

**Technology and Equipment Committee
Agency Report
Petition to Add Need Determination for
One Gamma Knife in the Western Region
Health Service Area (HSA) I, II and III
2020 State Medical Facilities Plan**

Petitioner:

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Request:

The Charlotte-Mecklenburg Hospital Authority d/b/a Atrium Health requests a special allocation for one Gamma Knife in the western region of the state in Health Service Areas (HSA) I, II and III in the 2020 State Medical Facilities Plan (*SMFP*).

Background Information:

Chapter Two of the SMFP allows for “[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 SMFP does not provide a standard methodology for gamma knife equipment. A summer petition is required to place a need in the upcoming SMFP. Atrium Health has submitted a petition for the 2020 SMFP to adjust the need determination to include one gamma knife in the western region (HSAs I, II and III) of the state.

Analysis/Implications:

North Carolina currently has 2 operational gamma knives, one in each of the two planning regions. The gamma knife in the Western Region (HSA I, II and III) is operated by North Carolina Baptist

Hospital and the gamma knife in the Eastern Region (HSA IV, V and VI) operated by Vidant Medical Center. The State of North Carolina has 3 types of equipment that are capable of performing stereotactic radiosurgery (SRS) procedures – gamma knife, linear accelerator (LINAC) based SRS, and CyberKnife. The type of equipment used during a procedure will depend, in part, on the diagnosis by the physician. Over a 5-year span the compound annual growth rate (CAGR) for gamma knife procedures in the western region was 7.19%. (see Table 1)

Table 1: Western Region Gamma Knife Procedure Trends, Data Years 2014-2018

	2016 SMFP	2017 SMFP	2018 SMFP	2019 SMFP	2020 SMFP	CAGR
Procedures	375	439	460	457	495	7.19%
Percent of Change		17.1%	4.8%	-0.65%	8.3%	

Source: 2015 – 2019 License Renewal Applications

Note: Data in SMFP is 2 years earlier than the publication of the SMFP.

In comparison to the surrounding states, North Carolina has a high population to gamma knife ratio. (see Table 2) Georgia has a similar population with more than double the available gamma knives. Virginia has a smaller population but double the number of gamma knives. Based on population alone, the state of North Carolina can support an additional gamma knife.

Table 2: State Population per Gamma Knife, Data Year 2018

State	Population	Number of Gamma Knives	Population per Gamma Knife
North Carolina	10,383,620	2	5,191,810
Georgia	10,519,475	5	2,103,895
South Carolina	5,084,127	2	2,542,064
Tennessee	6,700,010	2	3,350,005
Virginia	8,517,685	4	2,129,421

Source: U.S. Census Bureau

Throughout the Petition, Atrium Health mentions that in the Levine Cancer Institute there are numerous diagnoses where the gamma knife could be used for treatment. In 2018, they treated patients that could have potentially benefited from an estimated 1,618 gamma knife procedures. Treatment using gamma knife is based on recommendation from a physician. Considering the state does not collect data detailing the procedures, we cannot delineate the procedures that being performed on a gamma knife. However, the growing expansion of The Levine Cancer Institute has generated growth in patients that could benefit from gamma knife procedures.

Agency Recommendation:

The SMFP does not have a standard methodology for gamma knife equipment. As such, there is no minimum utilization required to trigger a need for an additional gamma knife. The Agency supports the process and requirements to obtain equipment based on the CON Law and rules. Given available information submitted by the August 8, 2019 deadline date for comments on

petitions and comments, and in consideration of factors discussed above, the Agency recommends approval of the petition for a special allocation need determination of one unit of gamma knife equipment in HSA III.