# Special Need Petition to the State Health Coordinating Council Regarding Additional Cardiac Catheterization Equipment for Catawba County 2025 State Medical Facilities Plan

July 24, 2024

Petitioner:		Contact:	
Name:	Catawba Valley Medical Center	Name:	Greg Billings
Address	810 Fairgrove Church Road SE Hickory,	E-mail:	gbillings@catawbavalleymc.org
Address:	North Carolina 28602	Phone:	828-326-2765

# STATEMENT OF REQUESTED ADJUSTMENT

Catawba Valley Medical Center ("CVMC") respectfully petitions the State Health Coordinating Council (SHCC) to create an adjusted need determination for **one additional unit of hospital-based fixed cardiac catheterization equipment in Catawba County** in the 2025 State Medical Facilities Plan.

### Background

Catawba County has two hospital systems and two active heart centers. According to Table 15A-3 of the Proposed 2025 State Medical Facilities Plan, one center, CVMC, needs more cardiac catheterization capacity. However, the Proposed 2025 SMFP shows Catawba County needs no more cardiac catheterization equipment, because the other system, Frye Regional has about one more unit of cardiac catheterization equipment than its procedures justify. The data defining this need is from the federal fiscal year 2023.

CVMC is county-owned. Residents of the county own the hospital and expect it to take care of them.

Catawba County is growing. In 2024, the NC Office of State Budget and Management estimates its population at 168,239. By 2028, NCOSBM estimates the county will have 175,436 residents with a median age of 43.1. CVMC heart program service area extends beyond Catawba County. Patient origin and formal EMS commitments to Iredell and Alexander Counties extend the CVMC service area population to almost 400,000 residents in 2024. That will grow to 439,000 in 2028. CVMC cardiac catheterization procedures are increasing along with the population.

Prior to 2014, a single group of independent cardiologists had privileges at and provided cardiac catheterization procedures at both CVMC and Frye Regional hospital systems. However, the cardiologists split into two groups, and each hospital now employs its own group.

CVMC employs three interventional cardiologists, two non-interventional cardiologists, and one part-time cardiac electrophysiologist with a second joining the team this October. The cardiology physician team is also supported by seven advanced professional providers. Demand for services at CVMC is increasing such that CVMC is actively interviewing for two additional general cardiologists.

CVMC has enough invasive/ interventional cardiologists and trained tech teams to staff two fixed cardiac catheterization laboratories. It recently organized space and staff, consolidating cardiac catheterization and electrophysiology in a dedicated Heart Center with its own patient registration, prep, and recovery area. It is immediately adjacent to the Emergency Department. This makes it easy for EMS to move patients directly from the ambulance to the Heart Center. This physical reorganization alone has reduced the length of stay and improved safety for patients and staff

CVMC's heart program is fully accredited by the American Heart Association as a 24/7 STEMI program. STEMI is short for ST-elevation Myocardial Infarction, which is the deadliest form of heart attack. Successful treatment of STEMI patients requires immediate therapeutic catheterization<sup>1</sup>. CVMC serves on the Triage and Destination Plans for STEMI with Catawba, Alexander, and Iredell Counties. CVMC has maintained AHA 24/7 Accreditation as a Chest Pain Center with Percutaneous Coronary Intervention (PCI) for four consecutive accreditation cycles—the equivalent of about 12 years. This accreditation means that CVMC is able and equipped to treat STEMI patients at any time of any day.

The American College of Cardiology accreditation standard is catheter reperfusion within 90 minutes from the time the patient enters the hospital. Small delays in care can mean loss of critical heart muscle function<sup>1</sup>. With only one unit of cardiac catheterization equipment operating above capacity, CVMC can no longer guarantee 24/7 STEMI access to its patients. It is already working extended hour schedule.

CVMC Heart Center is part of a complete cardiac care delivery system. It is an emergency referral affiliate with Atrium Health Wake Forest Baptist and Frye Regional Medical Center.

Catawba County EMS and Alexander County EMS bring STEMI patients to the hospital that patients choose if the hospital can meet the 90-minute response standard. If not, EMS takes patients to the nearest hospital that can meet the standard. After hours- evenings and weekends - Iredell County EMS has an agreement to take Iredell EMS patients to either Wake Forest Baptist in Forsyth County or CVMC in Catawba, whichever is closest.

Population is not the only demand driver for cardiac catheterization. Catawba County and the surrounding region have high-risk factors for heart disease. CVMC developed a Heart Center that now has five cardiologists. CVMC is county-owned and has IRS non-profit status. A core mission of the medical center is to assure access to healthcare to all who need it, regardless of their ability to pay. The payor mix directly reflects the mission. It is 5.15 percent Charity/Self Pay/ Indigent, 13.9 percent Medicaid, and 32.1 percent managed Medicare. See Attachment E

CVMC cardiac catheterization program needs a second cardiac fixed catheterization equipment to assure patient quality, safety, and access into the foreseeable future.

## **REASONS FOR THE PROPOSED ADJUSTMENT**

### **CVMC UTILIZATION HISTORY**

Actual utilization statistics demonstrate that CVMC's one lab is at capacity. As documented in its Hospital License Renewal Application, in FY 2023, CVMC met the State's threshold for an additional lab and is <u>on</u> track to exceed the threshold again in 2024.

Procedure Type	FY 2020	FY2021	FY2022	FY2023	Fy2024
Diagnostic	450	435	666	773	867
Interventional	232	266	274	265	321
Total Catheterizations	682	701	940	1,038	1,188
Weighted Procedures	856	901	1,146	1,237	1,429
% Change Wt Procedures		5%	27%	8%	16%
Cath Equipment Units Needed	0.71	0.75	0.95	1.03	1.2

### Table 1 Cardiac Catheterization Procedure History CVMC, FY 2020 - FY2024

Source: CVMC Internal data, FY 2024 based on seven months of data (October 2023 to May 2024, annualized

Table 1 demonstrates that if CVMC were the only cardiac catheterization provider in Catawba County, its cardiac catheterizations would justify a second cardiac catheterization lab. The table applies the standard methodology used in Chapter 15A of the Proposed 2025 SMFP. The 2025 SMFP methodology assumes 1,500 weighted Diagnostic Equivalent Catheterizations represent capacity. It shows need for another unit when existing units reach 80 percent of capacity or 1,200 weighted procedures. As the table illustrates, CVMC's weighted cardiac catheterization procedures increased at a compound annual growth rate of 12 percent between 2020 and 2024. At these trends, CVMC will easily reach 1,800 weighted caths in three more years. This is the 10 NCAC14C.1603(5) performance standard for two units of fixed cardiac catheterization equipment.

The driving factors behind the increases are age, population health status, and social determinants of health. Regional population growth is illustrated in the table below (see Table 2 and Attachments A and B).

County	2020 Population	2030 Projection	Numeric Change	Percent Change
Alexander	36,373	36,749	376	1.0%
Burke	87,889	89,865	2,086	2.4%
Caldwell	80,828	82,150	1,322	1.6%
Catawba	161,167	179,033	17,866	11.1%
Iredell	188,271	237,079	48,808	25.9%
Lincoln	87,298	109,691	22,393	25.7%



Source: NC Office of State Budget and Management

The Proposed 2025 SMFP shows no need for additional cardiac catheterization equipment in Catawba County because Frye Regional Medical Center has four fixed cardiac catheterization units and is using only 75 percent of its inventory. It needs only 2.94 units.

2022 and 2023	-	-
	2022	2023
Weighted Catheterization Procedures	3,595	3,523
Units of Fixed Equipment Required	3.0	2.94
Units of Fixed Equipment Approved	4.0	4.0
Surplus (Deficit)	1.0	1.06

Table 3 Frye Regional Cardiac Catheterization History – Four Cardiac Catheterization Laboratories.

Source: 2022 from 2024 SMFP Table 15AA-3. 2023 from the Public Request File of 2024 LRA data in the Enterprise database

The one-unit surplus of equipment at Frye Regional offsets the deficit at CVMC, and the 2025 SMFP standard methodology produces a net need of zero new units of cardiac catheterization equipment for the county. This closes out options for CVMC to acquire critical backup capacity.

### SEPARATE CARDIOLOGY PRACTICES

CVMC and Frye Regional Medical Center independently employ cardiologists; physicians have medical staff privileges at only one of the two facilities. This gives physicians some balance in their own lives. Though it sounds conceptually easy for cardiologist staff to practice at both facilities, it is almost impossible to organize. This arrangement was tested and fell apart in 2014. Availability for on-call coverage at both hospitals tested the group's endurance

This separate arrangement helped retain cardiologists in the community and meant that Catawba County could sustain a 24/7 STEMI program. Over time open heart surgery, which is only at Frye, has reduced in favor of less invasive alternatives. CVMC adjusted and developed its own strong heart program. However, CVMC now needs a second unit of fixed cardiac catheterization equipment to support both access and quality.

### **TRANSFER RISKS**

When patients at CVMC are transferred to Frye because CVMC has a capacity issue, patients lose continuity with their care team. The transfer alone could result in fragmented care and increased stress for patients and their families. The two hospitals have different electronic medical records (EMRs), medical staff, and insurance coverage agreements. With separate EMRs, patient information is fragmented. Physicians may lack access to crucial data, such as allergies, medications, and past treatments, potentially compromising patient safety. Incompatible insurance networks can limit patient choices and create financial strain (i.e.: One hospital may not accept a patient's insurance, while the other does). Differences in insurance agreements affect billing, reimbursement, and authorization for services. Patients may delay seeking care due to uncertainty about coverage, which in turn can delay critical treatments.

### **EXPANDED SCOPE OF PROCEDURES**

These challenges can be overcome with a second unit of cardiac catheterization equipment at CVMC. A second lab would not only increase CVMC's capacity to offer cardiac procedures but also reduce wait times for procedures. It would permit CVMC to offer access to procedures not currently available because of its commitment to absorb STEMI patients. Shortage of time on the one unit hinders scheduling flexibility and makes it difficult to serve STEMI patients. Our cardiologists are trained in the procedures they cannot do because doing so would take up schedule time that CVMC must reserve to accommodate the STEMI cases.

Importantly, a second fixed unit would optimize the environment for good outcomes. Today, maintenance time means no cardiac catheterization procedures are available. Two critical patients at one time means one must face a delay. A second lab at CVMC would provide critical redundancy. This would ensure more streamlined, efficient, and patient-centered care.

### SHCC PRECEDENT

There is a historical precedent for revising the need determination when one institution has capacity, and another is operating above the Plan's threshold.. In 2016, WakeMed had unused cardiac catheterization capacity and UNC Rex needed more. Following a failed attempt to share equipment, the SHCC granted a special need for one additional unit of fixed cardiac catheterization equipment in Wake County. In two instances of multi-county linear accelerator service areas, the SHCC added capacity in counties with growing demand, Robeson, and Carteret. The 2008 Plan generated need for a fixed unit of cardiac catheterization in Catawba County when CVMC was operating at less than 50 percent of capacity. At that time, Frye Regional had sturdy growth trends. In 2023, when CVMC and Frye both had extra operating room capacity, the SHCC granted Greystone Ophthalmology a special need for one more operating room in Catawba County for the 2024 Plan. These scenarios underscore the dynamic nature of health care needs and the importance of flexibility in planning and resource allocation.

# STATEMENT OF ADVERSE EFFECTS ON PROVIDERS AND CONSUMERS IF THE ADJUSTMENT IS NOT MADE

When capacity passes 80 percent, emergency procedures are at risk, thus patient safety is at risk. If the Plan does not include a chance for CVMC to add a second Cardiac Catheterization (Cath) lab, the capacity deficit could lead to adverse effects for patients and providers. For patients, the most immediate impact would be longer waiting times for procedures. Long waits means delayed diagnoses, which could potentially worsen their cardiac conditions. In emergency situations, delay could be life-threatening. If they travel to distant facilities to receive timely care, stress and financial burdens increase.

