

IN THE MATTER OF

*

BEFORE THE

MEDSTAR UNION MEMORIAL

*

MARYLAND

HOSPITAL

*

HEALTH CARE

Docket No.: 24-24-CP054

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COMMISSION

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**STAFF REPORT AND RECOMMENDATION
CERTIFICATE OF ONGOING PERFORMANCE
FOR PRIMARY & ELECTIVE
PERCUTANEOUS CORONARY INTERVENTION SERVICES**

November 21, 2024

I. INTRODUCTION

A. Background

Percutaneous coronary intervention (PCI), commonly known as coronary angioplasty, is a non-surgical procedure whereby a catheter is inserted in a blood vessel and guided to the site of the narrowing of a coronary artery to relieve coronary narrowing. Primary (or emergency) PCI programs provide emergency PCI intervention in the event of a heart attack shortly after it begins. Elective (or non-primary) PCI programs provide interventions that revascularize coronary arteries that are substantially blocked but have not yet resulted in an immediate cardiac event.

For many years, only Maryland hospitals with on-site cardiac surgery services could provide PCI. However, in the 1990s, Maryland began allowing some hospitals to perform primary PCI services without cardiac surgery on-site, first as part of research trials evaluating the safety of providing primary PCI at such hospitals and, later, as a regular clinical service, based on the research findings. The Maryland Health Care Commission (MHCC or Commission) issued waivers to hospitals to exempt them from the requirement for co-location of primary PCI services with cardiac surgery. In the following decade, similar research evaluated the safety of providing elective PCI services at hospitals without on-site cardiac surgery.

The nine Maryland hospitals that obtained waivers to provide elective PCI services participated in a multi-site clinical trial, C-PORT E, a study that was approved by the Commission upon the recommendation of its Research Proposal Review Committee. This non-inferiority study provided evidence that elective PCI could be performed safely and effectively at hospitals without on-site cardiac surgery. In 2012, the Maryland legislature passed a law directing the Commission to establish a process and minimum standards for a hospital to obtain and maintain Certificates of Ongoing Performance for the provision of cardiac surgery and PCI. The legislation required the Commission to establish a Clinical Advisory Group (CAG) to advise the agency on regulations to implement the new law.

After extensive discussion with the CAG, comprised of national and regional experts, and considering the CAG's and other stakeholders' recommendations, COMAR 10.24.17, the Cardiac Surgery and PCI Services chapter (Cardiac Services Chapter) of the State Health Plan for Facilities and Services was replaced, effective August 2014. The Cardiac Services Chapter was subsequently revised in November 2015 and again in January 2019.

The Cardiac Services Chapter contains standards for evaluating the performance of established cardiac surgery and PCI services in Maryland and for determining whether a hospital should be granted a Certificate of Ongoing Performance. A Certificate of Ongoing Performance for PCI services authorizes a hospital to continue to provide PCI services, either primary or both primary and elective PCI services, for a period of time that cannot exceed five years, unless an extension is granted by the Executive Director. At the end of the period, the hospital must demonstrate that it continues to meet the requirements in the Cardiac Services Chapter in order for the Commission to renew the hospital's authorization for a Certificate of Ongoing Performance.

In between renewals for a Certificate of Ongoing Performance, if a hospital is not in compliance with certain standards, a focused review must be conducted. Staff have the authority to conduct a focused review based on reported patient safety concerns, aberrations in data identified by Commission staff, or failure to meet quality standards established in State and federal regulations.¹ A hospital that is identified as failing to meet one or more of the requirements for a Certificate of Ongoing Performance must receive a detailed list of deficiencies from Commission staff and submit a plan of correction within 30 days of receipt of the list of deficiencies.² If a hospital does not submit a plan of correction that addresses deficiencies cited or does not successfully complete a plan of correction, the hospital shall upon notice of the Executive Director of the Commission, voluntarily relinquish its authority to perform cardiac surgery or emergency or elective PCI services, as applicable.³

B. Applicant

MedStar Union Memorial Hospital

MedStar Union Memorial Hospital (MUMH) is a 189-bed general hospital located in Baltimore, Maryland. MUMH also operates an on-site cardiac surgery program.

MUMH established its primary PCI program under a waiver prior to August 18, 2014, and as provided in COMAR 10.24.17.07A(2) and (3), the hospital continued to provide primary and elective PCI services when it had not yet completed a scheduled review to consider the grant of its first Certificate of Ongoing Performance. MUMH filed a Certificate of Ongoing Performance application on March 22, 2019, and was granted its initial Certificate of Ongoing Performance on September 17, 2020 for a period of four years. In September 2024, the Executive Director of MHCC granted a six-month extension of the hospital's 2020 Certificate of Ongoing performance to allow MHCC staff time to complete this review.

Health Planning Region

The Cardiac Services Chapter defines four health planning regions for adult cardiac services. MUMH is in the Baltimore/Upper Shore health planning region. This region includes Baltimore City and Anne Arundel, Baltimore, Caroline, Carroll, Cecil, Harford, Howard, Kent, Queen Anne's, and Talbot counties. Fourteen hospitals in this health planning region provide PCI services. One program has only provided primary PCI services since its inception; all of the other programs provide both primary and elective PCI services. Six of the fourteen hospitals also provide cardiac surgery services.

C. Staff Recommendation

MHCC staff recommends that the Commission approve MUMH's application for a Certificate of Ongoing Performance to continue providing primary and elective PCI services with

¹ COMAR 10.24.17.07B(2)(a), .07C(2)(a), and .07D(2)(a).

² COMAR 10.24.17.07B(2)(c), .07C(2)(c), and .07D(2)(c).

³ COMAR 10.24.17.07B(2)(e), .07C(2)(e), and .07D(2)(e).

two conditions. A description of the information submitted by MUMH and MHCC staff's analysis and recommendations follows.

II. PROCEDURAL HISTORY

MUMH submitted its application to renew its Certificate of Ongoing Performance for PCI on April 3, 2024. MHCC staff reviewed the application and requested additional information on August 30, 2024, October 16, 2024, and October 31, 2024. MHCC staff received additional information from MUMH on October 11, 2024, October 28, 2024, and November 1, 2024.

III. PROJECT CONSISTENCY WITH REVIEW CRITERIA

Data Collection

10.24.17.07D(3). Each PCI program shall participate in uniform data collection and reporting. This requirement is met through participation in the ACC NCDR registry, with submission of duplicate information to the Maryland Health Care Commission. Each elective PCI program shall also cooperate with the data collection requirements deemed necessary by the Maryland Health Care Commission to assure a complete, accurate, and fair evaluation of Maryland's PCI programs.

The hospital has submitted the data and reports required by MHCC. MUMH stated that it is not aware of any deficiencies in data collection or reporting.

