Draft Meeting Summary
Cardiac Services Advisory Committee
Tuesday, December 3, 2019
Maryland Health Care Commission
4160 Patterson Avenue, Baltimore, MD 21215

Work Group Member Attendees:
Anna Aycock (phone)
Kristen Fletcher (phone)
Heather Green (phone)
Christopher Haas, M.D (phone)
Josemartin Ilao
Richard Pomerantz, M.D.
Rawn Salenger, M.D.
Jerry Segal, M.D. (phone)
Stuart Seides, M.D. (phone)
John Wang, M.D.
Stafford Warren, M.D.

MHCC Staff Attendees:
Eileen Fleck
Paul Parker
Ben Steffen
Suellen Wideman, AAG

Introduction and Meeting Summary

Ms. Fleck welcomed members of the Cardiac Services Advisory Committee (CSAC), and let members on the phone know who was attending the meeting in person. She then asked members on the phone to introduce themselves. Ms. Fleck asked if anyone has suggested changes. She did not received any suggested changes prior to the meeting. Dr. Warren indicated that he had some very minor corrections that he would provide after the meeting. CSAC members agreed on finalizing the meeting summary with minor corrections.

Review of Measures Recommended for Public Reporting

Ms. Fleck explained that she included on the agenda a list of the measures that she though CSAC members had recommended for public reporting at the August meeting. The first one on the list is the Society of Thoracic Surgeons' (STS) composite star rating for coronary artery bypass graft (CABG) cases. All four components of this composite star rating are also recommended for public reporting. These components include risk-adjusted operative mortality, morbidity, use of the left internal mammary artery, and receipt of all perioperative medications. Ms. Fleck noted that all of that information is currently included on the STS web site for public reporting, and a majority of Maryland hospitals with cardiac surgery programs currently participate in public reporting through that web site.

Ms. Fleck next mentioned that risk adjusted in-hospital mortality was recommended by CSAC members for public reporting on PCI cases, as well as use of all recommended medications to reduce the chance of blood clots and decrease cholesterol after PCI or angioplasty. Although

there are separate measures for various medications, CSAC members recommended using just the combined metric to avoid redundancy.

Ms. Fleck stated that at the previous meeting she expressed concern about how the STS and American College of Cardiology might view the recommendations on public reporting that rely on measures developed by each organization. She followed up with each. The STS did not have concerns about MHCC staff posting information for public reporting that was generated by STS and available on its own public web site. STS staff asked that MHCC staff note STS as the source. MHCC staff could also link to the STS public reporting web site, rather than posting content on its own web site, but it would be up to MHCC staff to keep the link updated.

Similarly, Ms. Fleck noted that the American College of Cardiology (ACC) did not have concerns about MHCC staff posting information for public reporting that was generated by the ACC. Staff for the ACC asked that MHCC cite the ACC as the source of the information. When Ms. Fleck asked about posting in-hospital mortality information, staff for the ACC noted that a composite measure had been developed and was almost ready to be posted for public comment. The ACC views the new composite measure as a much better metric than in-hospital mortality. It has not yet been posted for comment though. Ms. Fleck suggested that CSAC members may want to discuss the measure at a later date, once more information is available.

Ms. Fleck stated that at a previous CSAC meeting, there were questions about what other states are doing with respect to public reporting using information from the STS and ACC. When Ms. Fleck asked STS staff about this issue, they were not aware of any state using information from STS for public reporting. Other states may get information from STS that is used to evaluate programs, but it is not part of public reporting. Ms. Fleck asked if there were any comments or questions on the recommendations or other information provided. There were none.

Ms. Fleck next noted that CSAC members had also previously recommended including volume information on MHCC's web site, but without any judgement attached to it. No one disagreed with this recommendation. With respect to the next steps for CSAC members recommendations on public reporting, Ms. Fleck explained that the project will be on hold for six months probably. Theressa Lee, the Director for the Center for Quality Measurement and Reporting at MHCC, has responsibility for public reporting and the next priority for her Center is metrics for outpatient surgery. Once work resumes on public reporting for cardiac surgery and PCI services, the next step is for a consumer group to consider more of the details related to implementation and the presentation of the information.