STEMI heart attack patients face increasing risks of transfer because open slots in the schedule become fewer and fewer as demand associated with the growing population gets higher. For a STEMI patient, delay risks loss of heart muscle function. See details in Attachment C.

For providers, failure to add a second Cath lab at CVMC means an increased workload in the existing lab, leading to longer hours and potential burnout. This could also impact the quality of care provided.

With only one lab operating at capacity, CVMC is faced with an untenable dilemma when cardiac emergency patients arrive. This scenario can result in interrupting a scheduled procedure for an emergency cardiac catheterization which, in turn, risks poor outcomes for both the emergency and the scheduled patient. Alternatively, the option to transfer the emergency patient risks delaying critical care. Even if the procedure for the scheduled patient could be safely delayed, changing the lab set up for the emergency patient creates delays that could increase risks for unintended consequences. CVMC is asking the SHCC to support preventing such a scenario.

Furthermore, such interruptions can cause stress and pressure on the medical staff, potentially affecting their performance and the overall quality of care.

In summary adverse effects of not making the adjustment risk:

- 1. Limited Capacity: A single catheterization lab can only accommodate a certain number of procedures per day. This limitation could lead to scheduling difficulties and delays in treatment, particularly for non-emergency cases.
- 2. Maintenance and Upgrades: Regular maintenance or upgrades to the catheterization lab equipment are necessary to ensure optimal performance. However, during these times, the lab would be unavailable for procedures, potentially causing further delays.
- 3. Dependency: In a single lab setup, the entire cardiac catheterization service is dependent on the functioning of one lab. Any unforeseen issues, such as equipment failure, could disrupt the entire service.
- 4. Staffing Challenges: A single lab might lead to overutilization of staff, potentially leading to fatigue and burnout. This could impact the quality of care provided.
- 5. Infection Control: With numerous procedures being conducted in the same space, there could be an increased risk of cross-contamination or infection.

# STATEMENT OF ALTERNATIVES CONSIDERED AND FOUND NOT FEASIBLE

### OVERVIEW

CVMC currently offers a comprehensive range of Cardiac Care services, with its own equipment and specialized physician services of Catawba Valley Cardiology. This dedicated team of five full-time cardiologists and healthcare professionals provides expert care in diagnosing and treating a wide range of heart conditions using state-of-the-art technology and procedures. Among the cardiologists, 3.5 provide interventional cardiac caths. The program has two more general cardiologists. The team plays a crucial role in delivering high-quality cardiac care to the community.

However good, Catawba Valley Cardiology and other services cannot replace the value that a second fixed cardiac catheterization lab would bring in terms of enhanced capacity, efficiency, and patient outcomes.

CVMC investigated expanding the existing lab operating hours, partnering with other hospitals for shared use of facilities, using emergency time on other equipment, investing in mobile Catheterization labs or a freestanding non-hospital option. However, these alternatives present their own challenges.

### **EXPANDED HOURS**

Extending the CVMC Cath lab hours may seem like a simple way to increase capacity, but it presents several challenges that make it unreasonable. First, extended hours lead to fatigue among technical and medical staff, potentially affecting the quality of care and increasing the risk of errors.

Second, longer operating hours could lead to higher operating costs --the hospital would need to pay overtime wages or hire additional staff to cover the extended hours. Moreover, equipment maintenance and cleaning would need to be scheduled around the extended hours, potentially leading to longer downtimes.

Lastly, not all patients may be able or willing to schedule their procedures during the extended hours, particularly if these fall during winter evenings when it is dark.

Therefore, while extending lab hours could provide additional capacity, that alternative does not address the fundamental issue of meeting the growing demand for cardiac services in a sustainable and efficient manner. The addition of a second Cardiac Catheterization lab would be a more effective and feasible solution.

### PARTNER WITH AND SHARE EQUIPMENT AT OTHER HOSPITAL CATH LABS

Partnering with other hospitals to share fixed equipment involves logistical complexities and potential conflicts over scheduling and usage. Partnering with Frye Regional Medical Center for shared use of cardiac catheterization lab facilities presents several challenges that make it not feasible. As noted, each hospital has its own independently employed medical and technical staff, who do not have privileges at CVMC. This could lead to conflicts over scheduling, usage, and patient care responsibilities.

Second, the differing operational models and objectives of the two hospitals could pose significant hurdles. CVMC operates on a not-for-profit basis, focusing on community service and patient care. On the other hand, Frye Regional Medical Center, a for-profit entity, faces different pressures, priorities, and financial objectives

These fundamental differences could lead to disagreements over cost-sharing, decision-making, and strategic direction. Therefore, while a partnership may seem like a good idea on the surface, these factors make it less feasible than adding a second Cardiac Catheterization lab at CVMC.

Last year, the SHCC made accommodation when it granted a special need for operating rooms for Greystone Ophthalmology when both Frye and CVMC had excess operating room capacity. In a similar scenario, the SHCC examined an alternative solution in Wake County and finally concluded that sharing cardiology equipment between two busy institutions is not sustainable. The SHCC accommodated and provided capacity in the SMFP for both UNC Rex and WakeMed to have sufficient equipment to care for patients who chose the respective institution.

Patients understand the differences between facilities and make choices with said differences in mind. While this provides some healthy competition, patients still deserve access to complete services at both competitor institutions when the volume can support it. It is a patient access and patient choice issue that can be affected by the physician network and patient insurance plan.

Competing services can enhance quality and access when demand is sufficient to support more than one provider.

### MOBILE LAB

North Carolina has grandfathered mobile lab capacity. However, mobile catheterization labs, while offering additional capacity and flexibility, may not provide the same level of stability and comprehensive services as a permanent lab. Mobile units are typically smaller and may not be equipped for all types of procedures. Although they might seem like a cost-effective solution, they present several challenges. Operation of a mobile lab requires frequent setup and breakdown, which can be time-consuming and disruptive to patient care. There are also additional costs associated with transportation, maintenance, and securing a suitable location for the mobile lab each time it is deployed. Mobile labs also add the overhead cost of the mobile vendor.

Given these considerations, a mobile unit provides less value in terms of stability, capacity, and range of services. making it a more feasible and beneficial option. This investment would align with Catawba Valley's commitment to providing high-quality, accessible cardiac care to the community.

### **FREESTANDING CATH LOCATION**

Permitting the next fixed cardiac catheterization equipment in Catawba County to be located in an ambulatory surgery center would not solve the problem. It would not offer STEMI services and would only do diagnostic procedures. It would further divide the time of the interventional cardiologists, adding to burnout risks. It would do the same with technology staff and nursing and further fragment care. Ambulatory surgery settings are approved by CMS and can be useful in communities that have 10's of thousands of cardiac cath procedures. However, the ambulatory surgery setting is best for diagnostic-only cardiac caths. That would mean a second trip to a cath lab in a hospital for any patient that needs intervention. Restricting Catawba County's need for one unit of additional fixed cardiac catheterization equipment to a hospital would avoid such unnecessary fragmentation of care.

### CONCLUSION

In conclusion, these alternatives do not address the fundamental issue of increasing capacity to meet growing demand in a sustainable manner. They also do not offer the same opportunities for specialization and improved patient care that a second dedicated Cardiac Catheterization lab would. Therefore, while these alternatives may provide temporary solutions, they are not as feasible or beneficial in the long term as adding a second Cardiac Catheterization lab.

## EVIDENCE OF NO UNNECESSARY DUPLICATION OF SERVICES

A second fixed cardiac catheterization unit in Catawba County would not duplicate services; it would enhance them. In light of growing demand and population trends, one more fixed cardiac cath lab in Catawba County would increase access. NCOSBM forecasts that Catawba County alone will add 17,886 residents between 2020 and 2030 <sup>2</sup>It also forecasts that the county's median age will increase from 42.1 in 2020 to 43.1 in 2030. As the population grows and ages, so does the prevalence of cardiac diseases, increasing the demand for cardiac services. A second Catheterization lab can help meet this growing demand. A second Catheterization lab would ensure that the healthcare system is prepared to manage this increase.

A second catheterization lab can improve access to cardiac care for patients living in different parts of the county, reducing travel times and making it easier for patients to receive the care they need. With two labs, CVMC can offer more procedures.

The standard time from door to catheter insert for an emergency cardiac catheterization is 90 minutes, according to the American College of Cardiology Chest Pain Center Accreditation. Having a second catheterization lab can ensure capacity to meet this standard, in case one lab is temporarily unavailable due to current patient use, maintenance, or other issues.

With more capacity, CVMC can significantly reduce wait times for scheduled procedures from the current average of ten-days; Shorter waits mean quicker diagnosis and treatment for patients. A second cardiac catheterization lab is a strategic investment that can enhance cardiac care services in the region, cater to a growing and aging population, and lead to better patient outcomes.

While it may seem counterintuitive to advocate for a second cardiac catheterization lab when an existing hospital in Catawba County has capacity but is underutilizing its labs, there are compelling reasons to do so. Underutilization at one hospital does not necessarily mean that lack of demand overall. Under use at Frye Regional could be due to scheduling conflicts or staffing issues

A second lab at CVMC could foster a competitive environment that drives quality improvement. Each hospital could strive to optimize its operations, leading to better patient outcomes.

# EVIDENCE OF CONSISTENCY WITH NORTH CAROLINA STATE MEDICAL FACILITIES PLAN

**BASIC GOVERNING PRINCIPLES** 

### 1. Safety and Quality

The practice of removing scheduled patients from their planned appointments; or removing them from the actual catheterization lab table to accommodate emergent patients presents several risks. First, it disrupts the planned care for scheduled patients, potentially delaying their diagnosis and treatment. Such disruption can lead to increased anxiety and dissatisfaction among these patients. In some cases, disruption could even adversely affect their health outcomes. CVMC is listed on the Triage and Destination Plan for STEMI for three counties: Iredell, Catawba, and Alexander. By EMS protocol, if an emergency occurs in a place where CVMC is the closest facility, EMS will transport the person to CVMC.

Along with Atrium Wake Forest Baptist Hospital, CVMC is one of the primary STEMI receiving centers, for Iredell Memorial Hospital ED/and EMS. Presently, the Iredell Memorial's STEMI program is Hybrid, operating Monday through Friday, between 0800 and 1700. As a requirement for Chest Pain Accreditation, CVMC is prohibited from being presented as "on diversion" for STEMI. The sole permitted exemption is in the case of equipment failure. Therefore, essential care could be delayed if EMS transports a STEMI to CVMC when CVMC has an active case in the single lab and that patient is either scheduled or emergent.

Second, reorganizing schedules to accommodate STEMI cases puts strain on the medical staff who must manage these schedule changes. Quality and safety goals start with reducing stress.

Finally, frequent schedule changes could damage the reputation of CVMC. The public may perceive such changes as evidence that the hospital is unable to manage its patient load effectively. A second CVMC cardiac catheterization lab would increase capacity and reduce the need for such schedule changes. This back up capacity would provide a crucial step toward improving patient care and operational efficiency at CVMC

From a safety perspective, a second lab would provide a backup option, ensuring that patient care at both hospitals continues uninterrupted in case of equipment failure or maintenance in one lab. It would also allow for better case distribution, reducing the risk of errors due to overworked staff or rushed procedures. The addition would also enable CVMC to provide a wider range of procedures in-house, reducing the need for patient transfers. As noted, transfers can be risky and stressful

This investment aligns with North Carolina's State Medical Facilities Plan, which aims to provide affordable and high-quality care centered around patients in the region, including serving traditionally medically underserved populations.

### 2. Access

CVMC is committed to serving all members of the community, regardless of their economic circumstances. A second cardiac catheterization lab at CVMC would be consistent with this this mission.