Staff Analysis and Conclusion

MUMH has complied with the submission of data to the American College of Cardiology's National Cardiovascular Data Registry (ACC-NCDR) for CathPCI to MHCC in accordance with the established schedule. MHCC staff concludes that MUMH complies with this standard.

Institutional Resources

10.24.17.07D(4)(a). The hospital shall demonstrate that primary PCI services will be available for all appropriate patients with acute myocardial infarction 24 hours per day, seven days per week.

MUMH responded that there were no times during which cardiac catheterization laboratory (CCL) downtime resulted in either diversion of patients to other hospitals or led to suboptimal treatment of patients. MUMH operates four dedicated CCLs, a vascular lab, two electrophysiology laboratories, and a hybrid operating room. The hospital provided a list of the downtimes for the dedicated CCLs, including the reasons for the downtime and the duration of downtimes. The list is provided in Appendix A, and the frequency of downtime is summarized below in Table 1.

Table 1: MUMH Reported Frequency of CCL Downtime by Room and Year

Calendar Year	Number of Downtime Occurrences				Overlapping Downtime ⁴
	Room 1	Room 2	Room 3	Room 4	
2019	2	4	5	2	No
2020	5	5	5	7	No
2021	2	4	7	11	No
2022	4	2	4	5	No
2023	2	8	1	2	No

Source: MUMH response to MHCC questions, October 11, 2024

Staff Analysis and Conclusion

The hospital has four CCLs, which makes it easier to ensure that at least one is available to provide PCI services to patients. There was never a time when no CCL was available to provide PCI services. Based on the documentation provided that indicates continuous availability of PCI services during the review period, MHCC staff concludes that MUMH complies with this standard.

10.24.17.07D(4)(b). The hospital shall commit to providing primary PCI services as soon as possible and not to exceed 90 minutes from patient arrival at the hospital, excluding transfer cases, for at least 75 percent of appropriate patients. The hospital shall also track the DTB times for transfer cases and evaluate areas for improvement.

MUMH provided a signed statement, dated March 18, 2024, from Thomas J. Senker, FACHE, the president of MUMH, stating that MUMH is committed to providing primary PCI services as soon as possible and not to exceed 90 minutes from patient arrival at the hospital, excluding transfer patients, for at least 75% of appropriate patients. Furthermore, MUMH is committed to tracking door-to-balloon (DTB) times for transfer cases and evaluating areas for improvement.

MUMH provided DTB times from January 2019 through December 2023 for non-transfer cases, as shown below in Table 2.

⁴ Overlapping downtime is defined as all four of the dedicated CCLs are simultaneously unavailable.

Table 2: MUMH Reported Compliance with DTB Time Standard by Quarter for Non-Transfer Cases, January 2019 - December 2023

Quarter	Non-Transfer Primary PCI Volume	Number of Cases with DTB <= 90 Minutes	Percent of Cases with DTB <=90 Minutes
2019 Q1	11	11	100.0%
2019 Q2	7	5	71.4%
2019 Q3	4	4	100.0%
2019 Q4	15	15	100.0%
2020 Q1	5	5	100.0%
2020 Q2	3	3	100.0%
2020 Q3	5	5	100.0%
2020 Q4	7	7	100.0%
2021 Q1	7	7	100.0%
2021 Q2	12	12	100.0%
2021 Q3	6	6	100.0%
2021 Q4	7	7	100.0%
2022 Q1	9	9	100.0%
2022 Q2	6	6	100.0%
2022 Q3	5	5	100.0%
2022 Q4	6	6	100.0%
2023 Q1	6	6	100.0%
2023 Q2	7	7	100.0%
2023 Q3	10	10	100.0%
2023 Q4	7	7	100.0%

Source: MUMH Response to MHCC questions, October 28, 2024

MUMH also provided information on its performance on DTB times for transfer cases, as shown in Table 3.

Table 3: MUMH Reported DTB Performance by Quarter for Transfer Cases, January 2019 – December 2023

Quarter	Transfer Primary PCI Volume	Cases With DTB <= 120 Minutes	Percent of Cases with DTB <=120 Minutes
2019 Q1	8	7	87.5%
2019 Q2	9	8	88.9%
2019 Q3	9	8	88.9%
2019 Q4	5	4	80.0%
2020 Q1	6	6	100.0%
2020 Q2	3	3	100.0%
2020 Q3	16	15	93.8%
2020 Q4	2	1	50.0%
2021 Q1	5	5	100.0%
2021 Q2	2	2	100.0%
2021 Q3	4	4	100.0%
2021 Q4	7	5	71.4%
2022 Q1	8	6	75.0%
2022 Q2	7	7	100.0%
2022 Q3	6	5	83.3%
2022 Q4	7	6	85.7%
2023 Q1	6	5	83.3%
2023 Q2	5	3	60.0%
2023 Q3	7	7	100.0%
2023 Q4	8	7	87.5%

Source: MUMH Response to MHCC questions, October 28, 2024

Staff Analysis and Conclusion

MHCC staff reviewed the information reported by MUMH that indicates in every quarter between January 2019 and December 2023, with one exception, the percentage of non-transfer primary PCI patients with a DTB time of 90 minutes or less in each quarter was 75% or greater. MHCC staff also analyzed the ACC-NCDR CathPCI data to calculate and evaluate DTB times, as shown below in Table 4. Staff’s analysis indicates that for all but one quarter between January 2019 and December 2023, MUMH achieved a DTB time of 90 minutes or less for 75% of primary PCI cases.

MHCC staff asked the hospital for more detail on the two non-transfer cases in the second quarter of 2019 in which the DTB standard of 75 minutes was not met. MUMH described the details of those cases and the lessons that the hospital learned from them. Both cases were discussed during MUMH’s regular meetings, and the hospital identified opportunities for improvement. In one case, a staff member did not follow the correct protocol and was reminded of the correct procedure to follow. In the other case, staff was reminded how to handle concerns that a patient may be a STEMI patient.