Request for Guidance on Additional Potential Triggers for Focused Reviews

Ms. Fleck explained that she thought it would be helpful to have more transparency and guidance on triggers for a focused review. MHCC has broad authority over what triggers a focused review, but the regulations are only explicit with respect to risk-adjusted mortality rates, star ratings, and volume for cardiac surgery programs. Ms. Fleck explained that it would be helpful to have a more comprehensive review of programs which would require some additional data collection. For cardiac surgery programs, the information currently collected is more limited than

for PCI programs; cardiac surgery programs would need to submit more information from their STS reports.

With respect to picking a benchmark to determine when a focused review is necessary, Ms. Fleck commented that it is a difficult decision. She noted that although information on quality metrics is included in hospitals' applications for Certificates of Ongoing Performance, the targets selected may by the STS national average or a more ambitious standard. Those standards may not be appropriate to use as the benchmark for deciding whether to conduct a focused review.

Ms. Fleck explained that the agenda includes some suggestions to consider for use as potential triggers for a focused review. She added that MHCC staff is open to considering other ideas that are not included on the list and would appreciate feedback on what the threshold should be for a focused review. She mentioned that when MHCC staff was developing an updated State Health Plan chapter for cardiac surgery and PCI services, she thought it was suggested that an observed to expected (O/E) ratio of 1.5 for operative mortality of isolated CABG cases had been recommended as the threshold for a focused review. She asked for feedback on taking that approach for other metrics and whether an O/E ratio of 1.5 would still be the appropriate threshold to use.

Rawn Salenger, M.D., suggested that first the metrics should be determined and then the thresholds should be discussed. Ms. Fleck agreed with that suggestion. She also explained that the list of potential triggers for discussion is based on information provided already to hospitals by the ACC or STS, as Ms. Fleck understands it. The presentation of the information may vary. Typically, there is a percentile ranking, and there may be an O/E ratio or confidence interval.

John Wang, M.D. asked what approach MHCC staff is currently taking now. Ms. Fleck responded that MHCC staff has been primarily focused on metrics that are explicit in the regulations. Dr. Wang asked for examples of what has triggered a focused review for cardiac surgery programs. Ms. Fleck responded that volume is a trigger for a focused review and an operative mortality rate that is statistically significantly worse than the national average. This approach results in only true outliers getting a focused review. Dr. Salenger added that a cardiac surgery program that receives a one-star rating for two reporting cycles in a row for its composite score for CABG is subject to a focused review.

Dr. Wang asked for clarification on the goals of MHCC. He asked if the issue is that the triggers for a focused review are not stringent enough. Ms. Fleck responded that the regulations explicitly state that a focused review will be conducted in only a few instances, and MHCC staff has concluded that greater transparency and guidance on triggers for a focused review would be helpful.

Dr. Wang responded that the focus is on CABG because it is common across programs so making comparisons is possible. It is challenging if different types of surgery are considered too. Ms. Fleck responded that she understands the importance of treating programs fairly for public reporting. However, if a program performs other types of cardiac surgery cases at a sufficient level of volume to be evaluated, then its performance on those other cases should be considered. Ms. Fleck noted that the STS combines three years of data to have a sufficient number of cases to

provide a meaningful evaluation of aortic valve replacement cases. Dr. Wang commented that the topic is very broad and questioned how much information is enough. For PCI programs there are hundreds of metrics. He also noted that acute kidney injury includes a change in creatinine that is small enough that it is clinically not meaningful.

