Meeting Summary
Cardiac Services Advisory Committee (CSAC)
Wednesday, March 22, 2017
MHCC, 4160 Patterson Avenue, Baltimore, MD 21215

Work Group Member Attendees:
Jaime Brown, M.D.
John Conte, M.D.
Blair Eig, M.D.
Chris Haas, D.O. (phone)
Josemartin Ilao, M.Ed.
James Ridge
Rawn Salenger, M.D.
Stuart Seides, M.D. (phone)
Jerome Segal, M.D.
Stafford Warren, M.D. (phone)
John Wang, M.D.

MHCC Staff Attendees:
Ben Steffen, Executive Director
Paul Parker, Director, Center for Health Care Facilities Planning & Development
Eileen Fleck, Chief, Acute Care Policy and Planning
Kathy Ruben, Program Manager
Suellen Wideman, Assistant Attorney General

Other Attendees:
Diane Alejo
Amy Dukovcic
Eddie Fonner
Terry Haber

Introduction:

The Cardiac Services Advisory Committee (CSAC) meeting convened at approximately 6:40 pm. Eileen Fleck, Chief, Acute Care Policy and Planning for the MHCC thanked everyone for attending the meeting, and she asked members to introduce themselves. She then welcomed two new members to the committee, Dr. John Wang and James Ridge. .

Background and Purpose

Ms. Fleck provided a short description of previous CSAC discussions in order to provide context for the current agenda. She reminded members that cardiac surgery codes had been discussed previously, and some members raised concerns about the procedures included in the

definition of cardiac surgery, as well as the use of the term "open heart surgery." She noted that the Maryland Cardiac Surgery Quality Initiative (MCSQI), a consortium of the ten hospitals in Maryland with cardiac surgery programs, had developed recommendations on which procedures to define as cardiac surgery, and this information was provided in the request for feedback that MHCC staff distributed. In this request, MHCC staff asked CSAC members and chief medical officers to provide feedback on which ICD-9 procedure codes to include in a definition of cardiac surgery codes and which procedures should count toward volume requirements in regulations and be used in the utilization projection for cardiac surgery in the SHP chapter for cardiac surgery and PCI services. She proposed that the CSAC first discuss which procedures to include in a definition of cardiac surgery and then discuss which procedures should count for volume standards.

Overview of Feedback Received on Cardiac Surgery Codes

MHCC staff provided handouts to CSAC members shortly before the meeting that summarized the feedback received on specific ICD-9 procedure codes. Ms. Fleck noted that not everyone responded or commented on each procedure code; she noted that fields were left blank if there was no response. Ms. Fleck told CSAC members to feel free to comment, even if they had not provided written feedback in advance of the meeting. Ms. Fleck noted that the CSAC's discussion should focus on areas where there are differences of opinion, and she hoped the comments would foster to a productive conversation.

Discussion of Cardiac Surgery Definition

Dr. John Conte led the discussion of the definition of cardiac surgery. He noted that identifying procedures that are considered to be cardiac surgery is different from determining which procedures should be used for the volume requirements. Dr. Conte stated that for most surgeons, the terms "open heart surgery" and "cardiac surgery" mean the same thing. He suggested that the CSAC should consider choosing a phrase or word that describes the codes that will be used for the volume standards and utilization projections other than "open heart surgery." He noted that volume is used as a proxy for quality, and MHCC needs to ensure quality at all Maryland programs. He suggested that the State also needs to consider which procedures are common among all programs because certain procedures are performed at only two programs or very few programs. Other CSAC members agreed with Dr. Conte.

Dr. Stuart Seides mentioned that MedStar Health's only disagreement with the recommendations from the MCSQI was with TAVR, ICD-9 code 35.05. He explained that this procedure was more likely to be performed by interventional cardiologists when done via the percutaneous femoral route. He noted that this requires a different skill set for both the surgeon and the surgical staff compared to the skills required for other cardiac surgeries. Dr. Seides commented that TAVR should be excluded from cardiac surgery case volume requirements because volume is being used as a surrogate for quality.

Several committee members agreed with Dr. Seides, including Staff Warren, M.D. John Wang, M.D. stated that if TAVR, as performed by interventional cardiologists via the percutaneous femoral route is counted toward volume requirements, the volume of other typical cardiac procedures may be low for a program, which could in turn affect the quality of care. He

agreed that TAVR procedures must be done in a facility with cardiac surgery. Dr. Conte noted that the CSAC had discussed how to define TAVR about two and a half years ago. He said that the MCSQI agreed on criteria for defining a procedure as cardiac surgery. He attributed the development of this definition to Rawn Salenger, M.D. and explained the criteria to the CSAC. At least two of the following criteria must be met:

- Incision in the chest;
- Direct contact with the heart;
- The use of cardio-pulmonary bypass; and
- Surgery on the thoracic-aorta or great vessels.