CVMC's status as a not-for-profit system allows participation in the Federal 340B prescription program. The 340B Drug Pricing Program allows qualifying hospitals and clinics that treat low-income and uninsured patients to purchase outpatient prescription drugs at a discount that amounts to 25 to 50 percent lower costs. By participating in this program, hospitals can stretch their limited resources, reduce pharmaceutical costs for patients, and expand health services to the communities they serve. Savings in pharmaceutical costs can be used to provide free care for uninsured cath patients.

CVMC's medical group provides staffing and administrative services for several Gaston Family Health Center's Federally Qualified Health Center expansion clinics. This has significant implications for patient access. Through the FQHC, CVMC provides comprehensive primary care services to underserved populations. These services include medical, dental, and behavioral health care. Having the FQHC designation ensures that patients have access to healthcare services regardless of their ability to pay or insurance status. CVMC offers various financial assistance programs to economically disadvantaged patients to ensure that cost does not prevent these patients from receiving the care they need. All of these become access points for cardiac cath.

CVMC also provides transportation assistance to patients who meet established criteria and do not have resources or access to public or other appropriate transportation. Attachment F provides information about clinics that CVMC supports.

In January 2021, during the third wave of the COVID pandemic, CVHS collaborated with the Catawba County Health Department and other key stakeholders to become the primary COVID-19 vaccine site for the region, including Catawba County and surrounding counties. CVHS established and staffed a large vaccine tent in the main parking lot. This site served as the county administration site from January 2021 to May 2021, administering over 16,907 vaccines to the community.

Finally, the second lab would bring significant time-saving benefits for both emergency and non-emergent care. In emergency situations, having an additional lab could mean the difference between life and death. For a STEMI heart attack, time saved is heart muscle saved. Attachment C provides information on the relationship between time and heart muscle health. A second lab would mean lower wait times for life-saving procedures. For non-emergent care, the second lab would allow for more flexible scheduling, reducing delays and improving the overall patient experience

### 3. Value

The incremental cost of equipment is small; the equipment represents only 5 to 15 percent of the total capital cost associated with operating a Primary STEMI Chest Pain Center. CVMC responded to community need and made a big investment in its Heart Center facility and staffing. The cost of a second lab that provides critical redundancy is small relative to both the investment in place and the incremental operating cost.

CVMC's proven procedures, trained staff, and established supply chains would immediately apply to the new lab, minimizing startup costs and reducing the learning curve. Additionally, the new lab can benefit from economies of scale in purchasing and maintenance, further enhancing cost-effectiveness.

Overutilization of a single cardiac catheterization lab can lead to several cost disadvantages. It can result in increased wear and tear on the equipment, leading to higher maintenance costs and potential downtime. Second overutilization can add overtime cost and put excessive strain on the staff, potentially leading to burnout and higher turnover, which, in turn, can result in additional recruitment and training costs as well as overtime for staff on hand.

When the current lab is scheduled to capacity, patients may be transferred to other facilities for urgent procedures, and that means more costs to the patient. Excessive use of cardiac catheterization facilities can occasionally lead to costly and inconvenient overnight hospital stays for patients who could have been sent home the same day. By increasing the capacity of the catheterization lab, we can ensure that all patients, whether admitted or outpatient, receive prompt care. This allows for discharge within a suitable timeframe, avoiding unnecessary costs for both patients and payors. Any delays in required treatment or unexpected overnight hospital stays contribute to increased healthcare costs.

Finally, the second lab could reduce wait times and overcrowding in the existing lab, enhancing patient satisfaction and staff morale. These improvements, while harder to quantify, are nonetheless crucial components of the value delivered by the investment. Therefore, while the upfront costs of implementing a second Cardiac Catheterization lab are not insignificant, the potential benefits suggest a high value return on this investment.

## CONCLUSION

The proposed changes are consistent with and support the Basic Principles that govern the *SMFP*. Cardiac catheterization is an emergency procedure that cannot be scheduled. CVMC has enough staff to cover the care. Equipment is the sole limiting factor.

CVMC's goal is to accommodate growing demand for cardiac catheterization procedures while continuing to provide exceptional patient care. Today, cardiac catheterization capacity is insufficient to care for the needs of its patients. Cardiac catheterization services must be available immediately for emergency patients who present to a hospital. The American College of Cardiology, along with other professional organizations, has long emphasized the importance of **timely treatment for patients** experiencing a heart attack. This includes a guideline that patients should receive interventional treatment, such as primary percutaneous coronary intervention (PCI), within 90 minutes of arriving at the hospital.

# ATTACHMENTS:

Catawba County Health Statistics	A
Leading Causes of Death, Catawba, Alexander, and Iredell	В
Time is Muscle Reference	C
Letters of Support	D
YTD Global Payor Mix	E
List of Clinics	F
Speeches	G

# ATTACHMENT A: CATAWBA COUNTY HEALTH STATISTICS

# North Carolina Data Portal Report

# Location

Catawba County, NC

# Health Outcomes

### **Chronic Conditions - Heart Disease (Adult)**

This indicator reports the percentage of adults age 18 and older who report ever having been told by a doctor, nurse, or other health professional that they had angina or coronary heart disease.

Within the report area, there were 7.20% of adults 18 and older who reported having coronary heart disease of the total population age 18 and older.

Report Area	Total Population	Adults Age 18+ Ever Diagnosed with CHD (Crude)	Adults Age 18+ Ever Diagnosed with CHD (Age-Adjusted)	Percentage of Adul Ever Diagnosed wit Heart Dise
Catawba County, NC	161,723	7.20%	5.70%	
North Carolina	10,551,162	6.47%	5.52%	0%
Jnited States	331,893,745	6.10%	5.20%	(7.20%) North Carolina United States (

Note: This indicator is compared to the state average.

Data Source: Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Accessed via the PLACES Data Portal. 2021.



Coronary Heart Disease, Prevalence Among Adults Age 18+ by ZCTA, CDC **BRFSS PLACES Project 2021** 



### **Hospitalizations - Heart Disease**

This indicator reports the hospitalization rate for coronary heart disease among Medicare beneficiaries age 65 and older for hospital stays occurring between 2018 and 2020.

Report Area	Medicare Beneficiaries	Cardiovascular Disease Hospitalizations, Rate per 1,000	Cardiovascular Disea Hospitalizations, Rate per Medicare Beneficiario
Catawba County, NC	33,751	11.3	
North Carolina	74,733	11.7	
United States	58,670,593	10.4	

Note: This indicator is compared to the state average.

Data Source: Centers for Disease Control and Prevention, CDC - Atlas of Heart Disease and Stroke . 2018-2020.

1 000



### Heart Disease Hospitalization Rate by Year

The table and chart below display local, state, and national trends in coronary heart disease hospitalization rates per 1,000 Medicare beneficiaries.

Report Area	2011-2013	2012-2014	2013-2015	2014-2016	2015-2017	2016-2018	2018-2020
Catawba County, NC	14.0	13.2	12.6	12.1	11.1	11.4	11.3
North Carolina	15.3	14.1	13.1	12.6	12.4	12.1	10.6
United States	14.8	13.5	12.6	12.1	12.0	11.7	10.4

Data Source: Centers for Disease Control and Prevention, CDC - Atlas of Heart Disease and Stroke . 2018-2020.



### **Readmissions - Chronic Obstructive Pulmonary Disease**

This indicator reports the average 30-day rate of readmission for chronic obstructive pulmonary disease (COPD) patients in selected hospitals\* within the report area. Readmission measures are estimates of the rate of unplanned readmission to an acute care hospital in the 30 days after discharge from a hospitalization due to chronic obstructive pulmonary disease (COPD). \*For a list of hospitals within the report area, see the data tables below.

Report Area	Discharges for COPD	30-day Readmission Rate
Catawba County, NC	741	18.14%
North Carolina	28,239	19.37%
United States	760,941	19.66%

Chronic Obstructive Pulmonary Disease Patients, 30-Day Readmission Rate



Note: This indicator is compared to the state average.

Data Source: Centers for Medicare and Medicaid Services, CMS - Geographic Variation Public Use File . 2018-20.



### Readmissions for Chronic Obstructive Pulmonary Disease (COPD) - Hospital Data

The table below displays attribute information for hospitals reporting chronic obstructive pulmonary disease (COPD) readmissions. Table size is limited to 20 records.

Note: Location-level data are only available when county-level data are displayed.

Hospital	City	State	Readmission Rate
CATAWBA VALLEY MEDICAL CENTER	HICKORY	NC	17.40%
FRYE REGIONAL MEDICAL CENTER	HICKORY	NC	18.70%

Data Source: Centers for Medicare and Medicaid Services, CMS - Geographic Variation Public Use File . 2018-20.

### **Readmissions - Heart Attack**

This indicator reports the average 30-day rate of readmission for heart attack patients in selected hospitals\* within the report area. Readmission measures are estimates of the rate of unplanned readmission to an acute care hospital in the 30 days after discharge from a hospitalization due to an acute myocardial infarction (heart attack).

\*For a list of hospitals within the report area, see the data tables below.

Report Area	Discharges for Heart Attack	30-day Readmission Rate	Heart Attack Patients, 30-Day Readmission Rate
Catawba County, NC	515	14.50%	
North Carolina	15,561	14.77%	
United States	453,994	15.59%	0% 50%
Note: This indicator is compared to the state average	e.		Catawba County, NC

Data Source: Centers for Medicare and Medicaid Services, CMS - Geographic Variation Public Use File . 2018-20.



# Acute Myocardial Infarction (AMI) Readmissions, Rate by Hospital, CMS 2018-20

(14.50%) North Carolina (14.77%) United States (15.59%)



### Readmissions for Heart Attack - Hospital Data

### records.

Note: Location-level data are only available when county-level data are displayed.

Hospital	City	State	Readmission Rate
FRYE REGIONAL MEDICAL CENTER	HICKORY	NC	14.80%
CATAWBA VALLEY MEDICAL CENTER	HICKORY	NC	13.90%

Data Source: Centers for Medicare and Medicaid Services, CMS - Geographic Variation Public Use File . 2018-20.

### **Readmissions - Heart Failure**

This indicator reports the average 30-day rate of readmission for heart failure patients in selected hospitals\* within the report area. Readmission measures are estimates of the rate of unplanned readmission to an acute care hospital in the 30 days after discharge from a hospitalization due to heart failure.

\*For a list of hospitals within the report area, see the data tables below.

Report Area	Discharges for Heart Failure	30-day Readmission Rate	Heart Failure Patients, 30-Day Readmission Rate
Catawba County, NC	670	22.18%	
North Carolina	41,586	21.13%	
United States	1,152,838	21.61%	0% 50%
Nets. This is disates is seen and to the state success			Catalyte County NC

Note: This indicator is compared to the state average. Data Source: Centers for Medicare and Medicaid Services, CMS - Geographic Variation Public Use File . 2018-20.





Heart Failure Readmissions, Rate by Hospital, CMS 2018-20



### Readmissions for Heart Failure - Hospital Data

The table below displays attribute information for hospitals reporting heart failure readmissions. Table size is limited to 20 records.

Note: Location-level data are only available when county-level data are displayed.

Hospital	City	State	Readmission Rate
FRYE REGIONAL MEDICAL CENTER	HICKORY	NC	23.80%
CATAWBA VALLEY MEDICAL CENTER	HICKORY	NC	19.70%

Data Source: Centers for Medicare and Medicaid Services, CMS - Geographic Variation Public Use File . 2018-20.

