TO THE NORTH CAROLINA STATE HEALTH COORDINATING COUNCIL
PETITION REGARDING ADJUSTING THE OPERATING ROOM NEED
FOR THE PITT/GREENE/HYDE/TYRRELL SERVICE AREA
2023 State Medical Facilities Plan

July 27, 2022

Via Email: DHSR.SMFP.Petitions-Comments@dhhs.nc.gov

1. **Name, address, email address and phone number of Petitioners:**

   Petitioner
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   P.O. Box 6028
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   Pitt County

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2. **Statement of the requested change, citing the need determination in the SMFP for which the change is proposed.**

   Petitioner Pitt County Memorial Hospital d/b/a Vidant Medical Center ("VMC") requests that Table 6C: Operating Room Need Determination in the 2023 State Medical Facilities Plan ("SMFP") be adjusted to reflect the need for 3 additional operating rooms. The requested change is based on correcting an error in the inpatient case times as reported in VMC's 2018 and 2019 Hospital License Renewal Application ("LRA"). The erroneous reporting, while corrected in the 2020 and subsequent LRA, is impacting Step 2: Determine Each Facility's Adjusted Case Times of the Operating Room Need Methodology. Specifically, the erroneous data is causing inpatient case times used in the 2023 SMFP need methodology to be significantly below VMC's actual inpatient case times. Step 2 of the methodology compares current case time to the previous year SMFP, which cannot be edited/changed. Therefore, the error that originally occurred 5 years ago in the 2019 SMFP, while able to be corrected in LRAs, cannot be corrected in the 2023 SMFP. This is ultimately causing the underreporting of average inpatient case times and consequently underestimating the true need for operating rooms in the service area. Therefore, VMC is requesting that Table 6C: Operating Room Need Determination in the 2023 SMFP be adjusted to reflect the need for 3 additional operating rooms in the Pitt/Greene/Hyde/Tyrrell Service Area in order to reflect the true need that would be identified if the original error did not happen, or if the 2022 SMFP could be edited/changed.

   NOTE: VMC filed a similar petition for the 2022 SMFP that was ultimately approved.

3. Reasons for the proposed change, including:

In 2017, VMC changed its operative services management system. While completing the 2018 LRA (based on FY17 data), it was noticed that the average case time report generated from the new system showed IP and OP case times that were significantly less than the reports generated from the old system and reported in past LRAs (see Table 1 below). The discrepancy was addressed with the third party system vendor and internal data abstractors. After a review, there was full confidence the new system was reporting correctly. VMC subsequently reported the lower case times in in the 2018 and 2019 LRA.

Table 1
VMC Historical IP/OP Case Times Reported on LRAs

License Application	Based On Data From	Ave IP Case Time	Ave OP Case Time
2016	FY15	194.0	133.0
2017	FY16	192.0	134.0
2018	FY17	114.5	103.5
2019	FY18	124.0	109.0
2020	FY19	187.0	136.0
2021	FY20	188.0	130.0
2022	FY21	191.0	135.0

Source: VMC's HLRA

In preparing the 2020 LRA, new data abstractors identified an error in the operative services management system regarding the way room set up and clean up times were being recorded. This error resulted in producing room set-up start to room clean up finish times that were significantly less than actual experience. The error was corrected and the actual IP/OP case times were reported in the 2020 LRA. Subsequently, the correct case times were submitted for the 2021 and 2022 LRAs (Table 1). VMC believes the case times presented in the 2016, 2017, 2020, 2021, and 2022 LRAs reflect the true IP/OP case times. The case times reported for those years is more in line with case times reported by other comparable AMCs (Table 2).