**Table 4: MUMH Compliance with DTB Standard by Quarter
for Non-Transfer Primary PCI Cases, January 2019 – December 2023**

Time Period	Total Primary PCI Volume	Number of Cases With DTB<=90 Minutes	Percent of Cases with DTB <=90 Minutes
2019 Q1	9	8	88.9%
2019 Q2	3	1	33.3%
2019 Q3	3	3	100.0%
2019 Q4	11	10	90.1%
2020 Q1	2	2	100.0%
2020 Q2	4	3	75.0%
2020 Q3	3	3	100.0%
2020 Q4	5	5	100.0%
2021 Q1	7	7	100.0%
2021 Q2	15	12	80.0%
2021 Q3	6	5	83.3%
2021 Q4	7	7	100.0%
2022 Q1	9	9	100.0%
2022 Q2	6	6	100.0%
2022 Q3	4	4	100.0%
2022 Q4	6	6	100.0%
2023 Q1	7	6	85.7%
2023 Q2	8	7	87.5%
2023 Q3	10	10	100.0%
2023 Q4	9	7	77.8%

Source: MHCC analysis of ACC-NCDR CathPCI data, January 1, 2019 – Dec. 31, 2023

Since failure to meet this standard in each quarter may be due to factors outside of a hospital’s control, MHCC staff also considers a hospital’s performance over longer time periods. Over rolling eight-quarter periods, MUMH complied with this standard, with between 87.5% and 96.5% of primary PCI cases meeting the DTB time standard, as shown below in Table 5.

Table 5: MUMH Non-Transfer Primary PCI Case Volume and Percentage of Cases with DTB Less Than or Equal to 90 Minutes, by Time Period, CY 2019 – CY 2023

Time Period	Quarter			Rolling 8-Quarters		
	Total Primary PCI Volume	Cases With DTB<=90 Minutes	Percent of Cases with DTB <=90 Minutes	Total Primary PCI Volume	Cases With DTB<=90 Minutes	Percent of Cases with DTB <=90 Minutes
2019 Q1	9	8	88.9%			
2019 Q2	3	1	33.3%			
2019 Q3	3	3	100.0%			
2019 Q4	11	10	90.1%			
2020 Q1	2	2	100.0%			
2020 Q2	4	3	75.0%			
2020 Q3	3	3	100.0%			
2020 Q4	5	5	100.0%	40	35	87.5%
2021 Q1	7	7	100.0%	38	34	89.5%
2021 Q2	15	12	80.0%	50	45	90.0%
2021 Q3	6	5	83.3%	53	47	88.7%
2021 Q4	7	7	100.0%	49	44	89.8%
2022 Q1	9	9	100.0%	56	51	91.1%
2022 Q2	6	6	100.0%	58	54	93.1%
2022 Q3	4	4	100.0%	59	55	93.2%
2022 Q4	6	6	100.0%	60	56	93.3%
2023 Q1	7	6	85.7%	60	55	91.7%
2023 Q2	8	7	87.5%	53	50	94.3%
2023 Q3	10	10	100.0%	57	55	96.5%
2023 Q4	9	7	77.8%	59	55	93.2%

Source: MHCC analysis of ACC-NCDR CathPCI data, January 1, 2019 – Dec. 31, 2023

For the period from January 2019 through December 2023, MHCC staff also reviewed the information reported by MUMH regarding the number and percentage of transfer PCI cases with a DTB time of 120 minutes or less. As shown in Table 3, in 17 of 20 quarters, over 75% of cases had a DTB time of 120 minutes or less, and the percentage of cases achieving a DTB of 120 minutes or less each quarter ranged from 50.0% to 100%. MHCC staff’s analysis of the ACC-NCDR CathPCI data shows that in only 12 of 20 quarters between January 2019 and December 2023, over 75% of transfer PCI cases achieved a DTB of 120 or less in each quarter, and the percentage of transfer primary PCI patients achieving a DTB time of 120 minutes or less ranged from 50.0% to 100%.

Table 6: MUMH Compliance with DTB Standard by Quarter for Primary PCI Transfer Cases, January 2019 – December 2023.

Time Period	Primary Transfer PCI Volume	Number of Cases With DTB<=120 Minutes	Percent of Cases with DTB <=120 Minutes
2019 Q1	7	6	85.7%
2019 Q2	9	9	100.0%
2019 Q3	3	3	100.0%
2019 Q4	3	3	100.0%
2020 Q1	6	4	66.6%
2020 Q2	3	3	100.0%
2020 Q3	10	9	90.0%
2020 Q4	3	2	66.6%
2021 Q1	5	4	80.0%
2021 Q2	3	2	66.6%
2021 Q3	5	3	60.0%
2021 Q4	8	5	62.5%
2022 Q1	8	6	75.0%
2022 Q2	9	7	77.7%
2022 Q3	5	5	100.0%
2022 Q4	9	6	66.6%
2023 Q1	6	5	83.3%
2023 Q2	8	4	50.0%
2023 Q3	7	7	100.0%
2023 Q4	11	7	63.6%

Source: MHCC analysis of ACC-NCDR CathPCI data, January 1, 2019 – Dec. 31, 2023

Although hospitals strive to achieve a DTB time in primary PCI transfer cases of 120 minutes or less, many factors impacting the DTB time in transfer cases are outside of the hospital’s control. For this reason, there is not a requirement that a certain percentage of cases achieve the benchmark of 120 minutes or less each quarter. Instead, a hospital is required to track the DTB times for transfer cases and evaluate areas for improvement. Based on the hospital’s description of several process changes that it has made in the past to improve DTB times for transfer patients MHCC staff, staff concludes that MUMH complies with this standard.

10.24.17.07D(4)(c). The hospital shall have adequate physician, nursing, and technical staff to provide cardiac catheterization laboratory and coronary care unit services to patients with acute myocardial infarction 24 hours per day, seven days per week.

As shown in Table 7, MUMH provided the number of physicians, nurses, and technicians who can provide cardiac catheterization services to acute myocardial infarction patients as of April 1, 2024.

Table 7: Total Number of CCL Physician, Nursing, and Technical Staff

Staff Category	Number/FTEs	Cross Training (S/C/M)
Physician	5	
Nurse	9.9 (FTE)	S/C/M = 2.0 FTE, S/M = 7.9 FTE
Technician	5.4 (FTE)	S/M = 5.4 FTE

Source: MUMH Application, Response to Question 4a.

*Scrub (S), circulate (C), monitor (M).

Staff Analysis and Conclusion

MHCC staff compared the reported staffing levels at MUMH to the staffing levels for programs at three other hospitals with similar PCI case volume. A comparison of volume and staffing levels for MUMH, Adventist White Oak Medical Center (WOMC), University of Maryland Medical Center (UMMC) and University of Maryland St. Joseph Medical Center (UM SJMC) is shown in Table 8. MUMH, WOMC and UMMC employ approximately the same number of interventionalists. MUMH handles a larger volume of PCI cases than WOMC and correspondingly employs a larger number of nurse FTE positions. MUMH utilizes a smaller combination of nurse and technician FTEs than WOMC and UMMC, 15.3 compared to 17 for WOMC and 22.5 for UMMC. However, MUMH also utilizes a larger number of nurse and technician FTEs than UM SJMC which only has 11.4 FTE positions for technicians and nurses. In addition to more nurse and technician FTEs, MUMH also has five interventionalists, compared to three interventionalists for UM SJMC, even though UM SJMC's PCI volume is approximately 9% greater than MUMH's PCI volume.

