

Draft Meeting Summary
Cardiac Services Advisory Committee (CSAC)
Wednesday, February 6, 2019
Maryland Health Care Commission (MHCC)
4160 Patterson Avenue, Baltimore, MD 21215

Committee Members Attendees

Kristen Fletcher (phone)
Christopher Hass, D.O. (phone)
Keith Horvath, M.D. (phone)
Josemartin Ilaio, M.Ed.
Paul Massimiano, M.D.
Richard Pomerantz, M.D.
James Recabo (phone)
Rawn Salenger, M.D.
Stefano Schena, M.D. (phone)
Jerome Segal, M.D. (phone)
Stuart Seides, M.D.
John Wang, M.D.
Stafford Warren, M.D.
David Zimrin, M.D.

Other Attendees

Diane Alejo – Johns Hopkins Hospital/MCSQI
Amy Dukovcic, CRNP – Washington Adventist Hospital
Terry Haber – Maryland Cardiac Surgery Quality Initiative (MCSQI)
Julie Miller, M.D. – Johns Hopkins Hospital
Amanda Elliott (phone)

Maryland Health Care Commission Attendees

Ben Steffen, Executive Director
Courtney Carta, Chief, Hospital Quality Performance
Eileen Fleck, Chief, Acute Care Policy and Planning
Theresa Lee, Director, Center for Quality Measurement and Reporting
Mahlet Nigatu, Chief, Policy, Cross-Payer & Workforce Analyses
Paul Parker, Director, Center for Health Care Facilities Planning and Development
Ruby Potter, Administrator, Center for Health Care Facilities Planning and Development
Mario Ramsey, Program Manager, Acute Care Policy and Planning
Suellen Wideman, Assistant Attorney General
Kenneth Yeates-Trotman, Acting Director, Center for Analysis and Information Systems

Ben Steffen began the meeting by having meeting participants introduce themselves. Mr. Steffen explained that a larger than usual number of MHCC staff were present at the meeting because MHCC has an ambitious quality reporting and price transparency initiative underway. He thought that it would be beneficial to bring everyone together to hear the discussion tonight. He noted that MHCC is using the cardiac services data for program review and would like to consider using the information for public reporting on quality. He also explained that the discussion of the Cardiac Surgery Advisory Committee (CSAC) on public reporting is a precursor for future work and would not be the workgroup used as MHCC moves forward, but members of the CSAC could possibly be included in the future workgroup.

Results of External Review of Percutaneous Coronary Intervention (PCI) Cases

Ms. Fleck began by referring CSAC members to three handouts with an overview of the *Summary of Results of External Review of PCI Cases for CY 2015, CY 2016, and CY 2017*, contained in the meeting packet. She summarized that, overall, the data showed that hospitals are doing well, and interventionalists are appropriately performing percutaneous coronary interventions (PCIs) the vast majority of the time. It is uncommon for PCI cases to be deemed rarely appropriate, and a PCI that is considered rarely appropriate is not necessarily inappropriate. She noted that there are three different categories for the evaluation of the appropriateness of PCI cases: 1) examination of angiographic images; 2) clinical appropriateness (the physician's judgement based on clinical standards); and 3) American College of Cardiology (ACC) appropriateness criteria.

Ms. Fleck also explained that if a reviewer concludes that a PCI is rarely appropriate, then a second reviewer will evaluate the PCI. If there is discrepancy with the second reviewer, then a third reviewer will also evaluate the PCI. She reported that in 2017, the number of rarely appropriate lesions treated was nine, which was a very small fraction of total number of 843 lesions for CY 2017. She also commented that if a lesion is considered rarely appropriate across all three categories for reviewing appropriateness then that is more concerning. She mentioned that two cases appeared to fall in that category, but MHCC staff has not yet reviewed all the reports in sufficient detail to provide a final number for all hospitals. She stated that other information is included in hospitals' external review reports, but MHCC staff focused on the appropriateness of the decisions.