Table 2
Group 1 IP/OP Case Times Reported on 2022 LRA

Group 1: AMC	Ave IP Case Time	Ave OP Case Time
Duke University Hospital	267.8	142.1
Atrium Health Wake Forest Baptist	238.5	135.5
Carolinas Medical Center	233.4	146.2
University of North Carolina Hospitals	237.0	141.0
Vidant Medical Center	191.0	135.0
AVERAGE GROUP 1	**233.5**	**140.0**

Source: Proposed 2023 State Medical Facilities Plan

Even though the error occurred in the 2018 and 2019 LRAs (2019 & 2020 SMFP), Step 2 of the operating room need methodology is negatively impacting the calculation of need in the 2023 SMFP for the Pitt/Greene/Hyde/Tyrrell service area. Step 2 of the methodology states:

Step 2: Determine Each Facility's Adjusted Case Times

a. For each facility, compare the Average Case Time in Minutes for inpatient and ambulatory cases on the annual LRA to its average case time used in the methodology in the previous year's SMFP.

(1) If either the inpatient or ambulatory case time is more than 10 percent longer than the previous year's case time, then the Adjusted Case Time is the previous year's reported case time plus 10 percent.

(2) If either the inpatient or ambulatory case time is more than 20 percent shorter than the previous year's case time, then the Adjusted Case Time is the previous year's reported case time minus 20 percent.

(3) If neither of the above situations occurs, then the Adjusted Case Time is the average case time(s) reported on the LRA.

Step 2.a adjusts each facility's case times by comparing the average case time as reported in the most recent LRA to the average case time **used in the previous year's SMFP**. If the average case time reported in the LRA is not less than 80% or greater than 110% of the average case time used in the previous year's SMFP, no adjustments to the case times reported in the LRA are made (2.a.3). If the average case time reported in the LRA is less than 80% or greater than 110% of the average case time used in the previous year's SMFP, adjustments to the case times reported in the LRA are made based on the methodology in 2.a.1 and 2.a.2 cited above. In the current methodology, the adjustments are made to the previous year's average case time as **reported in the SMFP** and not to the previous year's average case times reported in the LRA.

The unintended consequence of comparing to, and adjusting from, the average case times reported in the previous year's SMFP is that a substantial error in reporting on a historical LRA can take years to correct itself, even if it is being correctly reported in current and future LRAs. In fact, assuming VMC's actual average case times remain constant, **it will take until the 2025 SMFP** for the erroneous data to no longer negatively impact the need methodology. Table 3 below shows VMC's historical and projected average case times as reported in the LRAs and the subsequent average case times used in the SMFP based on adjustments made for being inside or outside the 80-100% threshold.

Table 3
VMC's Historical & Projected IP/OP Case Times as Reported in LRAs & SMFPs

			INPATIENT				OUTPATIENT				
A	B	C	D	E	F	G	H	I	J	K	
Based On Data From	For License Application	Used In SMFP	VMC Reported Time	% Change (Prev Year)	Time Used in SMFP	% of LRA vs Prev. SMFP	VMC Reported Time	% Change (Prev Year)	Time Used in SMFP	% of LRA vs Prev. SMFP	
2015	2016	2017	194.0				133.0				
2016	2017	2018	192.0	-1.0%	192.0	99.0%	134.0	0.8%	134.0	100.8%	
2017	2018	2019	114.5	-40.4%	153.6	59.6%	103.5	-22.8%	107.2	77.2%	††/††††
2018	2019	2020	124.0	8.3%	124.0	80.7%	109.0	5.3%	109.0	101.7%	
2019	2020	2021	187.0	50.8%	136.4	150.8%	136.0	24.8%	119.9	124.8%	†/†††
2020	2021	2022	188.0	0.5%	150.0	137.8%	130.0	-4.4%	130.0	108.4%	†
2021	2022	2023	191.0	1.6%	165.0	127.3%	135.0	3.8%	135.0	103.8%	†
2022	2023	2024	191.0	0.0%	181.5	115.7%	135.0	0.0%	135.0	100.0%	†
2023	2024	2025	191.0	0.0%	191.0	105.2%	135.0	0.0%	135.0	100.0%	

Source: 2017-2023 (Draft) State Medical Facilities Plans

† Inpatient case time substitution: Current year's reported case time is greater than 110% of previous year. Substituted previous year's average inpatient case time plus 10%.