A discussion ensued about the use of extracorporeal membrane oxygenation (ECMO), cardiopulmonary bypass, and other support apparatus for various procedures. It was mentioned that ICD-9 code 35.06 (transapical replacement of aortic valve) should be considered cardiac surgery. Dr. Conte stated that if cardio-pulmonary bypass is used, a procedure should be considered cardiac surgery. Dr. Seides disagreed. He noted that ECMO may be used for support if a patient is in shock. He noted that fundamentally the code 35.05 is transfemoral.

Dr. Conte asked for confirmation from CSAC members that they agreed with using the term cardiac surgery and eliminating the use of the term "open heart surgery" in the SHP chapter for cardiac surgery. Everyone agreed with this recommendation. Dr. Conte and other CSAC members mentioned some gray area situations, when it may not be clear whether to define a procedure as cardiac surgery, such as when a subclavian approach is used or a transcarotid procedure that does not require cardiopulmonary bypass.

Recommendations for Inclusion in Cardiac Surgery Definition

Ms. Fleck asked CSAC members to focus on the handout titled: Summary of Written Feedback on MCSQI Suggested Additions to Cardiac Surgery Definition. On the first page, for ICD-9 procedure code 35.09, transapical replacement of pulmonary valve, Ms. Fleck noted that Peninsula Regional Medical Center (PRMC) recommended not including it in the definition of cardiac surgery, but other organizations recommended including it. Ms. Fleck asked if there was a representative from PRMC available to discuss its recommendation, but there was not one in attendance. Ms. Fleck then proposed that the CSAC discuss another ICD-9 code, 37.31(pericardiectomy).

Dr. Conte described a pericardiectomy as the surgical removal of part or most of the pericardium. He noted that the procedure may be performed at a non-cardiac surgical facility, such as when a pneumonectomy is performed to for lung cancer. Surgeons often take a piece of pericardium when performing this procedure, and Dr. Conte noted that surgeons should not be restricted from removing part of the pericardium for this procedure. Dr. Conte noted that about 50% of pericardiectomies are on cardiopulmonary bypass though, and surgeons should not treat constrictive or restrictive pericarditis at a hospital without a cardiac surgery program. CSAC members agreed with Dr. Conte's assessment. Dr. Seides noted that surgery performed primarily to remove the pericardium should definitely be defined as cardiac surgery. Ms. Fleck told the group that Meritus was the only hospital that recommended that code 37.31 not be included in cardiac surgery definition. She also proposed that a diagnosis code in combination with

procedure codes for a pericardiectomy could be used to count only cases where the diagnosis was for constrictive or restrictive pericarditis. CSAC members agreed with this approach.

CSAC members next discussed ICD-9 code 37.25 (biopsy of heart). It was noted that this procedure could be performed open or closed and the ICD-9 codes do not differentiate. However, ICD-10 codes do distinguish between open and closed procedures. Dr. Seides noted that the number of closed biopsies performed greatly exceeds the number of open biopsies. He recommended not including the procedure as cardiac surgery, if only an ICD-9 code is available. Dr. Conte proposed that if the criteria developed by Dr. Salenger were met, then a biopsy should be considered cardiac surgery. He noted that usually for an open procedure there is an oncologic diagnosis and whether cardiopulmonary bypass was used is relevant. Dr. Wang commented that avoiding an over-count of cardiac surgery cases is essential. Because the number of open biopsies is few, he suggested not including biopsy of the heart in the definition of cardiac surgery. Ms. Fleck asked if not counting a biopsy as cardiac surgery when it is unknown whether it was open or closed is acceptable, but then counting when it is known, as it will be with ICD-10 codes. CSAC members agreed with this approach. Ms. Fleck noted that the Western Maryland Hospital System (WMHS) had commented that because there is no distinction by the ICD-9 codes, counting this procedure could falsely inflate cardiac surgery volumes. However, the proposed approach discussed would address that concern.

Ms. Fleck next noted that WMHS had also recommended that heart transplantation, ICD-9 code 37.51, not be included in the definition of cardiac surgery because only two medical centers in Maryland perform heart transplantation, and counting this procedure would falsely inflate surgical volumes. In the current SHP chapter for cardiac surgery, a heart transplant is defined as cardiac surgery. Josemartin Ilao noted that WMHS was the only hospital that made this recommendation. Dr. Eig mentioned that heart transplantation will not affect the other centers in terms of volume. Another CSAC member agreed, stating that there are only about a dozen done each year, and it should be counted because it requires a set of skills that the State wants to monitor. Dr. Seides noted that it would be odd not to include a heart transplant in the definition of cardiac surgery.

CSAC members next discussed ICD-9 procedure code 37.64, removal of external assist system(s) or device(s)), and 37.68, insertion of percutaneous external heart assist device. Dr. Eig noted that such procedures may be performed by cardiac teams from a hospital that has cardiac surgery who travel to a hospital without cardiac surgery to support a patient that is being transferred. Dr. Wang agreed that practice should be considered. He noted that in Pennsylvania it is very common scenario. Ms. Fleck noted that Washington Adventist Shady Grove Medical Center (SGMC) commented in its written feedback that insertion of a percutaneous external heart assist device can be safely performed in community hospitals, by qualified physicians, and that by designating this procedure as "cardiac surgery" the MHCC may be inadvertently placing administrative restrictions on practitioners that do not meet the recognized community standard. Dr. Eig said that HSCRC allows such procedures for patient stabilization. Jamie Brown, M.D. commented that 37.64 could not be included as cardiac surgery. However, it was noted that the ICD-10 codes that correspond to it may resolve the issue by better differentiating the procedure performed. Ms. Fleck noted that code 37.64 was only used three times by hospitals without

cardiac surgery between 2011 and 2015. The group agreed that use of an intra-aortic balloon pump percutaneously is not considered cardiac surgery.