# ATTACHMENT B: LEADING CAUSES OF DEATH CATAWBA, ALEXANDER, & IREDELL

### **RESIDENCE=ALEXANDER**

			# OF DEATHS	DEATH RATE
20-39 YEARS	0	TOTAL DEATHS ALL CAUSES	81	187.9
	1	Other Unintentional injuries	19	44.1
	2	Motor vehicle injuries	11	25.5
		Suicide	11	25.5
	4	Homicide	5	11.6
	5	Diseases of the heart	4	9.3
		Chronic liver disease & cirrhosis	4	9.3
		COVID-19	4	9.3
	8	HIV disease	2	4.6
		Cancer - All Sites	2	4.6
	10	In-situ/benign neoplasms	1	2.3
		Diabetes mellitus	1	2.3
		Pregnancy, childbirth, and puerperium	1	2.3
		Congenital anomalies (birth defects)	1	2.3
40-64 YEARS	0	TOTAL DEATHS ALL CAUSES	525	827.1
	1	Cancer - All Sites	124	195.4
	2	Diseases of the heart	82	129.2
	3	COVID-19	52	81.9
	4	Chronic lower respiratory diseases	25	39.4
	5	Diabetes mellitus	24	37.8
	6	Cerebrovascular disease	20	31.5
		Other Unintentional injuries	20	31.5
	8	Chronic liver disease & cirrhosis	19	29.9
	9	Motor vehicle injuries	17	26.8
	10	Suicide	15	23.6

### **RESIDENCE=ALEXANDER**

			# OF DEATHS	DEATH RATE
65-84 YEARS	0	TOTAL DEATHS ALL CAUSES	1,195	3521.0
	1	Cancer - All Sites	259	763.1
	2	Diseases of the heart	228	671.8
	3	Chronic lower respiratory diseases	95	279.9
	4	COVID-19	84	247.5
	5	Alzheimer's disease	51	150.3
	6	Diabetes mellitus	48	141.4
	7	Cerebrovascular disease	43	126.7
	8	Pneumonia & influenza	33	97.2
		Nephritis, nephrotic syndrome, & nephrosis	33	97.2
	10	Parkinson's disease	25	73.7
		Other Unintentional injuries	25	73.7
85+ YEARS	0	TOTAL DEATHS ALL CAUSES	579	15510.3
	1	Diseases of the heart	132	3536.0
	2	Alzheimer's disease	65	1741.2
	3	Cancer - All Sites	53	1419.8
	4	Cerebrovascular disease	43	1151.9
	5	COVID-19	37	991.2
	6	Chronic lower respiratory diseases	24	642.9
	7	Pneumonia & influenza	14	375.0
		Other Unintentional injuries	14	375.0
	9	Parkinson's disease	12	321.5
	10	In-situ/benign neoplasms	9	241.1
		Diabetes mellitus	9	241.1
		Nephritis, nephrotic syndrome, & nephrosis	9	241.1

**RESIDENCE=CATAWBA** 

			# OF DEATHS	DEATH RATE
AGE GROUP:	RANK	CAUSE OF DEATH:		
TOTAL - ALL AGES	0	TOTAL DEATHS ALL CAUSES	9,792	1217.3
	1	Diseases of the heart	1,763	219.2
	2	Cancer - All Sites	1,671	207.7
	3	Chronic lower respiratory diseases	639	79.4
	4	COVID-19	637	79.2
	5	Cerebrovascular disease	476	59.2
	6	Alzheimer's disease	428	53.2
	7	Other Unintentional injuries	412	51.2
	8	Diabetes mellitus	330	41.0
	9	Nephritis, nephrotic syndrome, & nephrosis	220	27.3
	10	Chronic liver disease & cirrhosis	209	26.0
00-19 YEARS	0	TOTAL DEATHS ALL CAUSES	104	53.4
	1	Conditions originating in the perinatal period	28	14.4
	2	Congenital anomalies (birth defects)	20	10.3
	3	Other Unintentional injuries	12	6.2
	4	Suicide	7	3.6
		Homicide	7	3.6
	6	Motor vehicle injuries	6	3.1
	7	Cancer - All Sites	3	1.5
	8	Diseases of the heart	2	1.0
		COVID-19	2	1.0
	10	Cerebrovascular disease	1	0.5
		Pneumonia & influenza	1	0.5

### **RESIDENCE=CATAWBA**

			# OF DEATHS	DEATH RATE
20-39 YEARS	0	TOTAL DEATHS ALL CAUSES	403	210.1
	1	Other Unintentional injuries	131	68.3
	2	Motor vehicle injuries	58	30.2
	3	Suicide	43	22.4
	4	Homicide	25	13.0
	5	Cancer - All Sites	24	12.5
	6	Diseases of the heart	22	11.5
	7	Diabetes mellitus	13	6.8
	8	COVID-19	9	4.7
	9	Pneumonia & influenza	6	3.1
		Chronic liver disease & cirrhosis	6	3.1
40-64 YEARS	0	TOTAL DEATHS ALL CAUSES	2,140	793.0
	1	Cancer - All Sites	466	172.7
	2	Diseases of the heart	390	144.5
	3	COVID-19	158	58.5
	4	Other Unintentional injuries	147	54.5
	5	Chronic liver disease & cirrhosis	117	43.4
	6	Chronic lower respiratory diseases	109	40.4
	7	Diabetes mellitus	89	33.0
	8	Suicide	63	23.3
	9	Cerebrovascular disease	58	21.5
	10	Motor vehicle injuries	57	21.1
65-84 YEARS	0	TOTAL DEATHS ALL CAUSES	4,535	3416.5
	1	Cancer - All Sites	957	721.0
	2	Diseases of the heart	815	614.0
	3	Chronic lower respiratory diseases	376	283.3
	4	COVID-19	337	253.9
	5	Cerebrovascular disease	221	166.5
	6	Diabetes mellitus	188	141.6
	7	Alzheimer's disease	160	120.5
	8	Nephritis, nephrotic syndrome, & nephrosis	126	94.9
	9	Pneumonia & influenza	98	73.8
	10	Chronic liver disease & cirrhosis	78	58.8

### **RESIDENCE=CATAWBA**

			# OF DEATHS	DEATH RATE
85+ YEARS	0	TOTAL DEATHS ALL CAUSES	2,610	16961.3
	1	Diseases of the heart	534	3470.2
	2	Alzheimer's disease	265	1722.1
	3	Cancer - All Sites	221	1436.2
	4	Cerebrovascular disease	193	1254.2
	5	Chronic lower respiratory diseases	153	994.3
	6	COVID-19	131	851.3
	7	Pneumonia & influenza	64	415.9
	8	Nephritis, nephrotic syndrome, & nephrosis	60	389.9
	9	Other Unintentional injuries	49	318.4
	10	Diabetes mellitus	40	259.9

**RESIDENCE=LINCOLN** 

			# OF DEATHS	DEATH RATE
AGE GROUP:	RANK	CAUSE OF DEATH:		
TOTAL - ALL AGES	0	TOTAL DEATHS ALL CAUSES	4,818	1094.1
	1	Cancer - All Sites	906	205.7
	2	Diseases of the heart	860	195.3
	3	COVID-19	313	71.1
	4	Chronic lower respiratory diseases	300	68.1
	5	Cerebrovascular disease	253	57.5
	6	Other Unintentional injuries	200	45.4
	7	Alzheimer's disease	162	36.8
	8	Diabetes mellitus	155	35.2
	9	Chronic liver disease & cirrhosis	92	20.9
	10	Nephritis, nephrotic syndrome, & nephrosis	90	20.4
00-19 YEARS	0	TOTAL DEATHS ALL CAUSES	49	48.7
	1	Conditions originating in the perinatal period	13	12.9
	2	Other Unintentional injuries	6	6.0
	3	Congenital anomalies (birth defects)	4	4.0
		Motor vehicle injuries	4	4.0
	5	Cancer - All Sites	3	3.0
		Suicide	3	3.0
		Homicide	3	3.0
	8	In-situ/benign neoplasms	1	1.0
		Diseases of the heart	1	1.0
		Pneumonia & influenza	1	1.0
		Nephritis, nephrotic syndrome, & nephrosis	1	1.0
		SIDS	1	1.0

### **RESIDENCE=LINCOLN**

			# OF DEATHS	DEATH RATE
20-39 YEARS	0	TOTAL DEATHS ALL CAUSES	188	191.7
	1	Other Unintentional injuries	74	75.5
	2	Motor vehicle injuries	25	25.5
	3	Suicide	17	17.3
	4	Diseases of the heart	10	10.2
	5	Homicide	8	8.2
	6	Cancer - All Sites	7	7.1
	7	COVID-19	6	6.1
	8	In-situ/benign neoplasms	2	2.0
		Legal intervention	2	2.0
	10	Septicemia	1	1.0
		HIV disease	1	1.0
		Anemias	1	1.0
		Cerebrovascular disease	1	1.0
		Pneumonia & influenza	1	1.0
		Chronic lower respiratory diseases	1	1.0
		Chronic liver disease & cirrhosis	1	1.0
		Pregnancy, childbirth, and puerperium	1	1.0
		Congenital anomalies (birth defects)	1	1.0
40-64 YEARS	0	TOTAL DEATHS ALL CAUSES	1,030	642.3
	1	Cancer - All Sites	244	152.2
	2	Diseases of the heart	155	96.7
	3	COVID-19	74	46.1
	4	Chronic lower respiratory diseases	54	33.7
		Other Unintentional injuries	54	33.7
	6	Diabetes mellitus	53	33.1
	7	Chronic liver disease & cirrhosis	49	30.6
	8	Suicide	39	24.3
	9	Cerebrovascular disease	28	17.5
	10	Motor vehicle injuries	26	16.2

### **RESIDENCE=LINCOLN**

			# OF DEATHS	DEATH RATE
65-84 YEARS	0	TOTAL DEATHS ALL CAUSES	2,407	3244.8
	1	Cancer - All Sites	544	733.3
	2	Diseases of the heart	451	608.0
	3	Chronic lower respiratory diseases	189	254.8
	4	COVID-19	168	226.5
	5	Cerebrovascular disease	133	179.3
	6	Diabetes mellitus	89	120.0
	7	Alzheimer's disease	76	102.5
	8	Nephritis, nephrotic syndrome, & nephrosis	55	74.1
	9	Septicemia	50	67.4
	10	Chronic liver disease & cirrhosis	39	52.6
85+ YEARS	0	TOTAL DEATHS ALL CAUSES	1,144	15862.5
	1	Diseases of the heart	243	3369.4
	2	Cancer - All Sites	108	1497.5
	3	Cerebrovascular disease	91	1261.8
	4	Alzheimer's disease	86	1192.5
	5	COVID-19	65	901.3
	6	Chronic lower respiratory diseases	56	776.5
	7	Other Unintentional injuries	30	416.0
	8	Nutritional deficiencies	25	346.6
	9	Nephritis, nephrotic syndrome, & nephrosis	24	332.8
	10	Septicemia	17	235.7

#### **RESIDENCE=NORTH CAROLINA-STATE TOTAL**

			# OF DEATHS	DEATH RATE
AGE GROUP:	RANK	CAUSE OF DEATH:		
TOTAL - ALL AGES	0	TOTAL DEATHS ALL CAUSES	530,579	1009.0
	1	Diseases of the heart	102,414	194.8
	2	Cancer - All Sites	100,298	190.7
	3	Other Unintentional injuries	28,659	54.5
	4	Cerebrovascular disease	27,868	53.0
	5	COVID-19	27,779	52.8
	6	Chronic lower respiratory diseases	25,991	49.4
	7	Alzheimer's disease	22,267	42.3
	8	Diabetes mellitus	17,481	33.2
	9	Nephritis, nephrotic syndrome, & nephrosis	10,542	20.0
	10	Motor vehicle injuries	8,754	16.6
00-19 YEARS	0	TOTAL DEATHS ALL CAUSES	7,859	60.8
	1	Conditions originating in the perinatal period	2,081	16.1
	2	Congenital anomalies (birth defects)	868	6.7
	3	Motor vehicle injuries	780	6.0
	4	Other Unintentional injuries	759	5.9
	5	Homicide	651	5.0
	6	Suicide	444	3.4
	7	Cancer - All Sites	274	2.1
	8	Diseases of the heart	153	1.2
	9	Pneumonia & influenza	76	0.6
	10	Cerebrovascular disease	64	0.5