†† Inpatient case time substitution: Current year's reported case time is less than 80% of previous year. Substituted previous year's average inpatient case time minus 20%.

††† Ambulatory case time substitution: Current year's reported case time is greater than 110% of previous year. Substituted previous year's average ambulatory case time plus 10%.

†††† Ambulatory case time substitution: Current year's reported case time is less than 80% of previous year. Substituted previous year's average ambulatory case time minus 20%.

Specifically, Table 3 shows:

- 2017 SMFP: This was the first year of the new methodology. The SMFP used VMC's LRA average case times of 194.0 and 133.0 for IP/OP respectively.

- 2018 SMFP: VMC reported 192.0 and 134.0 for IP/OP average case times respectively. Since these case times were within the 80-110% threshold (99%/101%), no adjustments were made.

- 2019 SMFP: VMC reported 114.5 and 103.5 for IP/OP average case times respectively. This was the first erroneously reported year. Since these case times were below the 80% threshold (60%/77%), the average case time was adjusted to be 80% of the previous year's case time as reported in the 2018 SMFP.

- 2020 SMFP: VMC reported 124.0 and 109.0 for IP/OP average case times respectively. This was the second erroneously reported year. Since these case times were within the 80-110% threshold (81%/102%), no adjustments were made.

- 2021 SMFP: VMC reported 187.0 and 136.0 for IP/OP average case times respectively. This was the first correctly reported year. Since these case times were above the 110% threshold (151%/125%), the average case time was adjusted to be 110% of the previous year's case time as reported in the 2020 SMFP. Therefore, the case times used were significantly below actual experience (136.4/119.9).

- 2022 SMFP: VMC reported 188.0 and 130.0 for IP/OP average case times respectively. This was the second correctly reported year. Since OP case times were within the 80-100% threshold (108%), no adjustments were made. However, since IP case times were still above the 110% threshold (139%), the average case time was adjusted to be 110% of the previous year's case time as reported in the 2021 SMFP. Therefore, the case time being proposed are significantly below actual experience (150.0).

- 2023 SMFP: VMC reported 191.0 and 135.0 for IP/OP average case times respectively. This was the third correctly reported year. Since OP case times were within the 80-100% threshold (104%), no adjustments were made. However, since IP case times were still above the 110% threshold (127%), the average case time was adjusted to be 110% of the previous year's case time as reported in the 2022 SMFP. Therefore, the case time being proposed are significantly below actual experience (165.0).

- 2025 SMFP: Assuming VMC's average IP case times remain constant at 191.0 minutes, the 2025 SMFP will be the first year the methodology catches up with the error. Under the current methodology, the 2024 SMFP will still calculate VMC's average case times to be greater than 110% of the previous year's reported case times (116%). It won't be until the 2025 SMFP that the reported case times will be within the 100% threshold (105%).

As Table 4 below shows, using the adjusted inpatient case time of 165.0 minutes as it is currently being applied in the Proposed 2023 SMFP operating room need calculation results in a **surplus** of 0.37 operating rooms for the Pitt/Greene/Hyde/Tyrrell service area. If the actual inpatient case time as reported in the 2022 LRA is applied, the operation room need calculation shows a **need** for 2.82 operating rooms, **a shift in need of over 3 operating rooms**. Based on the rounding rules in Step 6, a need for 2.82 operating rooms is rounded to 3.0 rooms.

Table 4
Operating Room Need Calculation: Adjusted Case Time vs Actual Reported Case Time

Table 6B: Projected Operating Room Need for 2025 - As Presented in 2023 Proposed SMFP