Dr. Wang asked again about the goals of MHCC and expressed concern over picking more metrics. Ms. Fleck responded that some measures may be more important than others or useful. She noted that Dr. Wang's earlier comments suggested that he disagreed that acute kidney injury, as defined by the ACC, should be used as a trigger for a focused review. Dr. Wang asked again if the present measures for a focused review are considered insufficient or deficient in some way. Ben Steffen disagreed with Dr. Wang, noting that there is broad authority for MHCC to conduct a focused review.

Ms. Fleck commented that the explicit triggers for a focused review are useful for programs that perform primarily CABG cases. However, some programs do many other types of cardiac surgery, and CABG cases may account for less than half of the program. MHCC should strive to be more comprehensive for Certificates of Ongoing Performance. She suggested that focusing on more than just mortality may also be useful.

Richard Pomerantz, M.D. asked for confirmation that the star rating encompasses mortality, morbidity, and other measures. Dr. Salenger agreed that Dr. Pomerantz's understanding of the STS composite star rating is correct. Dr. Pomerantz asked if the goal is to look at the components of the composite star rating individually. Dr. Salenger commented that almost no program performs enough valve cases or combination cases to have statistically valid conclusions based on one year of data, which is why the STS combines three years of data.

Dr. Salenger mentioned that in a conversation with Andrew Pollack, M.D., the chair for the MHCC, Dr. Pollack asked if there is a better way to identify programs that may need to improve, before the mortality rate stands out. Dr. Salenger agreed that the mortality measure is a blunt instrument. Ms. Fleck commented that there is no reason not to look at three years of combined data for valve procedures, when STS uses that approach. She also explained that it would be helpful to be more explicit about what matters most because there is a large volume of information on quality. The additional guidance on triggers for a focused review does not necessarily need to be included in the regulations.

Jose Ilao requested clarification on the requirements for Certificates of Ongoing Performance and how those requirements relate to the discussion. Dr. Salenger asked whether there would be redundancy if metrics are reviewed for a Certificate of Ongoing Performance. Ms. Fleck responded that the regulations give broad authority to MHCC. Theoretically, if MHCC staff were concerned about mortality rates for valve cases, then a focused review could be conducted, but currently MHCC staff is not requiring that programs provide information on mortality rates for valve cases on an ongoing basis. MHCC staff might get information on mortality rates for valve cases if a hospital provides it, but a hospital may also only provide the information years later, when an application for a Certificate of Ongoing Performance is submitted. If a hospital appears

to have had a problem, MHCC staff could do a focused review, but it probably would have been better to have known of the problem sooner.

MHCC is just beginning the Certificate of Ongoing Performance process, and MHCC staff has wanted to focus on reviewing the triggers that are explicit in the regulations. Mr. Steffen commented that the purpose is to provide greater specificity because the regulations are broad and general. Ms. Fleck agreed with Mr. Steffen, noting that greater clarity would be helpful for everyone.

Dr. Salenger suggested that focusing on the five major types of morbidity for cardiac surgery patients may be useful. He would not consider readmissions within 30 days. He described the five major types of complications tracked by STS, beyond mortality. He would not include readmissions within 30 days. The five major types of complications are surgical re-exporation, mediastinitis, acute renal failure (or renal failure requiring dialysis), stroke, and prolonged ventilation. Those are incorporated in the composite score, and those are the major complications that have benchmarks. Dr. Warren agreed with Dr. Salenger's suggestion.

Ms. Fleck asked Dr. Salenger to explain why he would cross off readmissions within 30 days. Dr. Salenger explained that there is not a good benchmark, and it can be related to quality but it also may be related to many other things. Hospitals are also strongly incentivized to reduce readmissions within 30 days, across all service lines. Ms. Fleck asked if anyone on the phone wanted to comment. Stuart Seides, M.D. agreed with Dr. Salenger. Readmissions are too complicated, and there is already a big financial incentive for hospitals to focus on reducing readmissions. Jose Ilao commented that it is acceptable to him to not use readmissions as a trigger for focused reviews, as proposed by Dr. Salenger.