John Wang, M.D., stated that if you break down the percentage of rarely appropriate lesions, the numbers are remarkable, with less than one percent of lesions categorized as rarely appropriate in some cases. He commented that the goal in reviewing PCI cases is not to have zero rarely appropriate lesions; if zero rarely appropriate lesions were reported, that could be an indication that medicine is not being practiced correctly. Stafford Warren, M.D., agreed and added that a report of zero rarely appropriate lesions could also indicate that physicians are not taking on PCI cases that they should be taking.

Dr. Warren then asked whether any institution or individual has a significantly high number of rarely appropriate lesions. Ms. Fleck responded that there was not a high percentage of rarely appropriate lesions at any individual hospital. She added that sometimes documentation is missing, which makes it hard for a reviewer to evaluate the appropriateness of a case, as noted in hospitals' reports. She also noted that the data covers either two and a half or three years for most hospitals because not all hospitals could provide the results for all of 2017. She asked why some hospitals would not have completed a review of 2017 data by early 2019, but then commented that she would probably follow-up with those hospitals directly.

Mr. Steffen asked if the roughly one to two percent rate of rarely appropriate lesions was good. Dr. Wang responded that in order to understand whether a case is truly a concern, a hospital would have to review each case individually. If there is a pattern that shows cases are frequently rarely appropriate, then there is an issue.

Dr. Wang stated that when intensive reviews of cardiac cases were going on between 2009 and 2011, physicians were very conservative in their treatment. Lesions were deferred because operators were afraid that the lesions did not meet the appropriateness criteria. As a result, patients' diseases worsened, or they presented later with acute coronary syndrome. For these reasons, Dr. Wang suggested that MHCC be cautious in presenting the data. Dr. Wang noted that at his hospital, peer review occurs monthly. His hospital is not waiting for an MHCC report or a report from an external review organization, like the Maryland Academic Consortium for PCI Appropriateness and Quality (MACPAQ) to determine whether the hospital is doing something wrong. He added that he expects the same is true for other hospitals.

Josemartin Ilao commented that he was surprised that even though three more PCI programs added in 2017, based on the table with results listed by hospital, the percentage of rarely appropriate lesions remained low. Ms. Fleck clarified that only one new elective PCI program has been established in Maryland. The other two PCI programs included in the table with CY 2017 results were already in existence, but in the previous years were already externally reviewing PCI cases apart from MHCC requirements.

Richard Pomerantz, M.D., stated that in the ACC guidelines, rarely appropriate does not mean never appropriate. In his view, the overall results for Maryland hospitals appear acceptable. Dr. Wang commented that the cases would have to be individually reviewed to determine how many, if any, were inappropriate.

Julie Miller, M.D. stated that she was impressed by the summary of the data, and she agreed that you cannot tell without looking at each PCI case if there is a problem. In her view, the concern probably lies in cases where PCI for a lesion is regarded as inappropriate for at least two out of the three categories used to evaluate the appropriateness of PCI. Dr. Miller also stated that the advantage of looking at clinical appropriateness is that it addresses Dr. Wang's concern that patients may not get appropriate interventions if physicians fear the system for evaluation of the appropriateness of PCI cases. Dr. Wang again noted that it is just as bad to undertreat a patient as it is to provide unnecessary treatment. At Dr. Wang's hospital, they review not only PCI cases, but also a sample of diagnostic cases because they want to know if those patients have been appropriately treated too.

Jerome Segal, M.D., asked how the data is going to be utilized. Ms. Fleck responded that the data is going to be used as part of the Certificate of Ongoing Performance Review (COPR) process. If the results from the external review of PCI cases is concerning for an individual hospital, then it could result in a focused review. She added that the first batch of COPR applications is due on March 22, 2019.

Maryland Hospital's Performance on Risk-Adjusted Isolated CABG

Ms. Fleck gave an overview of the handouts with Maryland hospitals' performance on risk-adjusted operative mortality rates for isolated coronary artery bypass grafting (CABG). She explained that hospitals have to perform similar or better than the national average to be compliant. Previously, MHCC regulations incorporated a state average as the benchmark for mortality rates. However, based on feedback from CSAC members and other stakeholders, MHCC adopted a

performance standard that references a national benchmark. The reporting period for the performance metric is 12 months. As shown in one of the handouts, she noted that the vast majority of cardiac surgery programs perform similar to the national average. She added that MHCC is most interested in identifying if someone is an outlier and if there is a pattern over time. If an outlier is identified, a focused review is triggered.