Table 8: CCL Staffing for MUMH and Other Select PCI Programs

Program	Total 2023 PCI Cases	Interventionalists	Nurse FTEs	Technician FTEs
MUMH	690	5	9.9	5.4
WOMC	567	6	7	10
UMMC	624	7	15	7.5
UMSJMC	754	3	6.9	4.5

Sources: MUMH's application and MUMH's PCI volume from ACC-NCDR CathPCI registry report for period ending December 31, 2023; WOMC's September 2021 application for a Certificate of Ongoing Performance and PCI volume from its ACC-NCDR CathPCI registry report for period ending December 31, 2023; UMMC's June 2024 application for a Certificate of Performance and its PCI volume from ACC-NCDR CathPCI registry report for period ending December 31, 2023; UMSJMC's June 2024 application for renewal of its Certificate of Ongoing Performance and its PCI volume from ACC-NCDR CathPCI registry report for period ending December 31, 2023.

Based on this analysis of the number of staff reported at other hospitals with comparable PCI volumes, MHCC staff concludes that there are adequate nursing and technical staff to provide services 24 hours per day, seven days per week. MHCC staff concludes that MUMH complies with this standard.

10.24.17.07D(4)(d). The hospital president or Chief Executive Officer, as applicable, shall provide a written commitment stating the hospital administration will support the program.

MUMH provided a signed letter of commitment, dated March 18, 2024, from Thomas J. Senker, FACHE, the president of MedStar Union Memorial Hospital, stating that MUMH will provide primary PCI services in accordance with the requirements established by the Commission.

Staff Analysis and Conclusion

MHCC staff concludes that MUMH meets this standard based on the letter of commitment provided.

10.24.17.07D(4)(e). The hospital shall maintain the dedicated staff necessary for data management, reporting, and coordination with institutional quality improvement efforts.

MUMH stated that MedStar employs a team of five FTEs, consisting of critical care RNs and a data analyst dedicated to collecting, entering, and managing the State or federal mandated data registries. Two nurses and the data analyst from the team also attend monthly performance improvement meetings for both MedStar hospitals that provide PCI services in the Baltimore area.

Staff Analysis and Conclusion

MHCC staff reviewed the information provided and notes that the hospital appears to have been submitting complete and timely information to the ACC-NCDR CathPCI and engaging in quality insurance activities to address DTB times for PCI patients and other concerns. MHCC staff concludes that MUMH complies with this standard.

10.24.17.07D(4)(f). The hospital shall identify a physician director of interventional cardiology services responsible for defining and implementing credentialing criteria for the catheterization laboratory and for overall primary PCI program management, including responsibility for equipment, personnel, physician call schedules, quality and error management, review conferences, and termination of primary PCI privileges.

John Wang, M.D. became the medical director of the CCL at MUMH in July 2005. MUMH provided a copy of Dr. Wang's Curriculum Vitae and job description.

Staff Analysis and Conclusion

MHCC staff reviewed the job description provided. The responsibilities listed include setting MedStar's regional policy for the use of drugs, devices, equipment and technical services for interventional cardiology; oversight of physician credentialing; interviewing potential new personnel and recommending hiring decisions; quality and patient outcomes; ensuring effective referral and communications systems and ensuring that appropriate reviews of the quality of all physicians' catheterization practices are undertaken. Based on the job description provided, MHCC concludes that MUMH complies with this standard.

10.24.17.07D(4)(g). The hospital shall design and implement a formal continuing medical education program for staff, particularly the cardiac catheterization laboratory and coronary care unit.

MUMH provided a list of competencies that staff review every year. Staff must prove their competency in some areas. The hospital also stated that its staff also participate in case reviews and performance improvement meetings.

Staff Analysis and Conclusion

MHCC reviewed the documentation submitted, including a list of the educational assessments provided to all hospital staff and the training specific to CCL staff, and noted that the continuing medical education programming includes appropriate topics. The topics included in the education program for MUMH staff are the following: Patient Safety, Emergency Preparedness, Corporate Compliance, Infection Prevention, Common CCL Drugs, and Radiation Safety. Based on staff's review of the information provided, MHCC staff concludes that MUMH complies with this standard.

10.24.17.07D(4)(h). The hospital shall have a formal, written agreement with a tertiary care center that provides for the unconditional transfer of patients for any required additional care, including emergent or elective cardiac surgery or PCI, for hospitals performing primary PCI without on-site cardiac surgery.

Staff Analysis and Conclusion

This standard does not apply to MUMH because it has a cardiac surgery program and is a tertiary facility.

10.24.17.07D(4)(i). A hospital shall maintain its agreement with a licensed specialty care ambulance service that, when clinically necessary, guarantees arrival of the air or ground ambulance within 30 minutes of a request for patient transport by hospitals performing primary PCI without on-site cardiac surgery.

Staff Analysis and Conclusion

This standard does not apply because MUMH performs on-site cardiac surgery.

Quality

10.24.17.07C(4)(a) and 10.24.17.07D(5)(a). The hospital shall develop formal, regularly scheduled (at least every other month) meetings for interventional case review that require attendance by interventionalists and other physicians, nurses, and technicians who care for primary PCI patients.

MUMH stated that its case review meetings occur jointly with MedStar Franklin Square Medical Center on the third and fourth Tuesday of each month. MUMH provided a list of the dates that case review meetings were held between January 2020 and December 2023 and attendance records. While the meetings are multidisciplinary, only MUMH's physicians are contractually bound to 75% attendance. Nurses and technicians attend based on their work schedules. MHUMH explained that because the case review meetings do not provide continuing education credits, attendance records for nurses and technicians are not kept.

MUMH reported that it has additional case review meetings that include reviews of angiographic images. The hospital holds peer review meetings monthly that only include physicians. The hospital also holds performance improvement meetings; these meetings were held

between seven and 11 times per year between January 2019 and December 2023, but attendance records were not provided.

Staff Analysis and Conclusion

Based on the documentation of meeting dates and list of attendees provided, there were over 18 joint meetings with MFSMC with case review held each year, which exceeds the requirement to hold case review meetings at least every other month. Although there was documentation that physicians attend these meeting, there was not documentation provided that these meetings are attended by MUMH's nurses and technicians who care for primary PCI patients. Staff was unable to confirm that nurses and technicians attend these meetings because attendance records are not kept by the hospital. Staff recommends that the Commission find the hospital meets this standard with the following condition:

MUMH shall hold interventional case review meetings at least every other month that include physicians, nurses, and technicians, as required in COMAR 10.24.17.07D(5)(a). MUMH shall track the attendance of physicians, nurses, and technicians at each of these meetings. MUMH shall submit to Commission staff attendance lists for each of these meetings held between May and October by December 1 of each year and attendance lists for meetings held between November and April by June 1 of each year beginning with meetings held after November 30, 2024, until at least December 31, 2026, to document compliance with this condition. After this date, the Executive Director may release MUMH from the reporting requirement if the Executive Director determines that the hospital has achieved substantial compliance with this condition.