Ms. Fleck suggested that for non-CABG cardiac surgery, it may be reasonable to focus on primarily risk-adjusted mortality, when a program has sufficient volume of other types of cases to evaluate mortality. Dr. Warren asked for clarification on the evaluation of non-CABG surgeries. Ms. Fleck stated that MHCC staff would rely on the major categories of cardiac surgery that are defined and used by STS. If a hospital has sufficient volume for STS to provide metrics, then MHCC will rely on the information, and if a hospital does not have sufficient volume and does not get performance information from STS, then MHCC staff will accept that a hospital cannot provide the information to MHCC.

Dr. Pomerantz and Dr. Salenger commented that the approach proposed by MHCC staff seemed unfair. A high volume program could face greater scrutiny through a focused review than a low volume program. Dr. Salenger suggested that confidence intervals must be considered. It would be difficult for a low volume program to be outside a confidence interval. Dr. Salenger suggested that any program performing one of the major types of cardiac surgery tracked by STS should at least report the raw numbers to MHCC with respect to volume and mortalities. Dr. Salenger also commented that if a program is only performing five aortic valve cases a year, then it raises a question about why a program is doing those types of cases at all. Ms. Fleck agreed that MHCC could review the raw numbers for a program that did not perform enough volume to have its performance evaluated by STS against a benchmark. Dr. Salenger expressed concerns about

potential gaming of a system. Ms. Fleck responded that if there is not information from STS on a hospital's performance for a particular category of cases, then it becomes more important for MHCC staff to have guidance on threshold or benchmark standards. Mr. Steffen asked for clarification on what the approach should be if a program has low volume for a particular category of surgery cases and continues to have low volume over time.

Ms. Fleck asked whether a case may be an emergency and that is why a program performed only a few of some types of cardiac surgery cases. It would be useful to know why a program only did a few cases. Dr. Salenger responded that the issues raised are why people look at CABG and not other surgeries to evaluate programs. Dr. Salenger stated that statistically, you cannot tell the difference between a program that performs ten valve cases and has zero deaths and a program that performs ten valve cases and has two deaths. Ms. Fleck agreed and responded that if two deaths for a program that does ten valve cases is concerning, then a focused review can be conducted. An independent surgeon will evaluate whether the deaths were unavoidable or if there are some problems that need to be addressed.

Dr. Wang commented that there is inherent bias against low volume programs. He also expressed concern about adding more metrics that would be triggers for a focused review. He stated that mortality rates, one-star ratings, and low volume are appropriate triggers for cardiac surgery programs, but he was skeptical about adding more triggers. He mentioned that for PCI, even the executive summary from the ACC, has 25 or 30 metrics, broken out into different measures. He asked again for MHCC staff to explain the goal. Every program should be reviewing outcomes. For his program, there are monthly meetings to review performance. He asked about accounting for new procedures, noting that the field keeps expanding. Mr. Steffen asked Suellen Wideman to read the regulations. Mr. Steffen noted that MHCC has broad authority and could take action if there appears to be a problem, but it may not be fairest way to proceed. It may be beneficial to have more guidance. The authority should be used cautiously. Ms. Wideman read the following text from the regulations.

> *Commission staff, or other persons acting on behalf of the Commission, may a review a program's clinical records at any time for the purpose of auditing data. In addition, reported patient safety concerns, aberrations in data identified by Commission staff, failure of an established program to meet a volume of 100 cardiac surgery cases annually . . . or failure to meet quality standards established in State and federal regulations may lead to a focused review that investigates the quality of patient care or the accuracy of a hospital's data.*

Dr. Salenger commented that it may be useful to look at the number of cases for different types of cases. It might be useful to evaluate aortic valve replacement (AVR) cases, but there are few programs performing other types of cases at sufficient volume to evaluate the programs on an annual basis. Ms. Fleck responded that it was unlikely that there would be criteria for all eight major categories used by STS to group and evaluate cardiac surgery cases.