Dr. Warren asked whether MHCC looked at the mortality rate for all Maryland hospitals collectively, and how the Maryland average compared with the national average, to which Ms. Fleck responded she would have to get back to the group with that information. Rawn Salenger, M.D., suggested that the Maryland Cardiac Surgery Quality Initiative (MCSQI), a collaborative group that includes all existing cardiac surgery programs, would be happy to share some comparative data with the CSAC for isolated CABG cases and aortic valve replacement (AVR) cases. Keith Horvath, M.D., asked whether the performance of the program that was worse than the national benchmark for one reporting period had triggered any action. Ms. Fleck explained that MHCC staff asked for additional information and had not declared whether or not a focused review would be conducted. MHCC staff wanted to get more information from the hospital first. Ms. Fleck noted that the hospital did not have MHCC staff's report stating that the hospital was not meeting the standard, and the standard only recently changed. However, Ms. Fleck also remarked that the hospital's STS report would have similar information, so the hospital would have known how its operative mortality rate compared to others. Mr. Steffen asked who would be conducting a focused review, and Ms. Fleck answered that an independent cardiac surgeon would need to perform the review. MHCC would contract with a surgeon who is not affiliated with any Maryland hospitals.

Dr. Warren stated that "Hospital #9" must have the lowest number of cases because it has the widest confidence interval. He added that with its low volume, one or two cases may look like it is a more significant outlier than it actually is. Ms. Fleck responded that it is not correct that Hospital #9 has the lowest volume. She cautioned against making that assumption, and reiterated that a hospital would have to significantly fall below the national benchmark to stand out.

Dr. Salenger asked whether the regulations (COMAR 10.24.17) state that two consecutive reporting periods of poor performance trigger a focused review. Ms. Fleck explained that it is only when a hospital's performance on the STS star rating is one star for two consecutive reporting periods. Generally, concerns regarding patient safety trigger a focused review. Keith Horvath, M.D., asked if the performance period was six months. Ms. Fleck explained that while reporting periods are twelve months, they overlap by six months.

Ms. Diane Alejo asked for clarification on the handout with "Risk-Adjusted Isolated CABG 30-Day All Cause Operative Mortality." Ms. Alejo explained that STS defines operative mortality to include both in-hospital deaths following surgery, even more than 30 days following surgery, and those within 30 days of surgery. Ms. Fleck stated that her understanding is that the information presented is consistent with the STS definition of operative mortality. However, she planned to confirm with STS and later update the Committee. (Following the meeting via e-mail Ms. Fleck informed CSAC members that the information was consistent with the STS definition for operative mortality.)

Maryland Hospitals' Performance on Risk Adjusted In-Hospital Mortality Rates for PCI Cases Relative to the National Benchmarks

Ms. Fleck gave an overview of the meeting handout with Maryland hospitals' performance on risk adjusted in-hospital mortality rates for ST-elevation myocardial infarction (STEMI) and non-STEMI cases. She explained that for PCI programs, there are quarterly reports from the ACC for the participants in the National Cardiovascular Data Registry (NCDR) that overlap by three quarters with the prior reporting period. MHCC has been getting hospitals' ACC NCDR reports with this information for several years, but not until recently have the standards for mortality rates in MHCC's regulations aligned with the information available in the ACC NCDR reports. Ms. Fleck observed that the vast majority of time, hospitals are in compliance with the national benchmarks for in-hospital mortality rates.