10.24.17.07C(4)(b) and 10.24.17.07D(5)(b). A hospital shall create a multiple care area group (emergency department, coronary care unit, and cardiac catheterization laboratory) that includes, at a minimum, the physician and nursing leadership of each care area and meets monthly to review any and all issues related to the primary PCI system, identify problem areas, and develop solutions.

In its application, MUMH reported that in addition to the meetings mentioned above, MUMH also holds Cardiovascular Service Line meetings. MUMH provided a list of Cardiovascular Service Line meetings and attendees.

Staff Analysis and Conclusion

MHCC staff reviewed the attendance records for the Cardiovascular Service Line meetings. There were nine meetings in CY 2019, six meetings in CY 2020, eleven meetings in CY 2021, eight meetings in CY 2022, and ten meetings in CY 2023. The attendance records for these meetings indicate that physician and nurse leadership for the emergency department and CCL, hospital leadership, and representatives from Procure, MUMH's emergency transportation vendor, regularly attended these meetings.

MHCC staff asked Medstar to explain why its monthly Cardiovascular Service Line meetings were cancelled three times in CY 2019, six times in CY 2020, and four times in CY 2022. The hospital explained that the meetings in 2019 were cancelled because the Cardiology Chief was unavailable. The meetings in 2020 were cancelled due to lack of a quorum; most of the operational leaders were either taking patient assignments or acting as a charge nurse on a unit because of the COVID-19 pandemic. The hospital did not explain the reason four meetings were cancelled in 2022.

While it is a reasonable explanation that meetings were canceled in 2020 because of staffing shortages during the COVID-19 pandemic, the hospital met fewer than ten times in two of the other four years reviewed. Staff recommends that the Commission find the hospital is meeting the standard with the following condition:

MUMH shall hold monthly multiple care area group meetings. These meetings shall be attended by the physician and nursing leadership of each care area and include a review of all issues related to the primary PCI system, identify problem areas, and develop solutions, as required in COMAR 10.24.17.07D(5)(b). MUMH shall submit to Commission staff meeting minutes and attendance lists for each meeting held between May and October by December 1 of each year and meeting minutes and attendance lists for each meeting held between November and April by June 1 of each year, beginning with meetings held after November 30, 2024, and continuing until at least December 31, 2026. After this date, the Executive Director may release MUMH from the reporting requirement if the Executive Director determines that the hospital has achieved substantial compliance with this condition.

10.24.17.07C(4)(c). At least semi-annually, as determined by the Commission, the hospital shall conduct an external review of at least five percent of randomly selected PCI cases performed in the applicable time period as provided in Regulation .08 that includes at least three cases per physician or all cases if the interventionalist performed fewer than three cases.

MUMH submitted copies of the external review reports for PCI cases performed between January 2019 and December 2022 by Maryland Academic Consortium for Percutaneous Coronary Intervention Appropriateness and Quality (MACPAQ).

Staff Analysis and Conclusion

MHCC reviewed the external review reports submitted. The volume, number and percentage of elective PCI cases for each review year is shown in Table 9. The percentage of cases externally reviewed each year were between 5.7% and 6.9%, in accordance with the 5% standard.

Table 9: MUMH External Review of PCI Cases by Year, CY 2019 - CY 2022

Calendar Year	Elective PCI Cases Forwarded to MACPAQ	Number of Cases Reviewed	Percentage of Cases Reviewed	Timing of external reviews	Meets Standard
2019	1,057	60	5.7%	Semi-annual	Yes
2020	757	44	5.8%	Semi-annual	Yes
2021	821	50	6.1%	Semi-annual	Yes
2022	710	49	6.9%	Semi-annual	Yes

Source: MHCC staff review of MUMH's MACPAQ reports for the period 2019 through 2022

For the period between January 2019 and December 2022, MHCC staff analyzed the ACC-NCDR CathPCI data and verified that at least five percent of elective PCI cases for the hospital, and the required minimum number of cases per physician, at least three cases for each semi-annual review or all cases if fewer than three were performed were reviewed externally. MHCC staff concludes that MUMH complies with this standard.

10.24.17.07C(4)(d). *The hospital shall evaluate the performance of each interventionalist through an internal or external review, as follows:*

(i) An annual review of at least 10 cases or 10 percent of randomly selected PCI cases, whichever is greater, performed by the interventionalist at the hospital, or all cases if the interventionalist performed fewer than 10 cases at the hospital, as provided in Regulations .08 and .09; or

(ii) A semi-annual review of each interventionalist conducted as part of the required semi-annual external review of the hospital's randomly selected PCI cases, as provided in paragraph .07C(4)(c), through random selection of three cases or 10 percent of PCI cases, whichever is greater, performed by the interventionalist at the hospital during the six-month period, or all cases if the interventionalist has performed fewer than 3 cases during the relevant period, as provided in Regulation .08; or

(iii) A quarterly or other review period conducted in a manner approved by Commission's Executive Director that assures that the external review of the cases performed by the interventionalist at the hospital will satisfy the annual requirement in Subparagraphs .07C(4)(d)(i).

10.24.17.07D(5)(c). *The hospital shall evaluate the performance of each interventionalist through an internal or external review, as follows:*

(i) An annual review of at least 10 cases or 10 percent of randomly selected primary PCI cases, whichever is greater, performed by the interventionalist at the hospital, or all cases if the interventionalist performed fewer than 10 cases at the hospital, as provided for in Regulations .08 and .09; or

(ii) For a hospital with both primary and elective PCI programs, a semi-annual review of each interventionalist conducted as part of the required semi-annual external review of the hospital's randomly selected PCI cases, as provided in Paragraph .07C(4)(c), through random selection of five cases or 10 percent of PCI cases, whichever is greater, performed by

the interventionalist at the hospital during the six-month period, or all cases if the interventionalist has performed fewer than five cases during the relevant period at the hospital, as provided for in Regulation .08; or

(iii) For a hospital with both primary and elective PCI programs, a quarterly or other review period conducted in a manner approved by Commission's Executive Director that assures that the external review of the cases performed by the interventionalist at the hospital will satisfy the annual requirement in Paragraphs .07C(4)(c) and .07D(5)(c).