### **RESIDENCE=NORTH CAROLINA-STATE TOTAL**

			# OF DEATHS	DEATH RATE
20-39 YEARS	0	TOTAL DEATHS ALL CAUSES	25,268	180.8
	1	Other Unintentional injuries	8,404	60.1
	2	Motor vehicle injuries	3,173	22.7
	3	Suicide	2,454	17.6
	4	Homicide	2,240	16.0
	5	Diseases of the heart	1,378	9.9
	6	Cancer - All Sites	1,282	9.2
	7	COVID-19	638	4.6
	8	Diabetes mellitus	491	3.5
	9	Chronic liver disease & cirrhosis	393	2.8
	10	Cerebrovascular disease	238	1.7
40-64 YEARS	0	TOTAL DEATHS ALL CAUSES	115,339	685.2
	1	Cancer - All Sites	26,171	155.5
	2	Diseases of the heart	21,013	124.8
	3	Other Unintentional injuries	9,620	57.1
	4	COVID-19	6,686	39.7
	5	Diabetes mellitus	5,256	31.2
	6	Chronic liver disease & cirrhosis	4,550	27.0
	7	Chronic lower respiratory diseases	4,291	25.5
	8	Cerebrovascular disease	3,792	22.5
	9	Motor vehicle injuries	2,985	17.7
	10	Suicide	2,973	17.7
65-84 YEARS	0	TOTAL DEATHS ALL CAUSES	242,817	3067.1
	1	Cancer - All Sites	57,673	728.5
	2	Diseases of the heart	46,935	592.8
	3	Chronic lower respiratory diseases	15,625	197.4
	4	COVID-19	13,973	176.5
	5	Cerebrovascular disease	13,055	164.9
	6	Diabetes mellitus	9,041	114.2
	7	Alzheimer's disease	8,686	109.7
	8	Nephritis, nephrotic syndrome, & nephrosis	5,681	71.8
	9	Other Unintentional injuries	5,531	69.9
	10	Septicemia	4,089	51.6

### **RESIDENCE=NORTH CAROLINA-STATE TOTAL**

			# OF DEATHS	DEATH RATE
85+ YEARS	0	TOTAL DEATHS ALL CAUSES	139,296	14929.8
	1	Diseases of the heart	32,935	3530.0
	2	Cancer - All Sites	14,898	1596.8
	3	Alzheimer's disease	13,298	1425.3
	4	Cerebrovascular disease	10,719	1148.9
	5	COVID-19	6,435	689.7
	6	Chronic lower respiratory diseases	5,931	635.7
	7	Other Unintentional injuries	4,345	465.7
	8	Pneumonia & influenza	2,837	304.1
	9	Nephritis, nephrotic syndrome, & nephrosis	2,766	296.5
	10	Diabetes mellitus	2,676	286.8

# **ATTACHMENT C: TIME IS MUSCLE REFERENCES**

Timely access to angiography is defined for this study as treatment on the day of hospital admission for STEMI patients and within three days of admission for NSTEMI patients. Angiography is a diagnostic process that involves an x-ray of dye injected into blood vessels to assess narrowing or blockage in veins or arteries.

The proportion of patients who received timely treatment increased and mortality decreased over time for men and women. However, while gaps in treatment and outcomes between genders narrowed over time, these disparities persisted over the course of the years analyzed.

It is striking that female patients received timely treatment for NSTEMI in 2015 at rates lower than males measured in 2006, the authors said. Females treated for STEMI in 2015 received timely treatment at lower rates than males did in 2010.

These disparities also exist along racial lines. The authors note that Black, Hispanic, and Asian patients were less likely as white patients to undergo timely angiography, with minimal changes over time.

"Some of the factors influencing this pronounced treatment gap are insurance status, hospital characteristics and geography," said Dr. Montoy. "But there are biases and social issues that challenge access to care and impact the treatment of women and patients of color with heart issues. These gaps should concern clinicians and patients because they can result in delayed care and lower the likelihood that some patients receive potentially lifesaving treatment."

For more information: www.acep.org

<u>Treatment for Heart Attacks Improving but Gaps in Access Persist, New Study Shows | DAIC</u> (dicardiology.com)

DIC	DICARDIOLOGY *	PHOTO GALLERIES (/GALLERY)	VIDEOS ¥	COMPARISON CHARTS (/COMPARISON- CHARTS)	WEBINARS BLOGS CALE (/WEBINARS) ~ (/EVE		CALENDAR (/EVENTS)	CASE STUDIES (/CASE- STUDIES)	BUYER'S GUIDE (/BUYERS- GUIDE)	RESOURCES (/CHANNEL/RESOURCES)		
lagentit - Interventional Contrology				Search				Sign In New User? Regist	ı <b>(/user/login)</b> ister Here (/user/register,	) X (http:	f in s(//###	<b>)</b> (http://i ps:// <b>Fire</b> /fi

≡

# STEMI

Acute ST-segment elevation myocardial infarction (STEMI) is the one of the most dangerous types of heart attack where there is a serious blockage in one of the major coronary arteries in the heart. The "ST" reference identifies the section of electrocardiogram (ECG) (https://www.dicardiology.com/channel/ecg) (between the S and T segments on the ECG waveform readout) where there is an abnormality shown as an elevated waveform on the 12-lead ECG.

Minimally invasive, cath lab (https://www.dicardiology.com/channel/cath-lab)-based primary percutaneous coronary intervention (PCI) is the preferred treatment for STEMI. This includes use of balloon angioplasty and coornary stent placement to prop open the artery. Centers without a cath lab will usually start an an IV bag with thrombolytic agents to begin dissolving the clot causing the heart attack. This includes use of aspirin and heparin, and in some cases, antiplatelet agents such as ticagrelor. This is usually followed by transport of the patient to the closest hospital with a cath lab.

The conventional standard of care works on the idea that the longer it takes to reopen a STEMI lesion to restore blood flow to the heart muscle, the more damage will likely occur. Lack of oxygen can cause an infarct, where part of the heart muscle dies. This can lead later to heart failure. There is a direct relationship between the length of time a coronary artery is blocked, the amount of permanent damage to the heart, and odds of survival or full recovery.

This has led to the term "time is muscle" and great emphasis has been placed on reducing door-to-balloon (D2B) times at hospitals with cath labs. D2B refers to the amount of time it takes between the patient coming through the door of the hospital to the time an angioplasty balloon can be used to reopen the artery. The national standard is to achieve D2B times of 90 minutes or less. Some centers count D2B time from the arrival of emergency medical services (EMS) by the patient's side to angioplasty.

Hospitals that work to reduce door-to-balloon times are often most successful if they create a STEMI alert system. This requires close coordination between EMS, the hospital emergency department (ED, or emergency room, ER), cath lab staff and the interventional cardiologists. When paramedics detect a suspected STEMI patient with their defibrillator-monitors, a call is immediately made to the ED to start a STEMI alert, or STEMI code. The ED doctor who received the pre-hospital ECG confirms the STEMI, and sends it on to the interventional cardiologist on call for further validation. During daytime hours the cath lab staff prepare a room for the patient, or after-hours are called in to prep the cath lab. The heart team meets the patient at the ambulance dock and transports them directly to the cath lab to save time.

#### Links to more STEMI Information:

Why STEMI Heart Attacks are so Deadly (https://www.piedmont.org/living-better/why-stemi-heart-attacks-are-so-deadly)

ECG in STEMI - Importance and Challenges (https://www.heart.org/idc/groups/heart-public/%40wcm/%40mwa/documents/downloadable/ucm\_467056.pdf)

Acute Myocardial Infarction ST Elevation (STEMI) (https://www.ncbi.nlm.nih.gov/books/NBK532281/)

What is a STEMI? (https://www.ecgmedicaltraining.com/what-is-a-stemi/)

# ATTACHMENT D: LETTERS OF SUPPORT



7/17/24

Dear Ms. Mitchell,

I am writing to express my strong support for the adjusted need determination petition to approve the acquisition of a second Cardiac Catheterization Laboratory (Cath Lab) at Catawba Valley Medical Center (CVMC). As a referring physician, I have had the privilege of witnessing first-hand the exceptional care provided by the dedicated team at CVMC's existing Cath Lab.

The addition of a second Cath Lab will significantly enhance the hospital's capacity to provide timely and efficient cardiac care to our patients. It is well-known that in cardiac emergencies, every minute counts. Having a second Cath Lab will reduce wait times, allowing more patients to receive potentially lifesaving procedures in a timely manner. A second Cath Lab would allow the hospital to accommodate more patients. This is particularly beneficial in areas with a high incidence of cardiac diseases or a large aging population. With an additional Cath Lab, the need to transfer patients to other facilities due to capacity constraints can be significantly reduced. This not only improves patient care but also helps to retain patients within the local healthcare system. In case of maintenance, upgrades or unforeseen downtime in one lab, the second Cath Lab can ensure that patient care continues uninterrupted. Having two labs could allow for one to be used for scheduled procedures while the other is made available for emergencies. Alternatively, they could be specialized in different types of procedures. An additional Cath Lab can provide more flexible scheduling for medical staff, potentially reducing burnout and improving job satisfaction.

Furthermore, the growth in our community's population and the increasing prevalence of cardiovascular diseases necessitate the expansion of our cardiac services. A second Cath Lab will enable CVMC to meet this growing demand and continue its mission of providing high-quality healthcare to all residents of our community. These benefits collectively contribute to improved patient outcomes and access.

I am confident that the investment in a second Cath Lab will greatly benefit our patients and the community at large. I urge all stakeholders to support this important initiative.

Thank you for considering my views on this matter. I am available to discuss this further if needed.

toush the PA-c



7/17/24

Dear Ms. Mitchell,

I am writing to express my strong support for the adjusted need determination petition to approve the acquisition of a second Cardiac Catheterization Laboratory (Cath Lab) at Catawba Valley Medical Center (CVMC). As a referring physician, I have had the privilege of witnessing first-hand the exceptional care provided by the dedicated team at CVMC's existing Cath Lab.

The addition of a second Cath Lab will significantly enhance the hospital's capacity to provide timely and efficient cardiac care to our patients. It is well-known that in cardiac emergencies, every minute counts. Having a second Cath Lab will reduce wait times, allowing more patients to receive potentially life-saving procedures in a timely manner. A second Cath Lab would allow the hospital to accommodate more patients. This is particularly beneficial in areas with a high incidence of cardiac diseases or a large aging population. With an additional Cath Lab, the need to transfer patients to other facilities due to capacity constraints can be significantly reduced. This not only improves patient care but also helps to retain patients within the local healthcare system. In case of maintenance, upgrades or unforeseen downtime in one lab, the second Cath Lab can ensure that patient care continues uninterrupted. Having two labs could allow for one to be used for scheduled procedures while the other is made available for emergencies. Alternatively, they could be specialized in different types of procedures. An additional Cath Lab can provide more flexible scheduling for medical staff, potentially reducing burnout and improving job satisfaction.

Furthermore, the growth in our community's population and the increasing prevalence of cardiovascular diseases necessitate the expansion of our cardiac services. A second Cath Lab will enable CVMC to meet this growing demand and continue its mission of providing high-quality healthcare to all residents of our community. These benefits collectively contribute to improved patient outcomes and access.

I am confident that the investment in a second Cath Lab will greatly benefit our patients and the community at large. I urge all stakeholders to support this important initiative.

Thank you for considering my views on this matter. I am available to discuss this further if needed.

Sincerely. n



RPatel

7/17/24

Dear Ms. Mitchell,

I am writing to express my strong support for the adjusted need determination petition to approve the acquisition of a second Cardiac Catheterization Laboratory (Cath Lab) at Catawba Valley Medical Center (CVMC). As a referring physician, I have had the privilege of witnessing first-hand the exceptional care provided by the dedicated team at CVMC's existing Cath Lab.