Ms. Fleck explained that she is concerned about comprehensively covering programs. Her fear is that there will be a newspaper headline about a cardiac surgery program's shortcomings, after the program in the news was granted a Certificate of Ongoing Performance. It would raise questions about whether the Certificate of Ongoing Performance process is effective. For that reason, she thinks it would be helpful to be more comprehensive and have more clarity and guidance.

Ms. Wideman noted that the regulations refer to all-cause risk adjusted mortality rates for a specific type of cardiac surgery, such as CABG. The regulations do not limit the Commission's authority to an evaluation of mortality rates for CABG cases. Dr. Pomerantz commented that it is likely to be a smaller volume program that generates a headline about poor quality.

Dr. Warren commented that since valve surgery is rarely an emergency, there is a potential opportunity to transfer a patient to a larger center. He asked if there is threshold below which a program should not perform those types of cases. Dr. Salenger commented that he was not aware of a standard. Dr. Wang commented that it is probably complicated because even though a program may be low volume, the surgeon may perform surgery at other locations too. He added that it is more than just the surgeon's volume that matters; the whole team providing care matters. It is complicated. Dr. Salenger commented that there is a general trend toward higher quality at larger volume programs, but there are also a lot of high quality lower volume programs, so making a policy based on an assumption that higher volume programs are almost always better is not a good idea.

Dr. Pomerantz commented that the concern is that you will not eliminate a program that is having a problem. Dr. Salenger agreed with Dr. Pomerantz. He suggested that considering AVR as a prototype for looking at non-CABG cases. The process needs to be fair, but still useful. It should be applied to all programs performing that type of surgery. Dr. Salenger added that AVR volume is going down and will continue to decrease. It will get harder and harder to identify a difference based on statistics. He is not aware of a threshold for AVR cases, so it will be tough to identify one. The volume of AVR cases is going down because of increases in transcatheter aortic valve replacement (TAVR) cases, and it will become more difficult to identify differences among programs. Dr. Wang asked about left ventricular assist device (LVAD) cases and extracorporeal membrane oxygenation (ECMO) cases. There are only two places in Maryland doing those types of cases, the academic medical centers.

Mr. Ilao commented that he thought the Certificate of Ongoing Performance process was one where a program could lose its program if volume is low, and he thought that all cases count in the volume, so the quality of all cases would be evaluated. Dr. Salenger commented that many types of cases are included for the volume metric, but for the quality metrics, you have to narrow the focus to a specific kind of case, in order to have a valid evaluation of the program.

Dr. Pomerantz asked whether the issues should be picked up by the Certificate of Ongoing Performance application review process. Ms. Fleck responded that MHCC staff relies on data reports from the STS and ACC. MHCC staff receives or had been receiving the whole report from the ACC for each hospital, but for cardiac surgery programs, they only send a few pages out of a

report that may be over 200 pages. The select pages are focused on CABG cases because that is explicit in the regulations, and MHCC staff wanted to start collecting more comprehensive information.

Dr. Pomerantz asked for confirmation that MHCC staff is uncomfortable with data provided by cardiac surgery programs and believes that something is missing. Ms. Fleck responded that she thinks the data collection could be better because there is a lot of information in reports. It would be helpful to be more targeted and have feedback and clarity on what matters the most. Dr. Pomerantz commented that on the PCI side, MHCC has a lot of information and there is a lot review. Ms. Fleck responded that for PCI, it is more a matter of the threshold decision. She thinks it would be valuable to have more input and clarity.

Dr. Pomerantz commented that there is pretty good review of programs through the Certificate of Ongoing Performance. It seems very granular, discrete, and real time. He was skeptical that more metrics are needed. Dr. Wang described the weekly reviews for his PCI program. There is also participation in the Maryland Academic Consortium for PCI Appropriateness and Quality (MACPAQ). There is review of every metric in the ACC National Cardiovascular Data Registry (NCDR) CathPCI report each quarter. He agreed with Dr. Pomerantz. He commented that some metrics are not meaningful, including acute kidney injury, as defined by the ACC. In his view, it makes sense to keep things broad rather than deciding everything in detail. That is why simple but powerful measures are used. Those measure also have been validated. Ms. Fleck responded that she understood, and it is useful to have the feedback.