10.24.17.07D(5)(d). The performance review of an interventionalist referenced in Paragraph .07D(5)(c) shall:

(i) Include a review of angiographic images, medical test results, and patients' medical records; and

(ii) Be conducted by a reviewer who meets all standards established by the Commission to ensure consistent rigor among reviewers.

MUMH stated that the hospital utilizes MACPAQ for the external review that includes an examination of angiographic images, test results, and patient's medical records. The reviews are conducted by a board-certified cardiac interventionist from another hospital system. Additionally, MUMH conducts monthly internal peer review after a data analyst randomly pulls the number of cases required by this standard. MUMH provided the number of cases reviewed internally for each interventionalist.

Staff Analysis and Conclusion

MHCC staff analyzed the ACC-NCDR CathPCI data for the period from CY 2019 to CY 2023 to determine the number of PCI cases performed by each interventionalist and calculated the number of cases required to be reviewed each year. MHCC staff compared the results of its analysis to the number of PCI cases reviewed per physician in MACPAQ reports and the number of cases reviewed internally for CY 2019 to CY 2022. For CY 2023, MHCC staff compared the results of its analysis to information directly provided by staff for MACPAQ on the number of cases already selected for review for each physician and the number of cases reviewed internally. This analysis shows that through the combination of internal and external case review, between CY 2019 and CY 2023, the greater of ten cases or 10% of cases were reviewed for each interventionalist performing PCI services at MUMH. MHCC staff concludes that MUMH complies with the standards for review of individual interventionalists.

10.24.17.07D(5)(e) and C(4)(f). The chief executive officer of the hospital shall certify annually to the Commission that the hospital fully complies with each requirement for conducting and completing quality assurance activities specified in this chapter, including those regarding internal peer review of cases and external review of cases.

MUMH submitted an affidavit from its president, Dr. Thomas J. Senker, FACHE, dated March 21, 2024, certifying that the hospital fully complies with each requirement for conducting and completing quality assurance activities specified in this chapter, including those regarding internal peer review of cases and external review of cases.

Staff Analysis and Conclusion

Based on the affidavit submitted, MHCC staff concludes that MUMH complies with this standard.

10.24.17.07C(4)(g) and 10.24.17.07D(5)(f). The hospital shall provide annually, or upon request, a report to the Commission that details its quality assurance activities, including internal peer review of cases and external review cases.

(i) The hospital shall demonstrate that it has taken appropriate action in response to concerns identified through its quality assurance processes.

(ii) All individually identifiable patient information submitted to the Commission for the purpose described in this subsection shall remain confidential.

(iii) Physician information collected through the peer review process that is submitted to the Commission for the purpose described in this subsection shall remain confidential.

MUMH provided the dates of its Performance Improvement meetings, which usually take place monthly. These meetings occurred between seven and 11 times annually for the period from CY 2019 to CY 2023. The hospital provided detailed meeting minutes from its December 2023 Performance Improvement and a cardiology service line meeting held in November 2023 to demonstrate quality assurance activities are taking place. MUMH also submitted examples of areas for improvement with respect to its PCI services and described the solutions implemented.

Staff Analysis and Conclusion

MHCC staff reviewed the information on quality assurance activities. Based on the detailed information provided regarding both the hospital's quality assurance process and positive outcomes, MHCC staff concludes that MUMH complies with this standard.

Patient Outcome Measures

10.24.17.07C(5)(a). An elective PCI program shall meet all performance standards established in statute or in State regulations.

(b) A hospital shall maintain a risk-adjusted mortality rate that is consistent with high quality patient care.

(c) A hospital with a risk-adjusted mortality rate for primary PCI cases that exceeds the statewide average beyond the acceptable margin of error calculated for the hospital by the Commission is subject to a focused review. The acceptable margin of error is the 95 percent confidence interval calculated for a hospital's all-cause 30-day risk-adjusted mortality rate for primary PCI cases.

10.24.17.07D(5)(a). A primary PCI program shall meet all performance standards established in statute or in State regulations.

(b) A hospital shall maintain a risk-adjusted mortality rate that is consistent with high quality patient care.

(c) A hospital with a risk-adjusted mortality rate for primary PCI cases that exceeds the statewide average beyond the acceptable margin of error calculated for the hospital by the Commission is subject to a focused review. The acceptable margin of error is the 95 percent confidence interval calculated for a hospital's all-cause 30-day risk-adjusted mortality rate for primary PCI cases.

MUMH's adjusted mortality rates, by rolling 12-month reporting period, for 2019 Q1 through 2024 Q1, are shown below in Table 9.

Table 9: MUMH Adjusted Mortality Rates (AMR) by Rolling 12-Month Reporting Period and Performance on MHCC Standards for PCI Programs

Reporting Period	STEMI				NON-STEMI			
	Hospital AMR	95% CI	National Benchmark	Meets MHCC Standard	Hospital AMR	95% CI	National Benchmark	Meets MHCC Standard
2023q2-2024q1	1.16	[0.03, 6.23]	0.79	Yes	0.81	[0.22, 2.06]	2.00	Yes
2023q1-2023q4	1.33	[0.03, 7.18]	1.88	Yes	0.67	[0.18, 1.71]	1.99	Yes
2022q4-2023q3	1.92	[0.05, 10.31]	1.91	Yes	0.51	[0.11, 1.49]	2.02	Yes
2022q3-2023q2	0.00	[0.00, 7.72]	1.89	Yes	0.47	[0.10, 1.38]	2.02	Yes
2022q2-2023q1	0.00	[0.00, 11.00]	1.89	Yes	0.67	[0.18, 1.70]	2.05	Yes
2022q1-2022q4	0.00	[0.00, 8.66]	2.00	Yes	0.79	[0.26, 1.84]	2.14	Yes
2021q4-2022q3	0.00	[0.00, 6.72]	2.11	Yes	0.87	[0.32, 1.88]	2.20	Yes
2021q3-2022q2	2.02	[0.05, 10.77]	2.18	Yes	0.79	[0.26, 1.84]	2.60	Yes
2021q2-2022q1	1.46	[0.04, 7.84]	2.82	Yes	0.46	[0.09, 1.34]	1.16	Yes
2021q1-2021q4	3.28	[0.40, 11.27]	2.74	Yes	0.49	[0.10, 1.43]	2.23	Yes
2020q4-2021q3	6.17	[1.29, 16.99]	2.18	Yes	0.63	[0.17, 1.60]	2.23	Yes
2020q3-2021q2	2.40	[0.06, 12.85]	7.51	Yes	1.00	[0.40, 2.05]	1.18	Yes
2020q2-2021q1	2.70	[0.07, 14.34]	7.55	Yes	0.97	[0.39, 1.98]	1.21	Yes
2020q1-2020q4	0.00	[0.00, 14.31]	6.89	Yes	0.98	[0.40, 2.02]	1.13	Yes
2019q4-2020q3	7.00	[1.46, 19.32]	6.37	Yes	0.82	[0.26, 1.61]	1.06	Yes
2019q3-2020q2	6.43	[1.79, 15.41]	6.06	Yes	0.59	[0.22, 1.28]	1.00	Yes
2019q2-2020q1	5.71	[1.58, 13.83]	5.99	Yes	0.67	[0.29, 1.31]	0.95	Yes
2019q1-2019q4	6.82	[2.26, 15.11]	6.01	Yes	0.65	[0.30, 1.22]	0.95	Yes

Source: MHCC staff compilation of results from the hospital's quarterly reports from the ACC-NCDR CathPCI Data Registry for PCI cases performed between January 2019 and March 2024.

