PROPOSED STATE MEDICAL FACILITIES PLAN



Chapter 6: Operating Rooms

CHAPTER 6 OPERATING ROOMS

Introduction

G.S. § 131E-76(18c) defines an *operating room* (OR) as "...a room used for the performance of surgical procedures requiring one or more incisions and that is required to comply with all applicable licensure codes and standards for an operating room."

Definitions

An *OR's service area* is the single or multicounty grouping shown in Figure 6.1. See below for the delineation of service areas.

The *reporting year* is October 1 through September 30. The current reporting year is October 1, 2023 through September 30, 2024.

The methodology calculates OR need for a *projection year*, which is four years beyond the current reporting year. The current projection year is 2028.

The *planning inventory* is the number of ORs used in need determination calculations. It is the number of ORs licensed as of the last day of the reporting year, plus the number of certificate of need (CON)-approved ORs that are under development, plus the number of ORs available pursuant to need determinations pending review or appeal, minus any exclusions described below under Application of the Methodology.

For the purposes of the OR methodology, a *health system* includes all licensed health service facilities with ORs located in the same service area that are owned or leased by:

- 1. the same legal entity (i.e., the same individual, trust or estate, partnership, corporation, hospital authority, or the State or political subdivision, agency or instrumentality of the State); or
- 2. the same parent corporation or holding company; or
- 3. a subsidiary of the same parent corporation or holding company; or
- 4. a joint venture in which the same parent, holding company, or a subsidiary of the same parent or holding company is a participant and has the authority to propose changes in the location or number of ORs in the health service facility.

A health system consists of one or more health service facilities. If the relocation or transfer of ORs to a different health system generates a need, the need determination will not appear until the relocated or transferred ORs are licensed in their new location.

Changes from the Previous Plan

The State Health Coordinating Council (SHCC) approved clarifying language in the third assumption of the OR methodology. The clarification specifies that only patient origin data from Hospital License Renewal Applications (LRAs) should be used to update OR service areas, rather than data on surgical

procedures by county of residence and county of service. This change aligns with the approach outlined in the *Delineation of Service Areas*.

In response to Session Law 2023-7 (SL 2023-7), which states that Qualified Urban Ambulatory Surgical Facilities (QUASFs) are exempt from CON law [see § 131E-176 (9b)], the SHCC approved adjustments to the operating room need determination methodology. A QUASF is defined as an ambulatory surgical facility that meets the following criteria: (1) is licensed by the NC Department of Health and Human Services to operate as an ambulatory surgical facility, (2) has a single specialty or multispecialty surgical program, and (3) is located in a county with a population greater than 125,000 according to the 2020 federal decennial census or any subsequent decennial census [See, § 131E-176 (21a)]. In the current SMFP, QUASF inventory and performance data have been removed from OR need determination calculations.

Operating room need determinations generated by the OR methodology calculations for counties with populations > 125,000 are provided in Table 6B of the current SMFP for informational purposes only. However, the summer petition process, as described in Chapter 2, is available to providers to request the addition of OR need determinations in counties with a population > 125,000 in the following year's SMFP. If a petition is approved, anyone can submit a CON application for the need determination.

Hospital and ASF surgical care providers in counties with a population \leq 125,000 may submit CON applications based on OR need determinations generated by the OR need methodology outlined in Table 6C. They may also submit summer petitions to request adjusted need determinations for ORs in counties with a population \leq 125,000. If a petition is approved, anyone can submit a CON application for the need determination.

Data Sources

The number of cases and procedures come from the Hospital License Renewal Applications (LRAs) and the Ambulatory Surgical Facility LRAs for the reporting year, as submitted to the North Carolina Department of Health and Human Services, Division of Health Service Regulation (Agency).

The inventory of ORs comes from LRAs submitted to the Agency's Acute and Home Care Licensure and Certification Section and approved CONs issued by the Agency.

Population data by county for the reporting year and the projection year come from the North Carolina Office of State Budget and Management.