Dr. Wang speculated that everyone has had a bad quarter on mortality for STEMI cases. Overall, there are a lot of "Y's" in the handout, an indication that a hospital meets MHCC's performance standard for the reporting period. Dr. Wang commented that performance for 2017 looks good, without any programs failing to meet the MHCC benchmark. However, he also remarked that if you see a pattern of non-compliance with the standard, then it should be investigated to determine if there is a problem. Ms. Fleck commented that with a small number of cases for programs and large confidence intervals, it is hard for a program to be labeled an outlier. For this reason, MHCC staff also reviewed which programs fell in approximately the bottom 10% relative to other programs. Ms. Fleck asked for CSAC members' feedback on that approach. Dr. Wang stated that you have to be careful when reviewing such cases. Ms. Fleck responded that she understood sometimes a single case will result in a hospital falling in the bottom 10% relative to other programs for some metrics.

Planning for Public Reporting of Cardiac Care Data

Ms. Fleck reiterated that public reporting is not being implemented immediately. It may be a year or longer before additional public reporting on cardiac care is available on the MHCC website. Mr. Steffen explained that there are several quality reporting efforts underway at MHCC, and those efforts include workgroups with consumers, hospitals, and other stakeholders. He explained that Theresa Lee, Director for MHCC's Center for Quality Measurement and Reporting, is conducting work that covers cardiac services. In addition, Mahlet Nigatu, MHCC staff for the Center for Analysis and Information Systems, is focusing on episodes of care for private payers and plans to next focus on the Medicare patients. The episodes of care encompass hospital and physician charges, as well as drug costs. MHCC staff is interested in feedback from CSAC members on additional public reporting for cardiac services.

Dr. Pomerantz stated that New York has been publishing cardiac outcomes data from the mid-1990s, and this reporting caused doctors to shy away from difficult cases. He cautioned that MHCC has to be very careful about how it address risk adjustments because physicians may become very risk adverse, if they fear punishment for taking on high risk cases. Dr. Salenger agreed with Dr. Pomerantz. Dr. Salenger questioned whether data should be publicly reported, and he noted that many high risk patients are served by the academic medical centers in Maryland. He

cautioned that the vast majority of people do not understand confidence intervals and may not accurately interpret such information.

Dr. Horvath stated that most of the high-risk cases are emergencies where a hospital cannot send the patients to another institution. From his perspective, some of Dr. Salenger's concerns are mitigated by risk adjustment, and that STS star rating system helps to further mitigate issues with interpretation of data.

Ms. Lee asked CSAC members for their opinions on the public reporting of procedure volume by physician. Dr. Pomerantz stated that people look closer at the quality of care rather than the quantity of procedures performed because higher quantity does not necessarily mean that someone is a better operator; sometimes operators may be doing cases that they should not. Ms. Lee agreed, but then explained that sometimes patients want to know the volume of procedures performed by a physician in order to make an informed decision on which physician is best qualified to perform their procedure. Dr. Wang agreed with Dr. Pomerantz. In addition, he expressed concern about reporting mortality rates by physician. He cautioned that the best of intentions could backfire, resulting in physicians avoiding high risk PCI cases. The goal of public reporting is to have transparency and educate patients, but the potential for negative unintended consequences must be considered too. To illustrate this point, he noted that knowing the cost of a specific procedure has resulted in some patients forgoing treatment because of confusion over what costs they will personally pay as opposed to the costs covered by their health insurance.

Dr. Wang expressed skepticism that the STS star ratings are a perfect measure for public reporting because a fixed percent of programs will fall in each category. Dr. Horvath corrected Dr. Wang, noting that it is not a fixed percentage or number of programs that are awarded one-star, two-stars, or three-stars. Dr. Wang also suggested that symbols used in public reporting may be data overload for patients. Stuart Seides, M.D., agreed with Dr. Wang. From Dr. Seides's perspective, MHCC's role is to ensure a basic level of quality, and using a reporting system that includes symbols would serve to confuse the public more than educate them. He expressed concern that public reporting with star ratings would result in facilities "hunting for stars" He also noted that a second star rating system would be duplicative because STS has already established a star rating system. Ms. Lee clarified that for consumers, MHCC staff is not proposing to establish a completely new system. MHCC wants to provide consumers with information on hospitals and physicians that will be useful to them.