The addition of a second Cath Lab will significantly enhance the hospital's capacity to provide timely and efficient cardiac care to our patients. It is well-known that in cardiac emergencies, every minute counts. Having a second Cath Lab will reduce wait times, allowing more patients to receive potentially life-saving procedures in a timely manner. A second Cath Lab would allow the hospital to accommodate more patients. This is particularly beneficial in areas with a high incidence of cardiac diseases or a large aging population. With an additional Cath Lab, the need to transfer patients to other facilities due to capacity constraints can be significantly reduced. This not only improves patient care but also helps to retain patients within the local healthcare system. In case of maintenance, upgrades or unforeseen downtime in one lab, the second Cath Lab can ensure that patient care continues uninterrupted. Having two labs could allow for one to be used for scheduled procedures while the other is made available for emergencies. Alternatively, they could be specialized in different types of procedures. An additional Cath Lab can provide more flexible scheduling for medical staff, potentially reducing burnout and improving job satisfaction.

Furthermore, the growth in our community's population and the increasing prevalence of cardiovascular diseases necessitate the expansion of our cardiac services. A second Cath Lab will enable CVMC to meet this growing demand and continue its mission of providing high-quality healthcare to all residents of our community. These benefits collectively contribute to improved patient outcomes and access.

I am confident that the investment in a second Cath Lab will greatly benefit our patients and the community at large. I urge all stakeholders to support this important initiative.

Thank you for considering my views on this matter. I am available to discuss this further if needed.



7/17/24

Dear Ms. Mitchell,

I am writing to express my strong support for the adjusted need determination petition to approve the acquisition of a second Cardiac Catheterization Laboratory (Cath Lab) at Catawba Valley Medical Center (CVMC). As a referring physician, I have had the privilege of witnessing first-hand the exceptional care provided by the dedicated team at CVMC's existing Cath Lab.

The addition of a second Cath Lab will significantly enhance the hospital's capacity to provide timely and efficient cardiac care to our patients. It is well-known that in cardiac emergencies, every minute counts. Having a second Cath Lab will reduce wait times, allowing more patients to receive potentially life-saving procedures in a timely manner. A second Cath Lab would allow the hospital to accommodate more patients. This is particularly beneficial in areas with a high incidence of cardiac diseases or a large aging population. With an additional Cath Lab, the need to transfer patients to other facilities due to capacity constraints can be significantly reduced. This not only improves patient care but also helps to retain patients within the local healthcare system. In case of maintenance, upgrades or unforeseen downtime in one lab, the second Cath Lab can ensure that patient care continues uninterrupted. Having two labs could allow for one to be used for scheduled procedures while the other is made available for emergencies. Alternatively, they could be specialized in different types of procedures. An additional Cath Lab can provide more flexible scheduling for medical staff, potentially reducing burnout and improving job satisfaction.

Furthermore, the growth in our community's population and the increasing prevalence of cardiovascular diseases necessitate the expansion of our cardiac services. A second Cath Lab will enable CVMC to meet this growing demand and continue its mission of providing high-quality healthcare to all residents of our community. These benefits collectively contribute to improved patient outcomes and access.

I am confident that the investment in a second Cath Lab will greatly benefit our patients and the community at large. I urge all stakeholders to support this important initiative.

Thank you for considering my views on this matter. I am available to discuss this further if needed.

Sincerely MICHAEL BALOSES, MD



7/17/24

Dear Ms. Mitchell,

I am writing to express my strong support for the adjusted need determination petition to approve the acquisition of a second Cardiac Catheterization Laboratory (Cath Lab) at Catawba Valley Medical Center (CVMC). As a referring physician, I have had the privilege of witnessing first-hand the exceptional care provided by the dedicated team at CVMC's existing Cath Lab.

The addition of a second Cath Lab will significantly enhance the hospital's capacity to provide timely and efficient cardiac care to our patients. It is well-known that in cardiac emergencies, every minute counts. Having a second Cath Lab will reduce wait times, allowing more patients to receive potentially life-saving procedures in a timely manner. A second Cath Lab would allow the hospital to accommodate more patients. This is particularly beneficial in areas with a high incidence of cardiac diseases or a large aging population. With an additional Cath Lab, the need to transfer patients to other facilities due to capacity constraints can be significantly reduced. This not only improves patient care but also helps to retain patients within the local healthcare system. In case of maintenance, upgrades or unforeseen downtime in one lab, the second Cath Lab can ensure that patient care continues uninterrupted. Having two labs could allow for one to be used for scheduled procedures while the other is made available for emergencies. Alternatively, they could be specialized in different types of procedures. An additional Cath Lab can provide more flexible scheduling for medical staff, potentially reducing burnout and improving job satisfaction.

Furthermore, the growth in our community's population and the increasing prevalence of cardiovascular diseases necessitate the expansion of our cardiac services. A second Cath Lab will enable CVMC to meet this growing demand and continue its mission of providing high-quality healthcare to all residents of our community. These benefits collectively contribute to improved patient outcomes and access.

I am confident that the investment in a second Cath Lab will greatly benefit our patients and the community at large. I urge all stakeholders to support this important initiative.

Thank you for considering my views on this matter. I am available to discuss this further if needed.

Jullium D.D., MPA, ACMO



June 20, 2024

Dear Ms. Mitchell,

I hope this letter finds you well. As an executive at Catawba Valley Medical Center (CVMC), I am writing to seek your support for a critical initiative that will significantly enhance cardiac care in our community.

CVMC has a strong record of providing exceptional healthcare services. Our existing Cardiac Catheterization Laboratory (Cath Lab) has been instrumental in diagnosing and treating cardiovascular conditions. However, the growing demand for cardiac services necessitates expansion.

We propose an adjusted need determination to permit the establishment of a second Cath Lab at CVMC. This strategic investment will address several key needs:

- In cardiac emergencies, every minute counts. Having a second Cath Lab will reduce wait times, ensuring prompt interventions for our patients.
- Our community's population is on the rise, and cardiovascular diseases remain prevalent. A second lab will bolster our capacity to serve more patients effectively.
- Dual labs allow for flexible scheduling. We can allocate one lab for scheduled procedures while keeping the other available for emergencies. This approach benefits both patients and our medical staff.
- By minimizing patient transfers due to capacity constraints, we strengthen our local healthcare system. Patients can receive uninterrupted care within our facility.
- Catawba Valley Medical Center and Frye Regional Medical Center each independently employ Cardiologist staff and neither have medical staff privileges at the other facility, significantly impacts patient care.
- A second Cath Lab aligns with CVMC's mission to improve patient outcomes and enhance access for all residents.

Feel free to reach out if you need any further details or clarification. Thank you for your support in advancing cardiac care in our state.



June 20, 2024

Dear Ms. Mitchell,

I hope this letter finds you well. As an executive at Catawba Valley Medical Center (CVMC), I am writing to seek your support for a critical initiative that will significantly enhance cardiac care in our community.

CVMC has a strong record of providing exceptional healthcare services. Our existing Cardiac Catheterization Laboratory (Cath Lab) has been instrumental in diagnosing and treating cardiovascular conditions. However, the growing demand for cardiac services necessitates expansion.

We propose an adjusted need determination to permit the establishment of a second Cath Lab at CVMC. This strategic investment will address several key needs:

- In cardiac emergencies, every minute counts. Having a second Cath Lab will reduce wait times, ensuring prompt interventions for our patients.
- Our community's population is on the rise, and cardiovascular diseases remain prevalent. A second lab will bolster our capacity to serve more patients effectively.
- Dual labs allow for flexible scheduling. We can allocate one lab for scheduled procedures while keeping the other available for emergencies. This approach benefits both patients and our medical staff.
- By minimizing patient transfers due to capacity constraints, we strengthen our local healthcare system. Patients can receive uninterrupted care within our facility.
- Catawba Valley Medical Center and Frye Regional Medical Center each independently employ Cardiologist staff and neither have medical staff privileges at the other facility, significantly impacts patient care.
- A second Cath Lab aligns with CVMC's mission to improve patient outcomes and enhance access for all residents.

Feel free to reach out if you need any further details or clarification. Thank you for your support in advancing cardiac care in our state.

athomit

Nadin Knippschild AVP, CIO



June 20, 2024

Dear Ms. Mitchell,

I hope this letter finds you well. As an executive at Catawba Valley Medical Center (CVMC), I am writing to seek your support for a critical initiative that will significantly enhance cardiac care in our community.

CVMC has a strong record of providing exceptional healthcare services. Our existing Cardiac Catheterization Laboratory (Cath Lab) has been instrumental in diagnosing and treating cardiovascular conditions. However, the growing demand for cardiac services necessitates expansion.

We propose an adjusted need determination to permit the establishment of a second Cath Lab at CVMC. This strategic investment will address several key needs:

- In cardiac emergencies, every minute counts. Having a second Cath Lab will reduce wait times, ensuring prompt interventions for our patients.
- Our community's population is on the rise, and cardiovascular diseases remain prevalent. A second lab will bolster our capacity to serve more patients effectively.
- Dual labs allow for flexible scheduling. We can allocate one lab for scheduled procedures while keeping the other available for emergencies. This approach benefits both patients and our medical staff.
- By minimizing patient transfers due to capacity constraints, we strengthen our local healthcare system. Patients can receive uninterrupted care within our facility.
- Catawba Valley Medical Center and Frye Regional Medical Center each independently employ Cardiologist staff and neither have medical staff privileges at the other facility, significantly impacts patient care.
- A second Cath Lab aligns with CVMC's mission to improve patient outcomes and enhance access for all residents.

Feel free to reach out if you need any further details or clarification. Thank you for your support in advancing cardiac care in our state.

Sincerely,

Mrc Billingo

Greg Billings — MSN, RN-BC, NEA-BC Vice President and Corporate Compliance Officer gbillings@cvmc.us | p 828.326.2765



June 20, 2024

Dear Ms. Mitchell,

I hope this letter finds you well. As an executive at Catawba Valley Medical Center (CVMC), I am writing to seek your support for a critical initiative that will significantly enhance cardiac care in our community.

CVMC has a strong record of providing exceptional healthcare services. Our existing Cardiac Catheterization Laboratory (Cath Lab) has been instrumental in diagnosing and treating cardiovascular conditions. However, the growing demand for cardiac services necessitates expansion.

We propose an adjusted need determination to permit the establishment of a second Cath Lab at CVMC. This strategic investment will address several key needs:

- In cardiac emergencies, every minute counts. Having a second Cath Lab will reduce wait times, ensuring prompt interventions for our patients.
- Our community's population is on the rise, and cardiovascular diseases remain prevalent. A second lab will bolster our capacity to serve more patients effectively.
- Dual labs allow for flexible scheduling. We can allocate one lab for scheduled procedures while keeping the other available for emergencies. This approach benefits both patients and our medical staff.
- By minimizing patient transfers due to capacity constraints, we strengthen our local healthcare system. Patients can receive uninterrupted care within our facility.
- Catawba Valley Medical Center and Frye Regional Medical Center each independently employ Cardiologist staff and neither have medical staff privileges at the other facility, significantly impacts patient care.
- A second Cath Lab aligns with CVMC's mission to improve patient outcomes and enhance access for all residents.

Feel free to reach out if you need any further details or clarification. Thank you for your support in advancing cardiac care in our state.

Bicheld Sedney

Michele Sedney Vice President and Chief Human Resource Officer



June 21, 2024

Dear Ms. Mitchell,

I hope this letter finds you well. As the chief nurse executive at Catawba Valley Medical Center (CVMC), I am writing to seek your support for a critical initiative that will significantly enhance cardiac care in our community.

CVMC has a strong record of providing exceptional healthcare services. Our existing Cardiac Catheterization Laboratory (Cath Lab) has been instrumental in diagnosing and treating cardiovascular conditions. However, the growing demand for cardiac services necessitates expansion.