Assumptions of the Methodology

- 1. In the current SMFP, for the methodology to determine an OR need for a service area, the minimum deficit must be two, after rounding.
- 2. The planning inventory and need determination calculations exclude one OR for each Level I and Level II trauma center, and one OR for each designated burn intensive care unit.
- 3. Beginning with the 2011 SMFP, the Agency updates service areas every three years. To update service areas in the current and future SMFPs, the Agency will use the three most recent years of patient origin data as reported on the LRAs (see below).
- 4. For purposes of these need projections, the number of surgical hours is anticipated to change in direct proportion to the change in the general population of the OR service area.

5. OR utilization is expected to shift across counties due to the impacts of SL 2023-7. During the transition, and in the current SMFP, inventory and performance data for ORs operated by QUASFs have been removed from OR need determination calculations.

Delineation of Service Areas

The SMFP contains two types of OR service areas: single county and multicounty. Counties with at least one facility having a licensed OR that are not grouped with another county are single county service areas. A multicounty service area is created under two conditions: 1) counties without a facility with a licensed OR are grouped with the single county where the largest proportion of its patients received surgery according to patient origin data provided on LRAs; 2) if two counties with at least one facility having a licensed OR each provided surgical services to at least 35 percent of the residents of a county without at least one facility with a licensed OR, then the county without at least one facility with a licensed OR is grouped with both of the counties with facilities that have at least one OR.

If an entity has a CON to develop a facility with a licensed OR in a county without a facility with a licensed OR, the planning inventory in Table 6B will include these ORs upon licensure. Before licensure, the ORs remain under development in the multicounty service area. Upon licensure of new ORs, the county where they are licensed becomes a single county service area.

In response to a petition, the State Health Coordinating Council (SHCC) created the Avery-Watauga multicounty OR service area. There are ORs in both Avery and Watauga counties.

Application of the Methodology

Step 1: Inventory of ORs (*Table 6A, Columns D through J*)

- a. In each OR service area, list the number of ORs by type, and sum them for each health system by summing the following for all licensed hospitals and ambulatory surgical facilities:
 - (1) Number of Inpatient ORs (Column D)
 - (2) Number of Ambulatory ORs, exclusive of QUASFs (Column E)
 - (3) Number of Shared ORs (Column F)
- b. For each facility:
 - (1) Exclude the number of dedicated Cesarean Section (C-Section) ORs from the Hospital LRA (*Column G*).
 - (2) Exclude one OR for each Level I and Level II Trauma Center and one additional OR for each designated Burn Intensive Care Unit (*Column H*).
 - (3) List the number of ORs (*Column I*) and C-Section ORs (*Column J*) for which CONs have been issued but not licensed as of the end of the reporting year.
- c. Enter placeholders for ORs for which a need determination in the SMFP is pending review or appeal (*Columns I and Column J*).

Step 2: Determine Each Facility's Adjusted Case Times

- a. For each facility (exclusive of QUASFs), compare the Average Case Time in Minutes for inpatient and ambulatory cases reported on the annual LRA to its Final Case Time used in the methodology in the previous year's SMFP.
 - (1) If either the inpatient or ambulatory reported average case time is more than 10% longer than the previous year's Final Case Time, then the Adjusted Case Time is the previous year's Final Case Time plus 10%.
 - (2) If either the inpatient or ambulatory reported average case time is more than 20% shorter than the previous year's Final Case Time, then the Adjusted Case Time is the previous year's Final Case Time minus 20%.
 - (3) If neither of the above situations occurs, then the Adjusted Case Time is the average case time(s) reported on the LRA.

Step 3: Group Facilities (exclusive of QUASFs; *Table 6A, Columns K through M*)

- a. For each hospital, multiply the total number of inpatient surgical cases (excluding C-sections performed in dedicated C-Section ORs) reported in the Surgical Cases by Specialty Area table on the annual Hospital LRA by the inpatient average case time from Step 2. Then divide by 60 to obtain the total inpatient surgical hours.
- b. For each facility, multiply the total ambulatory cases reported in the Surgical Cases by Specialty Area table on the annual LRA by the ambulatory average case time from Step 2. Then divide by 60 to obtain the total ambulatory surgical hours.
- c. Add the total inpatient and ambulatory surgical hours together to obtain each facility's Total Surgical Hours for Grouping (*Column K*).
- d. Assign each facility to a group based on the following criteria (*Column L*):

