exceeds the threshold of 6,750 ESTV procedures per accelerator. However, the methodology looks at the aggregate of equipment within the entire service area, not an individual facility.

The petition states "apparent capacity in the service area may not be available as a practical matter to alleviate demand." The circumstances that affect the actual capacity are stated in the petition to be attributed to an approved linear accelerator that is not yet in operation and one underutilized linear accelerator in the service area.

The 2007 SMFP included a need determination for a linear accelerator for Service Area 20. On February 4, 2011, a CON was issued to Cancer Centers of North Carolina (CNCC). The petition states that CNCC reported intentions to begin operation in 2015. Our review of the latest CON progress report from CNCC revealed that an architectural firm has been engaged and a timeline has been revised that includes plans to order equipment by December 1, 2013 and begin operations by September 2014. The operation of this new linear accelerator will provide increased access to services in Service Area 20. The standard need determination methodology for all equipment in the SMFP includes a placeholder for approved equipment for which a CON was issued but is pending development. This inclusion is set forth to prevent the same need from appearing in subsequent SMFPs during the time of development of that equipment.

Overall linear accelerator utilization since the 2007 SMFP in Service Area 20 has seen a slow, steady growth that has not yet been sufficient to trigger a need determination. One linear accelerator in Franklin County was in operation but did not report utilization until the 2013 SMFP. The utilization volume reported for this equipment was 1,407 ESTVs in the 2013 SMFP and 141 ESTVs in the Proposed 2014 SMFP. The methodology does not establish a definition for, or take into consideration “under-utilization” of a specific piece of equipment.

The petition suggests an unidentified need due to the inventory including the “under-utilized” and undeveloped linear accelerators. If the standard methodology inventory criteria were ignored for Service Area 20, as suggested in the petition, the inventory would then be seven linear accelerators (excluding the linear accelerator reporting “low” utilization and the approved linear accelerator not yet in operation). Based upon 44,979 adjusted ESTV procedures (excluding the procedures performed on the linear accelerator reporting “low” utilization), there would be an average of 6,426 adjusted procedures per accelerator. This volume does not exceed the threshold of 6,750 ESTV procedures per accelerator and no need would be demonstrated in Service Area 20 utilizing the adjusted inventory. An unidentified need cannot be demonstrated due to the inclusion of the under-utilized and undeveloped linear accelerators.

For the Proposed 2014 SMFP, 75 of the total of 300 linear accelerator patients from Harnett County were treated at Duke Raleigh Hospital. A total of 124 Harnett County residents received linear accelerator services in Service Area 20. The introduction of the additional linear accelerator in Harnett County within the newly created Service Area 21 is anticipated to draw at least a portion of those Harnett County residents back to the county from the neighboring Service Area 20.

***Agency Recommendation:***

The agency believes that the linear accelerator standard methodology and the current inventory are adequately addressing the needs of the people in Wake, and Franklin Counties. The unique circumstances in Service Area 20 do not demonstrate the necessity for an adjusted need determination. The Proposed 2014 SMFP presents a new service area for Harnett County (previously within Service Area 20) that is anticipated to affect access to care in this region. Given available information submitted by the August 16, 2013 deadline date for comments on petitions and comments, and in consideration of factors discussed above, the agency recommends that the petition for an adjusted need determination for one additional linear accelerator in Service Area 20 be denied.