Paul Massimiano, M.D., commented that it is difficult for consumers to evaluate volume criteria, and it puts a burden on physicians to meet an artificial volume. Furthermore, he noted that it takes a village to get good results or bad results. Patient outcomes are not solely driven by a surgeon's skills; outcomes also depend on the staff in the intensive care unit and nursing staff. He stated that to try to isolate an individual's volume as a representation of the individual's ability or the quality of the services that person provides is problematic. Hospital or program volumes, however, are fair game.

Mr. Ilaio noted that he has been a benefactor of cardiac services at both academic programs in Maryland. He stated that 99 percent of patients would likely not understand how to interpret

case volumes, confidence intervals, or other presentations of quality data. From Mr. Ilao's perspective, the most valuable information for consumers is that programs are subject to scrutiny through the processes described in MHCC's regulations for cardiac surgery and PCI programs. Consumers just need to know that doctors and programs are being regulated appropriately. He stated that if MHCC is going to publicly report a quality measure, then it should be the roughly one percent of rarely appropriate lesions.

Dr. Salenger asked Mr. Ilao about the value of the STS star rating system for patients. Mr. Ilao responded that, in the cardiac intervention support group that he attends, no one talks about the STS star ratings. People talk about having confidence in their doctors personally and consider feedback from other patients on physicians and hospitals. They also consider success rates. He again proposed that simply explaining the MHCC review process and how Maryland hospitals fare is sufficient for patients. Dr. Wang again expressed concern about using the STS star rating system for public reporting by MHCC. He commented that the distinction between programs is not that great because the vast majority of programs receive two stars. In his view, the benchmarks do not seem very helpful to consumers in discriminating between programs. Dr. Warren commented that he thought highlighting MHCC's process of oversight of programs would be the most useful to the public. He also expressed concern about data overload for consumers if a lot of numbers are presented.

David Zimrin, M.D., expressed concern about the misinterpretation of information on PCI volume and outcomes. Dr. Massimiano agreed with Dr. Zimrin, but also noted that consumers like to know that a hospital performs a particular procedure. Dr. Zimrin proposed that the focus should be whether the hospital completed the threshold number of procedures that professional guidelines identify as adequate to ensure quality. Currently, the number of PCI procedures performed by a physician that is considered adequate is 50 cases annually. Dr. Wang pointed out other reasons that information on program volume may be misleading. For example, research indicates that low volume operators at high volume hospitals have better outcomes, likely because it is the whole team that cares for a patient that matters. In addition, at some low volume hospitals, it may be physicians who perform a high volume of PCIs that exclusively cover PCI services for the low volume hospital. It would be a mistake to assume that the quality of care was worse at that hospital due to low volume. He again expressed concern that the public will not correctly interpret information on volume.

Ms. Nigatu stated that for MHCC's *Wear the Cost* campaign, MHCC staff solicited consumer feedback in order to ensure that the information presented was useful to the public. She noted that originally a table with data included eight variables, and based on consumer feedback, MHCC staff reduced the number of variables to three variables. She explained that MHCC staff recognizes that an abundance of data can be confusing, but the website still allows consumers to access data beyond the standard three variables. For the website, MHCC staff also set a threshold-based reliability score, and only hospitals that met the threshold were included on the website. The website also provides an explanation to consumers about why particular hospitals were not included on the website.

Mr. Ilao stated that the overall objective of CSAC is to make sure all programs provide excellent quality care. If a hospital fails to meet quality standards, then it will cease to exist as a program. He stated that, as a result of the review process, cardiac patients should be able to confidently go to any program and know that the hospital meets a certain threshold for quality.

Dr. Pomerantz stated that a lot of cardiac procedures are not elective anymore, they are emergent or urgent. Patients often will not have the ability to choose an operator based on price transparency. Mr. Steffen responded that quality reporting is headed in the direction of displaying cost variation only after the quality threshold has been met. Both must quality and cost must be considered. He also expressed concern about the idea of patients not being engaged. With the new payment model in Maryland, patients need to be engaged with the health system earlier. He is concerned that the status quo may make it difficult to meet requirements.

