

**Acute Care Committee Agency Report
Adjusted Need Petition
for One Operating Room in the Cumberland County Service Area
in the 2024 State Medical Facilities Plan**

Petitioner:

Cape Fear Valley Health System
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Request:

Cape Fear Valley Health System (CFVHS or “Health System”) requests an adjusted need determination for one operating room (OR) for the purpose of training surgical residents in the Cumberland County service area in the *2024 State Medical Facilities Plan (SMFP)*.

Background Information:

Chapter Two of the *SMFP* notes that during the summer, the Agency accepts petitions that “involve requests for adjustments to need determinations in the *Proposed SMFP*. Petitioners may submit a written petition requesting an adjustment to the need determination in the *Proposed SMFP* if they believe that special attributes of a service area or institution give rise to resource requirements that differ from those provided by the standard methodologies and policies.” It should be noted that any person may submit a certificate of need (CON) application for a need determination in the *SMFP*. The CON review could be competitive and there is no guarantee that the petitioner would be the approved applicant.

The OR need methodology consists of several steps to calculate the number of ORs needed in each service area. Step 3 outlines the standard hours for ORs according to facility type (Table 1). Standard hours are based on the assumption that an OR will be available for up to 75% of a given number of hours per day and a given number of days per year.

Table 1. Standard Hours for Operating Rooms

Facility Type	Standard Hours per Operating Room per Year
Academic Medical Center Teaching Hospitals	1,950
Hospitals reporting more than 40,000 surgical hours	1,950
Hospitals reporting 15,000 to 40,000 surgical hours	1,755
Hospitals reporting less than 15,000 surgical hours	1,500
Separately licensed ambulatory surgical facilities that perform at least 50 percent of their procedures in either ophthalmology or otolaryngology, or a combination of the two specialties	1,312
All separately licensed ambulatory surgical facilities not in Group 5	1,312

Source: *Proposed 2024 SMFP*

Surgical case times are integral in the calculations to determine the number of ORs needed. In Step 4 of the methodology, a growth factor is determined by the service area's population during the reporting year and the projected population for the service area during the projection year. Then that growth factor is multiplied by the surgical hours for each facility in the service area to project surgical hours for the projection year and the number of ORs needed for the projected surgical volume. The OR need determinations in the *2024 SMFP* will reflect the number of ORs that are projected to be required in 2026.

Cape Fear Valley Health System includes two hospitals in Cumberland County – Cape Fear Valley Medical Center (CFVMC), which operates 19 licensed ORs and Highsmith-Rainey Specialty Hospital, which operates three ORs. The *Proposed 2024 SMFP* shows that the Health System has a projected surplus of 1.31 ORs and CFVMC will have a projected surplus of 2.13 ORs. In February 2023, CFVHS entered a partnership with Methodist University to establish a medical school that will include a surgical residency program on CFVMC's campus. According to the Petitioner, having an OR dedicated to training will allow CFVMC to avoid delays and cancellations for other surgical patients that might occur at the expense of training residents.

Cape Fear Valley Health System began accepting residents from Campbell's School of Osteopathic Medicine in 2017. That same year, CFVHS successfully petitioned the SHCC for an additional OR for the purpose of training surgical residents in inpatient and outpatient procedures. At the time, the *Proposed 2018 SMFP* showed a projected surplus of 3.03 ORs at CFVMC, and the Health System showed a projected surplus of 1.27 ORs.

Analysis/Implications:

Research regarding the length of operative times when surgical residents are being trained as compared to when they are not has been mixed.^{1,2,3} However, CFVHS asserts that an additional OR is needed to train residents due to longer surgical case times. A review of surgical case time data reported on CFVMC's 2018 – 2023 Hospital License Renewal Applications (LRAs) confirms

¹ Uecker, John, et al. "Comparable operative times with and without surgery resident participation." *Journal of Surgical Education* 70.6 (2013): 696-699.

² de Geus, Susanna WL, et al. "Resident involvement in minimally-invasive vs. open procedures." *The American Journal of Surgery* 219.2 (2020): 289-294.

³ Whealon, Matthew D., et al. "Effect of resident involvement on patient outcomes in complex laparoscopic gastrointestinal operations." *Journal of the American College of Surgeons* 223.1 (2016): 186-192.

that while there have been year-to-year fluctuations in case times, the Petitioner’s inpatient case times in 2022 increased by 20.1% and ambulatory case times increased by 5.3% when compared to the hospital’s 2017 case times. Also, as shown in Table 2, CFVMC’s surgical case growth trends suggest that by 2025, its surgical case load will have increased by an estimated 811 cases as compared to the number of cases the facility expects to report for 2023.

Table 2. Cape Fear Valley Medical Center’s Total Surgical Cases

Reported Surgical Cases*					CAGR 2019- 2023	Projected Surgical Cases		
2019	2020	2021	2022	2023**		2024	2025	2026
11,107	10,705	11,469	11,541	12,586	3.17%	12,986	13,398	13,823

* Source for 2019 – 2022 surgical cases: CFVMC’s 2020 – 2023 Hospital License Renewal Applications

** Source: Annualized data provided on p. 7 of CFVHS’s 2023 summer petition for one additional OR in Cumberland County

According to the OR need determination methodology, CFVMC performed 27,486 surgical hours during the 2022 reporting year. Table 3 shows that inpatient surgical hours accounted for over half of the total hours ORs in CFVMC were utilized. However, on average, inpatient cases lasted 47 minutes longer than ambulatory cases. As noted above, one aspect of the methodology is the assumption that one OR in a hospital that reports between 15,000 to 40,000 surgical hours can be available for up to 1,755 standard hours per year. Accordingly, one OR at CFVMC can be expected to be available for a total of up to 737 cases. Therefore, Agency staff conclude an additional OR is needed to support the training of surgical residents at CFVMC.

Table 3. Cape Fear Valley Medical Center’s Operating Room Capacity

		Inpatient Cases	Ambulatory Cases
Total Surgical Hours at CFVMC*	27,486	15,648	11,838
Percent of Total Hours by Case Type		57%	43%
Standard Hours for One OR in Hospitals Reporting 15,000 to 40,000 Surgical Hours	1,755	999	756
CFVMC 2022 Case Times (Hours per Case)**		2.78	2.0
Capacity for Surgical Cases based on 75% Utilization of One OR		359	378

* Source: *Proposed 2024 SMFP*

** Source: CFVMC’s 2023 License Renewal Application

Agency Recommendation:

Cape Fear Valley Health System has requested that the *2024 SMFP* show an adjusted need determination for Cumberland County for one operating room to train surgical residents. The Agency supports the standard methodology for operating rooms as presented in the *Proposed 2024*

Plan. However, given the available information and comments submitted by the August 9, 2023 deadline, and in consideration of factors discussed above, the Agency recommends approval of the Petition to include in the *2024 SMFP* an adjusted need determination for one OR in Cumberland County with the stipulation that it is dedicated to training surgical residents in inpatient and outpatient surgical procedures.