A	B	C	D	E	F	G	H	I	J	K	L	M	N
Service Area	License	Facility	Inpatient Cases	Final Inpatient Case Time	Ambulatory Cases	Final Ambulatory Case Time	Total Adjusted Estimated Surgical Hours	Growth Factor	Projected Surgical Hours for 2024	Projected Surgical ORs Required for 2024	Adjusted Planning Inventory	Projected OR Deficit/ Surplus (Surplus shows as a "-")	Service Area Need
Pitt	AS0012	Vidant SurgiCenter	-	0.0	10,995	84.3	15,448	0.94	15,593	11.89	10	1.89	
Pitt	H0104	Vidant Medical Center†	10,947	**165.0**	10,218	135.0	53,103	0.94	53,602	27.49	28	-0.51	
Vidant Health Total										39.37	38	1.37	
Pitt		2022 SMFP Need Determination	0	0.0	0	0.0	0		0	0.00	1	-1.00	
Pitt/Greene/Hyde/Tyrrell												**0.37**	**0**

Source: 2023 Proposed State Medical Facilities Plan

Table 6B: Projected Operating Room Need for 2025 - Using IP Case Times from 2022 LRA

A	B	C	D	E	F	G	H	I	J	K	L	M	N
Service Area	License	Facility	Inpatient Cases	Final Inpatient Case Time	Ambulatory Cases	Final Ambulatory Case Time	Total Adjusted Estimated Surgical Hours	Growth Factor	Projected Surgical Hours for 2024	Projected Surgical ORs Required for 2024	Adjusted Planning Inventory	Projected OR Deficit/ Surplus (Surplus shows as a "-")	Service Area Need
Pitt	AS0012	Vidant SurgiCenter	-	0.0	10,995	84.3	15,448	0.94	15,593	11.89	10	1.89	
Pitt	H0104	Vidant Medical Center†	10,947	**191.0**	10,218	135.0	57,838	0.94	58,382	29.94	28	1.94	
Vidant Health Total										41.82	38	3.82	
Pitt		2022 SMFP Need Determination	0	0.0	0	0.0	0		0	0.00	1	-1.00	
Pitt/Greene/Hyde/Tyrrell												**2.82**	**3**

Source: 2023 Proposed State Medical Facilities Plan; VMC 2022 Hospital License Renewal Application

The operating room methodology is unique in that it is the only methodology that relies on historical SMFP information in its methodology. Step 2 of the operating room methodology dictates adjustments to case times are made by comparing reported case times in the LRA to the previous year SMFP. Unlike other methodologies, simply correcting the error in the LRA (or Truven/HIDI data for acute beds) will not correct the error in the SMFP. Historical SMFPs that have been finalized and adopted by the Governor cannot be edited. Therefore, there is no way to correct the error unless there are changes Step 2 of the methodology itself to account for historical errors, which VMC is not proposing. To address the underreporting and underestimation of OR need, VMC is requesting that Table 6C: Operating Room Need Determination in the 2023 SMFP be adjusted to reflect the need for 3 additional operating rooms in the Pitt/Greene/Hyde/Tyrrell Service Area in order to reflect the true need that would be identified if the original error did not happen or could be edited/changed in the 2022 SMFP.

a. statement of the adverse effects on the providers or consumers of health services that are likely to ensue if the change is not made; and

As stated above, not making the change and using the significantly under reported average inpatient case time results in a need determination of a 0.37 surplus. The determination of a surplus greatly underestimates the need for ORs in the Pitt/Greene/Hyde/Tyrrell service area. This underestimate of need will cause capacity constraints for the residents of this area who rely on adequate capacity for their needed healthcare. The capacity constraints will limit access, delay care, and force medically underserved populations to go elsewhere for care. All of this leads to poorer outcomes, limits access, put patients' health and safety at risk, and traveling outside the service area causes an undo economic burden, especially for the medically and socioeconomically underserved residents of this service area.

b. a statement of alternatives to the proposed change that were considered and found not feasible.

Since Step 2 of the operating room need methodology dictates comparing average case times to the previous SMFP, and previous SMFPs cannot be edited, so no other alternatives were considered. Maintaining the status quo and let the methodology correct the error by the 2025 SMFP was not considered a viable option for the reasons stated in 3.a above.

4. evidence that the proposed change would not result in unnecessary duplication of health resources in the area; and

At its core, the need methodologies and calculations in the SMFP are designed to ensure there is no unnecessary duplication of health resources. Making the correction to use the actual average case time ensures that the operating room need methodology is calculated correctly and reflects the true need for the Pitt/Greene/Hyde/Tyrrell service area without unnecessary duplication.