Dr. Conte stated that there will likely be a few dozen questionable codes that show up in the HSCRC discharge data for hospitals without cardiac surgery programs, and he proposed that the CSAC review those cases and determine if the procedure was inappropriate to perform. Mr. Steffen responded that he was would think about it because he was not sure if it would be within the scope of the CSAC's responsibility.

Dr. Conte noted that ICD-9 code 37.99, other operations on heart and pericardium, is an example of when it may be necessary to evaluate a case individually. Ms. Fleck mentioned that Meritus Medical Center disagreed with including this code in the cardiac surgery definition while the rest of the hospitals recommended including it.

Deletions to Cardiac Surgery Definition

Ms. Fleck noted that many organizations did not comment on the MCSQI suggested ICD-9 codes to remove from the cardiac surgery definition. In fact only three organizations replied, MedStar Health, Washington Adventist Hospital (WAH), and WMHS. Of these three, MedStar Health and WMHS agreed with all of MCSQI's proposed changes, while WAH apparently disagreed with all of MCSQI's proposed changes. Dr. Conte suggested that there may have been some confusion in filling out the feedback form. Ms. Fleck agreed and asked in a representative for WAH could provide clarification, but one was not available.

Ms. Fleck noted that MCSQI recommended that many of the procedures recommended for removal from the definition of cardiac surgery were recommended to be limited to hospitals with a cardiac surgery program. She commented that it would not be possible for MHCC to restrict procedures that are not cardiac surgery to hospitals with cardiac surgery programs. However, Mr. Steffen and Suellen Wideman noted a parallel situation in initial oversight of percuataneous coronary intervention (PCI). MHCC initially limited performance of PCI procedures to hospitals with cardiac surgery. Later exceptions were provided for non-cardiac surgery hospitals that were part of the two C-PORT clinical trials that assessed the safety and effectiveness of emergency and elective PCI performed at these hospitals. Dr. Wang agreed with Dr. Conte that if certain procedures were performed at a hospital without cardiac surgery, there could be catastrophic consequences.

Discussion of Procedures to Count for Volume Standards

Ms. Fleck asked CSAC members to discuss recommendations for volume counts and referred CSAC members to the handout titled: Summary of Written Feedback on Cardiac Procedures to Count for Volume. The handout shows the procedures that the MHCC currently counts for volume (67 total procedures), and those procedures that it does not count. Dr. Conte mentioned that many of the procedures that are counted toward volume requirements are rare, and suggested that volume as a proxy for quality be limited to the most common or high volume procedures. For example, he proposed that heart transplants should not be counted. Dr. Segal agreed that the focus should be on cases commonly done.

Dr. Conte suggested that the cardiac procedures should be discussed with MCSQI members further, and the volume of seven procedures should be checked at cardiac surgery hospitals. He suggested that MHCC may want to reevaluate using a volume of 200 cases, after analyzing the data more closely. Dr. Eig agreed that looking at the volume of specific types of cardiac surgeries would be helpful. Dr. Salenger noted that there is not a linear relationship between volume and quality. Mr. Steffen noted that the Cardiac Advisory Group in 2012 debated the number of cases to be used for volume requirements and opted to keep the same number.

Ms. Fleck noted that the CSAC would not finish the discussion of volume during this meeting. She explained that the current standard was set based on literature on the volume and quality relationship for coronary artery bypass graft (CABG) procedures. She noted that for low volume procedures it may be more difficult to determine quality. Dr. Segal suggested looking at common cases. Dr. Conte proposed that MCSQI review the volume of the most common cases at some of the smaller cardiac surgery programs. Mr. Steffen noted that volume jumped in CY 2016 as compared to CY 2015, and the switch to ICD-10 procedure codes probably contributed, but it was not clear why. Dr. Warren mentioned that he knew of two registry studies done in the states of California and New York that were completed over ten years ago that examined volume as a surrogate for quality. The studies concluded that lower volume hospitals had higher complication rates. Dr. Warren noted that the results may be outdated because of advances in cardiac surgery, and a review of more recent studies is needed. Dr. Conte stated that the CSAC has to be flexible enough to allow for the lower volumes in rural areas and patient's access to care.

Next Steps

Ms. Fleck proposed that MHCC staff examine some of the more recent studies that evaluate the volume-quality relationship for cardiac surgery. CSAC members agreed to give people more time to provide feedback on which cardiac surgical procedures to count for volume, and to gather more data and other information. Ms. Fleck thanked members of the Committee for their participation, and the meeting was adjourned at approximately 8:10 p.m.