Group	Facility Type
1	Academic Medical Center Teaching Hospitals
2	Hospitals reporting more than 40,000 surgical hours
3	Hospitals reporting 15,000 to 40,000 surgical hours
4	Hospitals reporting less than 15,000 surgical hours
5	Separately licensed ambulatory surgical facilities that perform at least 50% of their procedures in either ophthalmology or otolaryngology, or a combination of the two specialties.
6	All separately licensed ambulatory surgical facilities not in Group 5.

e. For purposes of the SMFP, the average OR is anticipated to be staffed based on its group membership and utilized at least 75% of the available time. Assumptions regarding hours per day and days per year of availability are shown in the table below. Multiply the Hours per Day by the Days Per Year. Then multiply by 75% to obtain the Standard Hours per OR per Year (*Column M*).

Group	Hours per Day	Days per Year	Standard Hours per OR per Year
1	10	260	1,950
2	10	260	1,950
3	9	260	1,755
4	8	250	1,500
5	7	250	1,312
6	7	250	1,312

Step 4: Project Future OR Requirements Based on Growth of OR Hours (exclusive of QUASFs; *Table 6B, Columns D through K*)

a. For Groups 2 through 6, use the Adjusted Case Time from Step 2 to calculate the average (mean) inpatient and ambulatory case times for each group. If the Adjusted Case Time exceeds one standard deviation above the mean case time for its group, substitute the value equivalent to the mean plus one standard deviation of the Adjusted Case Time to obtain the Final Inpatient Case Time (*Column E*) and Final Ambulatory Case Time (*Column G*), as applicable. Otherwise use the Adjusted Case Time from Step 2 as the final case times. The Average Final Inpatient and Ambulatory Case Times for each group are as follows for the current plan:

Group	Average Final Inpatient Case Time		Average Final Ambulatory Case Time	
	in Minutes	in Hours	in Minutes	in Hours
1	219.3	3.66	132.5	2.21
2	190.4	3.17	117.8	1.96
3	161.9	2.70	109.2	1.82
4	106.8	1.77	70.8	1.18
5			40.3	0.67
6			70.4	1.17

- b. For each facility, multiply the inpatient surgical cases reported on the LRA (*Column D*) by the Final Inpatient Case Time in minutes (*Column E*), and multiply the ambulatory surgical cases reported on the LRA (*Column F*) by the Final Ambulatory Case Time in minutes (*Column G*). Sum these amounts for each facility and divide by 60 to obtain the Total Adjusted Estimated Surgical Hours (*Column H*).
- c. For each service area with a projected population increase, calculate the Growth Factor based on each service area's projected population change between the reporting year and the projection year [Column I: Growth Factor = (projection year service area population reporting year service area population) / reporting year service area population.]. If the calculated population growth is negative, the Growth Factor is zero.
- d. Multiply each facility's Total Adjusted Estimated Surgical Hours ($Column\ H$) for the most recent reporting year by each service area's Growth Factor ($Column\ I$). Then add the product to the Total Adjusted Estimated Surgical Hours to determine the Projected Surgical Hours for the projection year $\int ((Column\ H\ x\ Column\ I)\ /\ 100) + Column\ H\ = Column\ J$.
- e. Divide each facility's Projected Surgical Hours for the projection year by the Standard Hours per OR per Year (based on group assignment) to determine the Projected Surgical ORs Required in the projection year (*Table 6B, Column J / Table 6A, Column M = Table 6B, Column K*).

Step 5: Determination of Health System Deficit/Surplus (exclusive of QUASFs; *Table 6B, Columns L - M*)

- a. Sum the ORs, adjustments, and exclusions (*Table 6A, Columns D through J*) for each facility to obtain the Adjusted Planning Inventory (*Table 6B, Column L*).
- b. Subtract the Adjusted Planning Inventory from the Projected Surgical ORs Required to obtain the surpluses and deficits for each facility (*Column M*). (*Note: In Column M, projected deficits appear as positive numbers indicating that the methodology projects that more ORs will be needed in the projection year than are in the current inventory*.) Then for each health system, sum the deficits and surpluses of each facility to arrive at the Projected OR Deficit/Surplus for the health system (*Column K Column L = Column M*).