5. evidence that the requested change is consistent with the three Basic Principles governing the development of the SMFP: safety and quality, access, and value (see Chapter 1).

The major objective of the SMFP is to provide individuals, institutions, state and local government agencies, and community leadership with policies and projections of need to guide local planning for specific health care facilities and services. Development of the plan is governed by three basic principles:

1. Safety and Quality Basic Principle

"The State of North Carolina recognizes the importance of systematic and ongoing improvement in the quality of health services. Citizens of North Carolina rightfully expect health services to be safe and efficient. To warrant public trust in the regulation of health services, monitoring of safety and quality using established and independently verifiable metrics will be an integral part of the formulation and application of the North Carolina State Medical Facilities Plan."

2. Access Basic Principle

"Equitable access to timely, clinically appropriate and high-quality health care for all the people of North Carolina is a foundational principle for the formulation and application of the North Carolina State Medical Facilities Plan. Barriers to access include, but are not limited to: geography, low income, limited or no insurance coverage, disability, age, race, ethnicity, culture, language, education and health literacy. Individuals whose access to needed health services is impeded by any of these barriers are medically underserved. The formulation and implementation of the Plan seeks to reduce all of these types of barriers to timely and appropriate access."

3. Value Basic Principle

"The SHCC defines health care value as the maximum health care benefit per dollar expended. Disparity between demand growth and funding constraints for health care services increases the need for affordability and value in health services. Maximizing the health benefit for the entire population of North Carolina that is achieved by expenditures for services regulated by the State Medical Facilities Plan will be a key principle in the formulation and implementation of SHCC recommendations for the Plan."

As stated above in 3.a, not making the change and using the significantly under reported average inpatient case time results in a need determination of a 0.37 surplus. The determination of a surplus greatly underestimates the need for operating rooms in the Pitt/Greene/Hyde/Tyrrell service area. This underestimate of need will cause capacity constraints for the residents of this area who rely on adequate capacity for their needed

healthcare, and is therefore inconsistent with the three Basic Principles the SMFP is built upon. Specifically,

- Safety and Quality: The capacity constraints caused by not having the correct number of operating rooms needed to support demand negatively impacts safety and quality. As existing operating rooms reach maximum capacity, back logs and after hours scheduling will begin to increase. This will in turn begin to cause delays in care. Delayed care leads to poorer outcomes and put patients' health and safety at risk. By approving this petition, the operating room need methodology in the 2023 SMFP will reflect the true need for ORs in the Pitt/Greene/Hyde/Tyrrell service area and ensure adequate capacity to maintain safe, reliable, high quality health care in the service area.

- Access: The capacity constraints caused by not having the correct number of operating rooms needed to support demand negatively impacts access. Having demand in the service area outweigh the available inventory of resources will limit access. As a result, residents of the Pitt/Greene/Hyde/Tyrrell service area may have to leave the region for care. For the many medically underserved and socioeconomically challenged residents of this area, traveling outside the region for healthcare is difficult and burdensome. For many, where traveling is not an option, they choose to forego care. By approving this petition, the operating room need methodology in the 2023 SMFP will reflect the true need for ORs in the Pitt/Greene/Hyde/Tyrrell service area and ensure adequate, equitable access to timely, clinically appropriate and high-quality health care.

- Value: The capacity constraints caused by not having the correct number of operating rooms needed to support demand negatively impacts value. As stated above, as existing operating rooms reach maximum capacity, delays in care will increase. Delayed care leads to poorer outcomes. Poorer outcomes inherently increase the cost of health care and thus decreases value. In addition, patients that would have to travel outside the service area would incur an undo economic burden. This would be especially difficult for the medically and socioeconomically underserved. By approving this petition, the operating room need methodology in the 2023 SMFP will reflect the true need for ORs in the Pitt/Greene/Hyde/Tyrrell service area and promote affordability and value.