Dr. Massimiano stated that public reporting should not be used for reporting any volumes, especially not physician volumes. Instead, he expressed support for reporting whether programs meet the criteria for Certificates of Ongoing Performance. He asked if a program's failure to meet a quality standard would be publicly reported and whether it would be public that a program is undergoing a focused review. Mr. Ilao responded that reporting on adverse actions is part of public reporting. It would be unfair to patients not to report this information, especially because a patient in an emergency situation does not have the option to seek care elsewhere.

Ms. Fleck noted that there could be a concern about quality that triggers a focused review, but then it takes time to investigate the concern and decide whether a program needs to improve or whether the program, upon closer examination, meets the quality threshold. It is understandable that a program may be concerned if it has been flagged as needing more scrutiny. The public may view the program negatively even though it has not been determined whether the program's quality is lacking.

Ms. Fleck commented that many CSAC members have expressed concerns about public reporting, and it would be helpful to have more positive feedback on measures that might work. Mr. Steffen responded that patient-reported outcome measures are gaining traction, and he asked if that was something of interest to CSAC members. He explained that moving away from technical or clinical measures towards measures that are more meaningful to patients, such as patient-reported outcomes, is one possible response to the concerns raised by many CSAC members. Ms. Lee agreed that could be considered. She also clarified that quality reporting is separate from the reports for Certificates of Ongoing Performance. MHCC staff is not saying that it wants to make all the information presented at the CSAC meeting available to consumers through public reporting. MHCC wants to provide simple information that is useful to consumers, and it has a legislative mandate to provide quality and cost information so consumers can compare the performance of hospitals. She suggested that a checklist may be useful for fairly comparing hospitals, based on feedback provided by CSAC members during the meeting.

Kristen Fletcher stated that many hospitals have committed to publicly reporting for PCIs, and she would prefer to use a system that already exists. Ms. Lee explained that MHCC's policy is to use National Quality Forum (NQF) or Centers for Medicare and Medicaid Services (CMS)

endorsed measures when available. She suggested that linking to the STS web site or the ACC NCDR web site may be an option. MHCC staff would have to check with those organizations. There may be proprietary issues.

Dr. Pomerantz agreed with Ms. Lee and added that beyond minimal standards, you may have numbers like 2.1, 2.5, and 2.8 which once you factor in the confidence interval, are essentially the same number, and may mislead consumers who do not understand statistics that well. He mentioned that years ago, in New York, patients would bring him the public data with outcomes for cardiac surgeons and request a referral for a specific surgeon. He would sometimes need to tell patients that they should see a different surgeon based on their mistaken interpretation of the data.

Dr. Wang stated that the most recent version of ACC NCDR is voluminous with 400 fields and 15 pages. He noted that when providers hear that people want more data, they are very concerned. The demand for data keeps increasing, and it requires several employees to handle now. It makes people less excited about public reporting. Dr. Horvath stated that concerns about the ACC NCDR should be handled by participants in it. He noted that with the STS registries, providers had the same issue with the ever increasing demand for more data, and STS has responded to those complaints and now works to modify and minimize the burden of data collection.

Dr. Warren asked whether a 3-star facility was really better than a 2-star facility. Dr. Horvath answered yes. Dr. Salenger noted that the vast majority of patients go where their physicians tell them.

Performance Metrics Included on MHCC's Web Site Related to Cardiac Care

One CSAC member asked for clarification on a performance metric included in one of the handouts. This metric reads, "How often the hospital uses a procedure to find blocked blood vessels in the heart on both sides of the heart instead of only on one side." Several other CSAC members agreed that the wording was confusing, and they were not sure what it meant. MHCC staff agreed to review that specific metric for clarity.

Ms. Fleck announced that, moving forward, the CSAC would be holding quarterly meetings, with the next meeting being scheduled for late April or early May. Mr. Steffen noted that Dr. Salenger brought several articles about the public reporting that MHCC staff will distribute by email. The meeting was adjourned at 9:01p.m.