We propose an adjusted need determination to permit the establishment of a second Cath Lab at CVMC. This strategic investment will address several key needs:

- In cardiac emergencies, every minute counts. Having a second Cath Lab will reduce wait times, ensuring prompt interventions for our patients.
- Our community's population is on the rise, and cardiovascular diseases remain prevalent. A second lab will bolster our capacity to serve more patients effectively.
- Dual labs allow for flexible scheduling. We can allocate one lab for scheduled procedures while keeping the other available for emergencies. This approach benefits patients and medical staff.
- By minimizing patient transfers due to capacity constraints, we strengthen our local healthcare system. Patients can receive uninterrupted care within our facility.
- Catawba Valley Medical Center and Frye Regional Medical Center each independently employ Cardiologist staff and neither have medical staff privileges at the other facility, which significantly impacts patient care.
- A second Cath Lab aligns with CVMC's mission to improve patient outcomes and enhance access for all residents.

Feel free to reach out if you need any further details or clarification. Thank you for your support in advancing cardiac care in our state.

nichen UN9K-

Michelle Lusk, RN, MSN, CIC, CPHQ Chief Nursing Officer Catawba Valley Health System



**Emergency Medicine** 

Medical Center Boulevard Winston-Salem, NC 27157-1089 p 336.716.4625 f 336.716.5438

17 July 2024

Dear Ms. Mitchell,

I am writing to express my strong support for the adjusted need determination petition to approve the acquisition of a second Cardiac Catheterization Laboratory (Cath Lab) at Catawba Valley Medical Center (CVMC). As an Emergency Department Physician, I have had the privilege of witnessing first-hand the exceptional care provided by the dedicated team at CVMC's existing Cath Lab.

The addition of a second Cath Lab will significantly enhance the hospital's capacity to provide timely and efficient cardiac care to our patients. It is well-known that in cardiac emergencies, every minute counts. Having a second Cath Lab will reduce wait times, allowing more patients to receive potentially life-saving procedures in a timely manner. A second Cath Lab would allow the hospital to accommodate more patients. This is particularly beneficial in areas with a high incidence of cardiac diseases or a large aging population. With an additional Cath Lab, the need to transfer patients to other facilities due to capacity constraints can be significantly reduced. This not only improves patient care but also helps to retain patients within the local healthcare system. In case of maintenance, upgrades, or unforeseen downtime in one lab, the second Cath Lab can ensure that patient care continues uninterrupted. Having two labs could allow for one to be used for scheduled procedures while the other is made available for emergencies. Alternatively, they could be specialized in different types of procedures. An additional Cath Lab can provide more flexible scheduling for medical staff, potentially reducing burnout and improving job satisfaction.

Furthermore, the growth in our community's population and the increasing prevalence of cardiovascular diseases necessitate the expansion of our cardiac services. A second Cath Lab will enable CVMC to meet this growing demand and continue its mission of providing high-quality healthcare to all residents of our community. These benefits collectively contribute to improved patient outcomes and access.

I am confident that the investment in a second Cath Lab will greatly benefit our patients and the community at large. I urge all stakeholders to support this important initiative.

Thank you for considering my views on this matter. I am available to discuss this further if needed.

Pattamp

Pierce Hibma, MD Emergency Medicine



June 24, 2024

Dear Ms. Mitchell

As the Physician Executive Director of the Heart Center at Catawba Valley Medical Center (CVMC), I wholeheartedly endorse the petition for an adjusted need determination to permit the establishment of a second Cardiac Catheterization Laboratory (Cath Lab) within our esteemed institution. Having closely observed the exceptional care delivered by our dedicated team in the existing Cath Lab, I am convinced that this expansion is vital for our patients and community.

In critical cardiac situations, time is of the essence. A second Cath Lab will significantly reduce wait times, allowing more patients to receive urgent, potentially life-saving procedures promptly. Moreover, it will bolster our capacity to accommodate a growing patient population, especially in areas with high rates of cardiac diseases and an aging demographic.

By minimizing the need to transfer patients elsewhere due to capacity constraints, we enhance patient care and strengthen our local healthcare system. The second Cath Lab ensures uninterrupted service during maintenance, upgrades, or unexpected downtime in one lab.

Two labs offer flexibility. We can allocate one for scheduled procedures while keeping the other available for emergencies. Alternatively, specialized procedures could be performed in each lab. This adaptability benefits both patients and medical staff.

Our community's population continues to grow, and cardiovascular diseases remain prevalent. Expanding our cardiac services is not just prudent but essential. At the current rate of demand, I have no doubt that CVMC will easily do 2400 procedures three years from now. The second Cath Lab aligns with CVMC's mission of providing high-quality healthcare to all residents. Moreover, considering the complexity of our field, cardiologists cannot effectively cover two hospitals anymore. The risk of burnout is significant. Focusing our efforts within CVMC ensures better patient outcomes and supports our dedicated medical professionals.

I urge all stakeholders to support this critical initiative. Together, we can improve patient outcomes and ensure timely access to cardiac care.

Thank you for your consideration. Feel free to reach out for further discussion.

Vencent J. Pompil no

Vincent J. Pompili, MD, FACC, FSCAI Physician Executive Director, Heart Center Catawba Valley Health System



**Emergency Medicine** 

Medical Center Boulevard Winston-Salem, NC 27157-1089 p 336.716.4625 f 336.716.5438

Ms. Micheala Mitchell Chief, Healthcare Planning and Certificate of Need Section Division of Health Service Regulation 809 Ruggles Drive Raleigh, NC 27603

17 July 2024

Dear Ms. Mitchell,

I am writing to express my strong support for the adjusted need determination petition to approve the acquisition of a second Cardiac Catheterization Laboratory (Cath Lab) at Catawba Valley Medical Center (CVMC). As an Emergency Department Physician, and Chair of Emergency Medicine, I have had the privilege of witnessing first-hand the exceptional care provided by the dedicated team at CVMC's existing Cath Lab.

The addition of a second Cath Lab will significantly enhance the hospital's capacity to provide timely and efficient cardiac care to our patients. It is well-known that in cardiac emergencies, every minute counts. Having a second Cath Lab will reduce wait times, allowing more patients to receive potentially life-saving procedures in a timely manner. A second Cath Lab would allow the hospital to accommodate more patients. This is particularly beneficial in areas with a high incidence of cardiac diseases or a large aging population. With an additional Cath Lab, the need to transfer patients to other facilities due to capacity constraints can be significantly reduced. This not only improves patient care but also helps to retain patients within the local healthcare system. In case of maintenance, upgrades, or unforeseen downtime in one lab, the second Cath Lab can ensure that patient care continues uninterrupted. Having two labs could allow for one to be used for scheduled procedures while the other is made available for emergencies. Alternatively, they could be specialized in different types of procedures. An additional Cath Lab can provide more flexible scheduling for medical staff, potentially reducing burnout and improving job satisfaction.

Furthermore, the growth in our community's population and the increasing prevalence of cardiovascular diseases necessitate the expansion of our cardiac services. A second Cath Lab will enable CVMC to meet this growing demand and continue its mission of providing high-quality healthcare to all residents of our community. These benefits collectively contribute to improved patient outcomes and access.

I am confident that the investment in a second Cath Lab will greatly benefit our patients and the community at large. I urge all stakeholders to support this important initiative.

Thank you for considering my views on this matter. I am available to discuss this further if needed.

Sincerely. 400

Richard Rozier, MD Chair, Emergency Medicine



June 25, 2024

Dear Ms. Mitchell,

I am writing to express my support for the adjusted need determination petition to approve the acquisition of a second Cardiac Catheterization Laboratory (Cath Lab) at Catawba Valley Medical Center (CVMC). As an interventional cardiologist, I am familiar with several of the cardiology staff at CVMC and aware of the exceptional care provided by the dedicated team at CVMC's existing Cath Lab.

The addition of a second Cath Lab will significantly enhance the hospital's capacity to provide timely and efficient cardiac care to patients. It is well-known that in cardiac emergencies, "time is of the essence." Having a second Cath Lab will reduce access times, allowing patients to receive potentially life-saving procedures in a more timely manner.

A second Cath Lab would allow the hospital to accommodate greater patient volumes. This is particularly beneficial in areas with a high incidence of cardiac diseases or a large aging population. With an additional Cath Lab, the need to transfer patients to other facilities due to capacity constraints can be significantly reduced. This not only improves patient care but also helps to retain patients within the local healthcare system. In case of maintenance, upgrades or unforeseen downtime in one lab, the second Cath Lab can ensure that patient care continues uninterrupted. Having two labs could allow for one to be used for scheduled procedures while the other is made available for emergencies. Additionally, the 2<sup>nd</sup> lab could be utilized for noncardiac procedures, further reducing scheduling constraints. The ability to more promptly schedule elective procedures enhances care quality and patient satisfaction.

Furthermore, the growth in our community's population and the increasing prevalence of cardiovascular diseases demands the expansion of our cardiovascular services. A second Cath Lab will enable CVMC to meet this growing demand and continue its mission of providing high-quality healthcare to all tesidents of our community.

I am confident that the investment in a second Cath Lab will greatly benefit patients and the community at large. I urge all stakeholders to support this important initiative.

Thank you for considering my views on this matter. I am available to discuss this further if needed.

Sincerely, Chas DeBerardinis, DO, FACC Director, Cardiac Catheterization Lab Iredell Health Systems Statesville, NC

# YTD GLOBAL PAYOR MIX

2024

Blue Cross	204,311,321.06	14.08%
Champus	7,024,431.42	0.48%
Charity Care	1,071,361.70	0.07%
Client	2,216,749.80	0.15%
Commercial Insurance	42,164,739.70	2.91%
Employee Health	16,530,870.23	1.14%
Managed Care	129,677,387.26	8.94%
Medicaid	50,034,492.00	3.45%
Medicaid Managed Care	137,590,254.10	9.49%
Medicaid NonContract MngedCare	0	0.00%
Medicare	262,804,666.20	18.12%
Medicare Advantage	466,062,986.97	32.13%
Medicare Advantage NonContract	1,000,755.49	0.07%
Other	49,143,867.43	3.39%
Self Pay/Indigent	73,677,700.05	5.08%
Worker Comp	7,257,096.53	0.50%
Total	1,450,568,679.94	100.00%

### Attachment F

### Catawba Valley Medical Center Clinic Relationships – Examples

- FQHC Catawba Valley Family Medicine Maiden 137 Island Ford Rd Maiden, NC 28650-8735
- FQHC Catawba Valley Family Medicine Claremont 3114 West Main Street, Claremont, NC 28610-9609
- FQHC Catawba Valley Family Medicine -Graystone 3511 Graystone Place SE, Conover, NC 28613-8201
- FQHC Catawba Valley Family Medicine -Northeast Hickory 2365 Springs Road NE, Hickory, NC 28601-3067
- FQHC Catawba Valley Family Medicine -Taylorsville 50 Macedonia Church Road, Suite A, Taylorsville, NC 28681-8414

### CVMC has other employed physician offices located throughout Catawba County

https://www.catawbavalleyhealth.org/Medical-Group/Family-Health-Centers.aspx

# **ATTACHMENT G: SPEECHES**

# Presentation of Special Needs Petition for One Additional Unit of Fixed Back up Cardiac Catheterization Equipment Catawba County, Proposed 2025 State Medical Facilities Plan July 16, 2024

Thank you. Good afternoon, my name is Chuck Scronce, I am the Assistant Vice President for Clinical Support at Catawba Valley Health System. Among my administrative responsibilities is the Catawba Valley Heart Center. We are in Hickory, Catawba County. I have been there for 13 years; I have a master's degree and am a Nurse Executive, Advanced Board Certified. I have also worked at Frye Regional Medical Center, Caldwell Memorial Hospital and recently retired from the USAF and NCANG after 41 years of service.