Ms. Fleck explained that MHCC staff does not want to exhaust everyone and have another 25 different triggers, but she thinks that it is possible to expand the list of other possible triggers. MHCC has the authority, but only a small number of triggers are explicitly included in the regulations. She mentioned that with morbidity it would be helpful to have more guidance. With small volumes, the confidence intervals may be very wide, and it is then difficult to judge a program.

Dr. Wang noted that major adverse cardiovascular events (MACE) are typically defined as death, myocardial infarction, and repeat revascularization. With PCI, it is not routine to check biomarkers for myocardial infarction. Stroke is an easy metric to use. Risk adjusted mortality is an easy metric to use. Dr. Wang asked what other major events MHCC staff want to consider for morbidity. Ms. Fleck responded that her understanding is that there is a composite measure for morbidity that is included in the reports provided to participants in the ACC NCDR CathPCI Registry. The composite measure includes death, emergency CABG surgery, stroke, or repeat target vessel revascularization. Dr. Wang noted that the composite measure described is not part of the current format of the executive summary. Ms. Fleck commented that it may be in the body of the report. She also explained that major morbidity may be meaningful and more likely to meet a threshold for volume that allows for conclusions about programs based on statistical information.

Dr. Wang asked Ms. Fleck what timeframe is used for one of the components of the composite MACE measure, repeat target vessel revascularization. Ms. Fleck stated that she would

have to look it up. Dr. Wang explained that there is a measure for "return to lab" and that metric may not be meaningful because a lot of patients are taken off the table and sent for a surgery consult, which is entirely appropriate, but those patients are included in that metric. Dr. Wang explained that when reviewing that metric, it is noted how many of the patients with a return to lab were surgical turndowns or staged procedures. That is the only metric that Dr. Wang thought might be capturing repeat target vessel revascularization. He stated that good measures are stroke, risk-adjusted mortality, and acute kidney failure that requires hemodialysis. Those are important in his view. Dr. Warren agreed with Dr. Wang. Stroke, hemodialysis, risk-adjusted mortality, and major vascular complications (as defined in the ACC reports) are the best measures.

Dr. Seides commented that he agreed with Dr. Wang, but also expressed reservations. In his view, it is a physician's judgment regarding who should get what procedure and when that matters. That is what discriminates between quality programs the most. Some of the scandalous things that have happened in Maryland would not have been picked up looking at complications. One of the big issues was patients getting PCI who did not need it. He was skeptical about spending a lot of time on complications. His experience is that a physician's judgment or an institutions judgment is what is most relevant. Dr. Pomerantz added that the required external reviews for elective PCI cases pick up on the clinical judgment of physicians. That is already being tracked. Dr. Warren agreed with Dr. Pomerantz.

Ms. Fleck responded that the feedback provided is helpful, and she was pleased to hear that the external reviews are regarded as valuable. However, she noted that the information that MHCC staff has received is more program level information that does not allow staff to determine is a particular operator may be showing poor judgment.

Dr. Pomerantz commented that hospitals are able to track individual operators. Dr. Warren commented that every report is reviewed by all the interventionalists and discussed. He is not sure of the practice at other hospitals though. Dr. Wang commented that he reviews the executive summary and gives it to his partners. He expects that the administrators may go through it in more detail. Dr. Warren suggested that it may be useful to ask hospitals about their process for handling the external review reports.