Notes: A hospital's AMR meets the MHCC standard as long as the hospital's 95% confidence interval (CI) includes the national benchmark or indicates statistically significantly better performance than the national benchmark for ST Elevated Myocardial Infarction (STEMI) or Non-STEMI cases, as applicable. A hospital does not meet MHCC's standard when it performs statistically significantly worse than the national benchmark for STEMI or non-STEMI cases, as applicable. The national benchmarks are the national median risk-adjusted in-hospital mortality rate for STEMI and non-STEMI cases for each reporting period

*Reporting on STEMI cases in the ACC-NCDR CathPCI reports changed beginning in the period ending 2021q3; for this period and later, the performance metric excludes cases with cardiogenic shock.

Staff Analysis and Conclusion

As shown in Table 9, MHCC staff compiled the results from MUMH's quarterly reports from the ACC-NCDR CathPCI for STEMI and non-STEMI PCI cases performed between January 2019 and March 2024. MHCC staff reviewed the adjusted mortality rate data by rolling 12-month periods for STEMI patients and determined that the hospital's risk-adjusted mortality rate was not statistically significantly worse than the national benchmark in any reporting period. The national benchmark fell within or above the 95% confidence interval (CI) for MUMH for all 12-month reporting periods between January 2019 and March 2024. For non-STEMI patients, the hospital performed statistically significantly better than the national benchmark in several reporting periods, including all the reporting periods between January 2021 and March 2024. MHCC staff concludes that MUMH met the benchmark for both STEMI and non-STEMI cases and complies with this standard.

Physician Resources

10.24.17.07D(7)(a) and 10.24.17.07C(6)(a). Physicians who perform primary PCI at a hospital without on-site cardiac surgery shall perform a minimum of 50 PCI procedures annually averaged over a 24-month period. A hospital without on-site cardiac surgery shall track physicians' volume on a rolling eight quarter basis and report the results to the Maryland Health Care Commission on a quarterly basis.

MUMH submitted information on the volume of primary and elective PCI cases at MUMH and other hospitals, by physician and quarter, for the period January 2019 through December 2023.

Staff Analysis and Conclusion

MHCC staff reviewed the physician volumes reported by MUMH and determined that each interventionalist performed at least 50 PCI procedures annually on average over 24-month periods between CY 2019 and CY 2022, even in years when the standard was waived. The requirement to perform at least 50 PCI procedures annually on average over a 24-month period was waived for 2020 and 2021, due to the COVID-19 pandemic.⁵ MHCC staff concludes that MUMH complies with this standard.

10.24.17.07D(7)(b). Each physician who performs primary PCI at a hospital that provides primary PCI without on-site cardiac surgery who does not perform 50 PCI procedures annually averaged over a 24-month period, for reasons other than a leave of absence, will be subject to an external review of all cases in that 24-month period to evaluate the quality of care provided. The results of this evaluation shall be reported to MHCC. A hospital may be required to develop a plan of correction based on the results of the physician's evaluation.

Staff Analysis and Conclusion

This standard is not applicable since MUMH's physicians perform 50 PCI procedures annually on average over a 24-month period.

⁵ https://mhcc.maryland.gov/mhcc/pages/hcfs/hcfs_cardiacare/documents/MHCC%20bulletin_cardiac_covid19_20200331.pdf

10.24.17.07D(7)(c). A physician who performs primary PCI at a hospital that provides primary PCI without on-site cardiac surgery and who does not perform the minimum of 50 PCI procedures annually averaged over a 24-month period, who took a leave of absence of less than one year during the 24-month period measured, may resume the provision of primary PCI provided that:

- (i) The physician performed a minimum of 50 cases in the 12-month period preceding the leave of absence;***
- (ii) The physician continues to satisfy the hospital's credentialing requirements; and***
- (iii) The physician has performed 10 proctored cases before being allowed to resume performing PCI alone.***

Staff Analysis and Conclusion

This standard does not apply to MUMH because the hospital has a cardiac surgery program on-site.

10.24.17.07D(7)(e). Each physician shall be board certified in interventional cardiology with an exception for those who performed interventional procedures before 1998 or completed their training before 1998 and did not seek board certification before 2003 [or physicians who completed a fellowship in interventional cardiology less than three years ago].

10.24.17.07D(7)(f). Each physician shall obtain board certification within three years of completion of a fellowship in interventional cardiology.

MUMH submitted a statement, dated March 27, 2024, signed by MUMH's Regional Director of Cardiac Intervention, Dr. Wang, stating that four of the five interventionalists at MUMH are board certified in Interventional Cardiology, while the fifth is exempt because he completed his training before 1998 and did not seek board certification prior to 2003.

Staff Analysis and Conclusion

MHCC staff reviewed the information provided and concludes that MUMH complies with this standard.

10.24.17.07D(7)(g). An interventionalist shall complete a minimum of 30 hours of continuing medical education credits in the area of interventional cardiology during every two years of practice.

MUMH submitted signed and dated attestations from Drs. Iskander, Kaliyadan, Peichert, Wang, and Siddiqi stating that each physician has completed a minimum of 30 hours of continuing medical education credits in interventional cardiology during the last two years. The timing for meeting this requirement is based on a physician's medical license renewal in Maryland, which is every two years.

Staff Analysis and Conclusion

MHCC staff reviewed the attestations provided and concludes that MUMH complies with this standard.

10.24.17.07D(7)(h). *Each physician who performs primary PCI agrees to participate in an on-call schedule.*

MUMH submitted a signed statement from Dr. Wang, the medical director of the CCL, acknowledging that each physician currently performing primary PCI services are participating in the on-call schedule. MUMH also submitted a copy of the on-call schedule for March and April 2024.

Staff Analysis and Conclusion

MHCC staff reviewed the on-call schedule submitted, and observed that Drs. Iskander, Kaliyadan, Peichert, Wang, and Siddiqi were all scheduled to be on-call at different times during the month. MHCC staff concludes that MUMH complies with this standard.