To echo Dr. Pompili, we are asking the State Health Coordinating Council to modify the Proposed *2025 State Medical Facilities Plan* to include a **special need for one more unit of hospital-based cardiac catheterization equipment in Catawba County**. This would modify Chapter 15A.

CVMC expects to end this fiscal year with the cath lab operating over capacity. Table 15A-3 shows CVMC needed 1.08 units of fixed cardiac catheterization equipment to meet demand <u>last fiscal year – 2023</u>. Yet, the Proposed 2025 SMFP shows that the county does not need another unit. Why? The Proposed 2025 SMFP calculates need for cardiac catheterization equipment by <u>county</u>. Catawba County has two hospitals. The other hospital, Frye Regional, has 4 fixed units, but needed only 3 last year. The standard methodology sums the two hospitals and gets net zero need. On paper, this looks reasonable. It is not, because sharing equipment or patients is virtually impossible.

- CVMC is a safety net hospital; it is an <u>instrumentality of Catawba County</u>, <u>North</u> <u>Carolina</u>, and tax exempt via the IRS 115 (2) code and has a fiduciary responsibility to provide charity care; Frye Regional is one of a system of for-profit hospitals in the DLP LifePoint system.
- CVMC and Frye have separate employed Cardiology groups that provide exclusive cardiology services including ED call at the respective hospital.
- Each hospital participates in different insurance arrangements.
- Cath equipment is fixed; it cannot move from one hospital to another; when CVMC reaches overflow, the only option is to move the patient and that is not ideal care.

CVMC Heart Center is a physical space with a dedicated staff who care for heart patients from diagnosis through recovery. It has only one unit of cardiac cath equipment. When that is down or in use, we have no back up. Year to date, we have provided more than 1,500 weighted caths. Capacity is 1,200, according to the standard methodology. The cardiac catheterization laboratory has a medical staff of 3.5 interventional cardiologists, who work exclusively at CVMC.

The Heart Center is organized around the patient. Registration, treatment, recovery are together. This structure increases contact between patients and clinicians, and we see outcome results in lower length of stay. The Heart Center also offers electrophysiology The EP program is a partnership with Wake Forest Baptist and will be staffed full time this fall by a Catawba Valley Cardiology Board Certified EP cardiologist – one who specializes in treating problems associated with electrical communication among the heart's

muscles. These are long procedures and can take up much of the day. CVMC offers a full range of EP procedures and was the 1st in our region to do Afib Ablation with PFA (Pulsed Field Ablation).

Our service area is the Unifour Region of North Carolina, the foothills of the Appalachian Mountains. It has about 400,000 residents and is emerging as a technology and a retirement center. Resident median age today is over 42. Compare that to North Carolina average of 39. People come to the foothills for retirement, and many arrive with complex health problems. People who have lived here all their lives are less healthy than the North Carolina average, particularly regarding heart health. According to the State Center for Health Statistics, more adults have heart disease diagnoses than the state average (7 vs 6 percent). Centers for Disease Control and Statistics shows Catawba County with higher Medicare heart hospitalizations than the US average. Heart disease is the leading cause of death and death rates are higher than the state average. In adjacent Alexander County, which has no hospital, heart disease death rates for 2018-2022 are 25 percent higher than the state average (242 vs 195 per 100,000 residents). We have good reason to focus on heart care.

As Dr. Pomili mentioned, we are a STEMI Primary Heart Center. Our commitment is community wide. CVMC is the only Catawba County hospital that provides after-hours back-up for adjacent Iredell County as their STEMI program is only available certain days and times based on their Cardiology availability. Dr. Pompili discussed two alternatives that we considered and discarded: the mobile unit and referring patients to another location. Neither works, we need on-site, in hospital back up for our single unit of life-saving equipment.

We understand that the SHCC must find that the proposed special need would not represent duplication. **CVMC is at capacity right now**. We will do more than <u>1,500</u> <u>weighted caths this year</u>. Our service area population is increasing and aging. CVMC cannot reasonably use the excess capacity at Frye. Frye has a good program, but sharing this type of equipment is not workable. We tried it and it fell apart logistically in 2014.

There is precedent for this request. In 2016, WakeMed had unused capacity. The SHCC recognized the difficulty associated with two systems sharing fixed cardiac catheterization equipment and granted a special need for another unit in Wake County. UNC Rex subsequently received the CON. In 2023, when CVMC and Frye both had extra operating room capacity, the SHCC granted Greystone Ophthalmology a special need for one more operating room in Catawba County for the 2024 Plan.

As you will see in our petition, have support from physicians, EMS, and the cardiology program at Iredell Memorial. Redundancy for a one-unit program that is fully committed to STEMI is critical to safe care.

Health care systems are vertically integrated today. Fixed equipment sharing is difficult to impossible. Moreover, the physical unit of cardiac catheterization equipment is a small part of the service program cost – about 5 to 10 percent. CVMC made the big investment in staff, protocols, third party contracts, and space. One more unit of cardiac

60

catheterization equipment at CVMC would represent an investment in quality and safety and provide essential redundancy.

CVMC has achieved a Leapfrog Score of A for quality/safety in 17 of the last 18 cycles and we have a Lowns Score for social responsibility that ranks the hospital at number 14 in the state.

I ask that you help us and approve this request. I will be submitting a formal petition in the required format later this month. Meanwhile, I will be happy to respond to any of your questions today.

# Presentation of Special Needs Petition for One Additional Unit of Fixed Cardiac Catheterization Equipment Catawba County, Proposed 2025 State Medical Facilities Plan July 16, 2024

## Introduction

Good afternoon, my name is Vincent Pompili, I am a Board-Certified Interventional Cardiologist and Medical Director Cardiology at Catawba Valley Medical Center in Hickory, North Carolina. Thank you Chairperson, staff, and members of the State Health Coordinating Council for giving me a few moments to discuss a special need in Catawba County.

I have been on the medical staff at Catawba Valley Medical Center for 3 years and experienced several evolutions in the local health care delivery system. Today, CVMC hospital has 243 acute care beds and serves 57,000 emergency patients a year. We have an organized Heart Center staffed by 7 cardiologists and 7 Advanced Practice Providers. Our Heart Center offers 24/7 STEMI coverage and is accredited by the American College of Cardiology as a Chest Pain Center with PCI. For those of you who are not familiar with clinical terms, STEMI is short for ST-elevation myocardial infarction. This is the deadliest form of heart attack. It occurs when a blood clot completely blocks a coronary artery that supplies oxygen-rich blood to the heart muscle. For people with this condition, time is muscle. Even five minutes makes a difference. The recommended treatment for the condition is Percutaneous Coronary Intervention – which is the clinical term for interventional cardiac catheterization.

We have a problem and would like your assistance. CVMC has one unit of fixed cardiac catheterization equipment, and we need another. Last fiscal year, it operated above the Plan standard. We are on track to reach full capacity this year. However, the Proposed 2025 Plan shows no need for additional fixed cardiac catheterization equipment in Catawba County. My colleague, Chuck Scronce, will discuss the planning issues. I will talk about what this means to our patients.

My colleague and I are here to ask members of the State Health Coordinating Council to modify the Proposed *2025 State Medical Facilities Plan* to include a **special need for one** additional unit of hospital-based cardiac catheterization equipment in Catawba County.

Cardiac catheterization equipment lets us watch a beating heart while we thread exceedingly small catheters through the leg or arm and either use contrast agents to visualize heart circulation or small instruments to repair a blockage. One type of cardiologist, a noninvasive cardiologist is trained and certified to diagnose problems. Others like me pursue additional training and peer testing to become Board Certified Interventionalists who can remove clots, place stents and repair heart arteries. This is delicate business. Patients' lives are in our hands.

To attain American College of Cardiology Accreditation, an institution must maintain a standard of 90 minutes from patient arrival at the hospital to catheter placement. When you are operating at capacity as we are, maintaining this standard is a challenge. CVMC

63

treats an average of three STEMI patients a week. They are emergencies –we cannot predict when they arrive, and if we will have an open slot –they could arrive back-toback.

Accreditation requires integration of cardiac treatment with local EMS services so that care can begin when EMS picks the patient up and continue seamlessly on arrival at the hospital. CVMC has such STEMI protocols and arrangements with EMS in three counties: Catawba, Alexander, and Iredell.

CVMC has the medical staff and team to manage back-to-back patients, but we do not have the second piece of equipment. When our one cardiac catheterization lab is in use and we cannot meet the STEMI standard, we spend valuable minutes determining if we have time to finish the current patient or stop mid-procedure to accommodate the STEMI On these occasions, we stabilize the patient in the ED, then referred them to another STEMI center, often by ambulance. This is not ideal. As I said, 'Time is muscle.' Every minute counts. Many patients who have a STEMI heart attack in our region are already in our electronic medical record system, which expedites treatment. Or, because we are the safety net hospital for the region,, and they have no coverage, we are ready to cover them with our charity program. Record starting delay is minimal. We know their history, their risks and can move quickly to treat them.

You may ask, "Who is likely to have a STEMI heart attack?" Any gender over age 20, although rates for men are twice the female rates. Genes, health habits, lifestyle, smoking, stress, congenital issues, and diet are among the many risk factors. Age certainly increases the risk.

CVMC Heart Center is part of a system of care that begins with 107 providers in the Catawba Valley Medical Group. The group has offices throughout the county – 21 outpatient clinics, 8 employer-based workplace clinics and 1 student health clinic. This multi-specialty medical group has 320,000 encounters a year and 15,000 of these are to Catawba Valley Cardiology. With so much demand, we are actively recruiting two more cardiologists and complementary specialists in family medicine, pulmonology, general surgery, neurology, and vascular surgery. Most people with heart disease need services from one or more of these specialities, as well.

Catawba Valley Medical Group shares the electronic medical record database with Catawba Valley Medical Center. This means that the hospital has medical history on most heart patients when they arrive.

You might be thinking that we could solve our problem with a mobile unit, even one that does not move from CVMC. This is not a satisfactory solution. It means taking fragile patients out in the weather – and we get snow and ice in the winter -- and using staff from another company who are not necessarily trained in our protocols. The arrangement adds another layer of overhead to pay the mobile company, and it takes away any efficiency or continuity of care that we have worked hard to attain in our Heart Center. The team in the mobile unit is all alone. The team in the Heart Center has immediate back up.

Or, you may be thinking, why not send the patients to the hospital that has extra capacity? We tried this and it worked for a while, but the county is too big, health care is too organized in systems and our physicians now have privileges at only one hospital.

When we move patients from one hospital to another, we risk losing critical continuity in care protocols. And we lose physicians if we ask them to get privileges at two hospitals – it is too stressful.

I ask that you help us and approve this request. CVMC will be submitting a formal petition in the required format later this month. Meanwhile, I will be happy to respond to any of your questions today.

# Presentation of Special Needs Petition for One Additional Unit of Fixed Back up Cardiac Catheterization Equipment Catawba County, Proposed 2025 State Medical Facilities Plan July 24, 2024

Thank you. I am Chuck Scronce, Assistant Vice President for Clinical Support at Catawba Valley Health System in Hickory NC. I have been there for 13 years; I am a Nurse Executive, Advanced Board Certified. I have also worked at Frye Regional Medical Center, Caldwell Memorial Hospital and recently retired from the USAF and NCANG after 41 years.

We are asking the State Health Coordinating Council to modify the Proposed 2025 State Medical Facilities Plan to include a <u>special need for one more unit of hospital-based</u> cardiac catheterization equipment in Catawba County.

Briefly, CVMC has one cardiac catheterization lab and expects to end this fiscal year with operating over capacity. We could support a second. Yet, the Proposed 2025 SMFP shows that Catawba County without a need. It calculates need by <u>county</u>. Catawba County has two hospitals. The other hospital, Frye Regional, has 4 fixed units, but needed only 3 last year. The standard methodology sums the two hospitals and gets net zero needed. On paper, this looks reasonable. It is not, because sharing equipment or patients is virtually impossible.