Ms. Fleck summarized the discussion related to PCI by programs by stating that her understanding is that CSAC members think that there is already good data collection for PCI programs and effective practices for evaluating the information, so nothing additional is required. However, for cardiac surgery programs, there may be an opportunity to be more comprehensive and consider coming up with some thresholds, after agreement is reached on specific measures to target. Dr. Warren suggested that it makes sense to consider AVR cases, which after CABG cases, are the most common.

Dr. Salenger asked Ms. Fleck what she meant by thresholds. Ms. Fleck clarified that she meant triggers for a focused review, which will follow after first deciding what additional measures are most important. Dr. Warren suggested that mortality rates and stroke would be a reasonable choice. Dr. Salenger agreed that would be a reasonable way to start. Ms. Fleck commented that the feedback was helpful and the material that she wanted to discuss had been covered. She asked

if anyone had topics that they wanted to propose for discussion at the next meeting. She also noted that the topics from today would continue to be discussed. Ms. Fleck encouraged CSAC members to follow-up after the meeting with any feedback.

Dr. Warren asked about the timeliness of the external review reports on elective PCI cases that are required by MHCC's regulations. Ms. Fleck explained that there seemed to be some variation in how quickly hospitals had those reports, and the lag concerned her a bit. She asked if hospitals were not concerned about the lag because they do their own internal review and already know what to expect from the external review reports. She noted that fortunately it appears that everyone is doing well, but if there was a concern, it seems like there is a long lag before a hospital would have that feedback from an external review report. Dr. Wang commented that for the ACC reports, there is a six month lag due to the processing of the information submitted and the time required to then generate reports. Ms. Fleck responded that six months would be expected, but it seemed like a longer lag. She thought that it may be partly due to format changes related to data collection and the ACC reports. Dr. Warren commented that all hospitals should be providing the data within the same timeframe.

Ms. Fleck asked if anyone else wanted to comment before the meeting was adjourned. Mr. Steffen commented that for public reporting the next group will focus more on the presentation of the data. He indicated that there would be an opportunity to respond to the recommendations before the information would be posted on MHCC's web site. Mr. Steffen also explained that MHCC has some other initiatives on price transparency that were started a few years ago. There have been some delays due to switching vendors multiple times. MHCC is on the verge of expanding the number of episodes for cost comparisons, and he anticipates that PCI and CABG cases will be included. MHCC staff will likely want to engage with some CSAC members to obtain their feedback on the construction of episodes of care for PCI and CABG. Mr. Steffen noted that the analysis would be based on claims data. He suggested that anyone who is interested should contact Ms. Fleck. It is currently anticipated that the rollout could be in late March 2020.

A CSAC member asked for clarification on the charges that would be included in an episode of care. Mr. Steffen responded that costs for an episode of care would include hospital charges, physician charges, drugs, and rehabilitation. He noted that a hospital does not have control over all the costs, but it would give consumers an idea of how costs compare among hospitals. Dr. Pomerantz noted that HSCRC sets the rates, not hospitals. Mr. Steffen responded that the rates are regulated and noted that hospitals do come back and complain that they are being criticized for rates that were approved. He explained that sometimes consumers think that rates are all the same at all Maryland hospitals for the same service, but that is not the case. The information provided will help consumers to understand how the rate setting system works. Dr. Pomerantz asked whether consumers would really be able to sort through the information. Mr. Steffen agreed that Dr. Pomerantz's point is valid.

Mr. Ilao commented that price transparency is very relevant for consumers, and there should be more education for consumers. Mr. Steffen responded that the federal government, finally after many years, has some momentum regarding price transparency. Mr. Steffen added that consumers need to be educated on the new total cost of care model in Maryland. That will be

challenging. Mr. Steffen also commented that recent literature contradicts everything that he said before about price variation, and he wants to share an article with CSAC members. Some of the work by the Peterson group has been debunked by a group of researchers at the Harvard School of Public Health. Mr. Steffen wished everyone a happy holiday, and Ms. Fleck thanked CSAC members for their participation. The meeting adjourned at approximately 8:40 p.m.