Volume

10.24.17.07C(7)(a). *The target volume for an existing program with both primary and non-primary PCI services is 200 cases annually.*

(b) A PCI program that provides both primary and elective PCI that fails to reach the target volume of 200 cases annually may be subject to a focused review.

MUMH submitted volume information by fiscal year, as shown in Table 10.

Table 10: MUMH PCI Volume

Fiscal Year	Total PCI Volume
2019	1,106
2020	903
2021	893
2022	827
2023	728

Source: MUMH Application, Response to Question 25

Note: The fiscal year is July 1-June 30.

Staff Analysis and Conclusion

MHCC staff analyzed the information in the ACC-NCDR CathPCI data submitted by MUMH. This analysis indicates that MUMH exceeded the target volume of 200 PCI procedures annually, during each year of the review period. MHCC staff concludes that MUMH complies with this standard.

10.24.17.07D(8)(a). *For primary PCI cases, if a program falls below 36 cases for rural PCI providers and 49 cases for non-rural providers, a focused review will be triggered.*

MHCC staff analyzed the ACC-NCDR CathPCI Registry data to calculate the primary PCI volume for MUMH from CY 2019 through CY 2023, as show in Table 11. This analysis shows that primary PCI volumes ranged from 51 to 84 cases each year. Because MUMH exceeded the threshold of 49 cases annually, during the review period, no focused review is required.

Table 11: MUMH Primary PCI Volume

Year	Primary PCI Volume
2019	66
2020	51
2021	73
2022	69
2023	84

Source: MHCC analysis of ACC-NCDR CathPCI data, January 1, 2019 – Dec. 31, 2023

10.24.17.07D(8)(b). *The target volume for primary PCI operators is 11 or more primary cases annually.*

MUMH submitted primary PCI volume for each interventionalist for CY 2019 through CY 2023. MHCC staff reviewed the primary PCI case volume information submitted by MUMH, and it shows that at least eleven primary PCI procedures were completed per year for each interventionalist.

Staff Analysis and Conclusion

MHCC staff analyzed the data in the ACC-NCDR CathPCI registry for the period CY 2019 through CY 2023 and observed that, all MUMH interventionalists performed at least eleven primary PCI procedures per year. MHCC staff concludes that MUMH complies with this standard.

Patient Selection

10.24.17.07C(8) *The hospital shall commit to providing elective PCI services only for suitable patients. Suitable patients are:*

(a) Patients described as appropriate elective PCI in the Guidelines of the American College of Cardiology Foundation/American Heart Association (ACCF/AHS) for Management of Patients with Acute Myocardial Infarction or the Guidelines of the American College of Cardiology Foundation/American Heart Association/Society for Cardiovascular Angiography and Interventions (ACCF/AHA/SCAI) for Percutaneous Coronary Intervention.

(b) For elective PCI programs without cardiac surgery on-site, patients at high procedural risk, as described in the ACCF/AHA/SCAI Guideline for Percutaneous Coronary Intervention, are not suitable for elective PCI.

MUMH stated that according to the ACCF/AHA appropriate use criteria, no elective PCI cases were identified by internal or external reviews as inappropriate.

Staff Analysis and Conclusion

MHCC staff reviewed external review reports from January 2019 through December 2022 and determined that there were no cases, of the 203 reviewed, that were determined to be inappropriate by two or more of the three criteria used to evaluate appropriateness. MHCC staff concludes that MUMH complies with the standard.

10.24.17.07D(9). A hospital shall commit to providing primary PCI services only for suitable patients. Suitable patients are:

(a) Patients described as appropriate for primary PCI in the Guidelines of the American College of Cardiology Foundation/American Heart Association (ACCF/AHS) for Management of Patients with Acute Myocardial Infarction or the Guidelines of the American College of Cardiology Foundation/American Heart Association/Society for Cardiovascular Angiography and Interventions (ACCF/AHA/SCAI) for Percutaneous Coronary Intervention.

(b) Patients with acute myocardial infarction in cardiogenic shock that the treating physician (s) believes may be harmed if transferred to a tertiary institution, either because the patient is too unstable or because the temporal delay will result in worse outcomes.

(c) Patients for whom the primary PCI system was not initially available who received thrombolytic therapy that subsequently failed. These cases should constitute no more than 10 percent of cases.

(d) Patients who experienced a return of spontaneous circulation following cardiac arrest and present at a hospital without on-site cardiac surgery for treatment, when the treating physician(s) believes that transfer to a tertiary institution may be harmful to the patient.

MUMH stated that during the review period there were no patients who received thrombolytic therapy in lieu of primary PCI. MUMH also stated that there were no patients who received primary PCI services inappropriately.

Staff Analysis and Conclusions

MHCC staff analyzed the ACC-NCDR CathPCI data and noted that between CY 2019 and CY 2023, there were zero PCI patients who received thrombolytic therapy. Staff also reviewed the hospital's ACC-NCDR CathPCI reports for the period from January 2019 to December 2023. For all reports during this period, staff noted zero primary PCI cases were determined to be "rarely appropriate." MHCC staff determines that MUMH complies with the standard.

RECOMMENDATION

Based on the above analysis and the record in this review, MHCC staff recommends that the Commission find that MUMH meets the requirements for a Certificate of Ongoing Performance. Staff recommends that the Commission issue a Certificate of Ongoing Performance that permits MUMH to continue providing primary and elective percutaneous coronary intervention services for four years, subject to the following conditions:

1. MUMH shall hold interventional case review meetings at least every other month that include physicians, nurses and technicians, as required in COMAR 10.24.17.07D(5)(a). MUMH shall submit to Commission staff attendance lists for each of these meetings held between May and October by December 1 of each year and attendance lists for meetings held between November and April by June 1 of each year beginning with meetings held after November 30, 2024, until at least December 31, 2026, to document compliance with this condition. After this date, the Executive Director may release MUMH from the reporting requirement if the Executive Director determines that the hospital has achieved substantial compliance with this condition.
2. MUMH shall hold monthly multiple care area group meetings. These meetings shall be attended by the physician and nursing leadership of each care area and include a review of all issues related to the primary PCI system, identify problem areas, and develop solutions, as required in COMAR 10.24.17.07D(5)(b). MUMH shall submit to Commission staff meeting minutes and attendance lists for each meeting held between May and October by December 1 of each year and meeting minutes and attendance lists for each meeting held between November and April by June 1 of each year, for meetings held after November 30, 2024, and continuing until at least December 31, 2026. After this date, the Executive Director may release MUMH from the reporting requirement if the Executive Director determines that the hospital has achieved substantial compliance with this condition.