Step 6: Determination of Service Area OR Need (*Table 6B, Column N*)

a. Round the health system deficits according to the rounding rules, below:

If a health system located in an OR service area with more than 10 ORs in the Adjusted Planning Inventory has a projected fractional deficit of 0.50 or greater, round the deficit to the next highest whole number. For each health system in an OR service area with more than 10 ORs and a projected deficit less than 0.50 or in which there is a projected surplus, there is no need.

If a health system located in an OR service area with six to 10 ORs in the Adjusted Planning Inventory has a projected fractional deficit of 0.30 or greater, round the deficit to the next highest whole number. For each health system in an OR service area with six to 10 ORs and a projected deficit less than 0.30 or in which there is a projected surplus, there is no need.

If a health system located in an OR service area with five or fewer ORs in the Adjusted Planning Inventory has a projected fractional deficit of 0.20 or greater, round the deficit to the next highest whole number. For each health system in an OR service area with five or fewer ORs and a projected deficit less than 0.20 or in which there is a projected surplus, there is no need.

- b. Add all rounded health systems deficits. Then adjust for any placeholders for need determinations in previous SMFPs to calculate the Service Area Need (*Column N*).
- c. For the current plan, the Service Area Need must be at least two to show an OR Need Determination in Table 6C.

Unless otherwise specified by the methodology, calculations do not use rounded values. However, fractional values are rounded automatically when displayed.

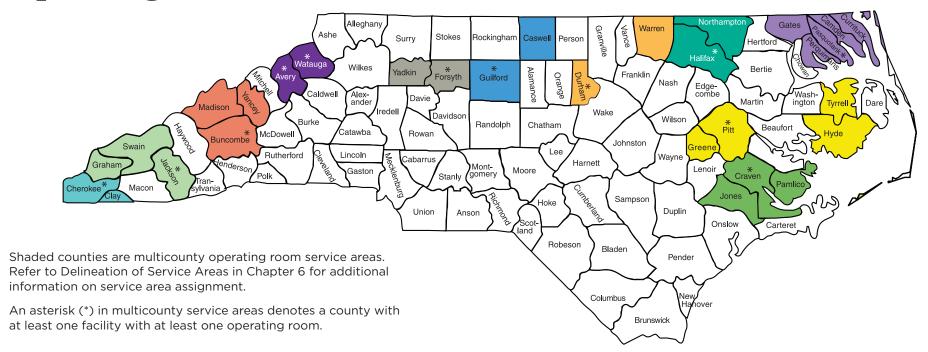
<u>NOTE</u>: The need methodology excludes Dedicated C-Section ORs and associated cases from the calculation of need determinations.

A dedicated C-section OR shall only be used to perform C-sections and other procedures performed on the patient in the same visit to the C-section operating room, such that a patient receiving another procedure at the same time as the C-section would not need to be moved to a different OR for the second procedure.

Hospitals proposing to add a new OR for use as a dedicated C-section OR must obtain a CON but may apply for a CON without regard to the need determinations in this chapter.

Figure 6.1

Operating Room Service Areas



Hospitals	Multicounty Service Area	Color Code
Atrium Health Wake Forest Baptist, Novant Health Forsyth Medical Center, Novant Health Medical Park Hospital	Forsyth, Yadkin	
Atrium Health Wake Forest Baptist Greensboro Medical Center, Atrium Health Wake Forest Baptist – High Point Medical Center, Cone Health	Guilford, Caswell	
CarolinaEast Medical Center	Craven, Jones, Pamlico	
Charles A. Cannon Jr. Memorial Hospital, Watauga Medical Center	Avery, Watauga	
Duke Regional Hospital, Duke University Hospital, NC Specialty Hospital	Durham, Warren	
ECU Health Medical Center	Pitt, Greene, Hyde, Tyrrell	
ECU Health North Hospital	Halifax, Northampton	
Erlanger Murphy Medical Center	Cherokee, Clay	
Harris Regional Hospital	Jackson, Graham, Swain	
Mission Hospital	Buncombe, Madison, Yancey	
Sentara Albemarle Medical Center	Pasquotank, Camden, Currituck, Gates, Perquimans	