TO: Consensus Standards Approval Committee (CSAC)

FR: Cost and Resource Use Standing Committee

RE: Cost and Resource Use Standing Committee Ad Hoc Review of the Conceptual and Empirical Analysis of Sociodemographic Variables and Payment Outcomes

DA: January 6, 2016

The CSAC will review recommendations from the Cost and Resource Use Standing Committee Ad Hoc Review of the Conceptual and Empirical Analysis of socioeconomic status and demographic variables (SDS) Variables and Payment Outcomes project at its January 12 conference call.

This memo includes a summary of the project, the three recommended measures, and themes identified from and responses to the public and member comments.

Accompanying this memo are the following documents:

1. Cost and Resource Use Standing Committee Ad Hoc Review: Conceptual & Empirical Analysis of SDS Variables and Payment Outcomes Draft Report.
2. Comment table. Staff has identified themes within the comments received. This table lists 11 comments received.

CSAC ACTION REQUIRED

The CSAC will consider approval of the Standing Committee recommendation to continue endorsement of the following three measures:

- #2431: Hospital-level, risk-standardized payment associated with a 30-day episode-of-care for Acute Myocardial Infarction (AMI) (CMS/Yale)
- #2436: Hospital-level, risk-standardized payment associated with a 30-day episode-of-care for Heart Failure (HF) (CMS/Yale)
- #2579: Hospital-level, risk-standardized payment associated with a 30-day episode of care pneumonia (CMS/Yale)

BACKGROUND

In early 2015, NQF began a two year trial period during which sociodemographic status (SDS) factors can be considered in the risk-adjustment approach of measures submitted to NQF if there is a conceptual and empirical rationale for doing so. Prior to January 2015, NQF criteria and policy prohibited the inclusion of such factors in the risk adjustment approach and only allowed for inclusion of a patient's clinical factors present at the start of care.

Because the evaluation of the three measures listed above began and ended prior to the start of the SDS trial period, the Cost and Resource Use Standing Committee did not consider SDS factors as part of the risk-adjustment approach during their initial evaluation. When the NQF Board of Directors Executive Committee ratified the CSAC's approval to endorse the measures, it did so with the condition that these

measures enter the SDS trial period because of the questions raised throughout the project about the potential impact of SDS on payment outcomes and the impending start of the SDS trial period.

To meet this condition for endorsement, the Cost and Resource Use Standing Committee reviewed the conceptual and empirical relationship between sociodemographic factors and payment outcomes. The measure developers were asked to submit additional analysis in a two-phased approach:

- Webinar #1: Examine the conceptual relationship between SDS factors and the outcome
- Webinar #2: Examine the empirical relationship between SDS factors and the outcome

During the first webinar, the Standing Committee reviewed the conceptual analysis of selected SDS variables provided by the measure developer and determined that further empirical analysis was warranted. The Committee reviewed the proposed variables to be pursued in the empirical analysis by the measure developer and provided input on the approach to empirical analysis.

During the second webinar, the Standing Committee reviewed the empirical analysis of the impact of SDS variables in the risk model and the measure score. The Standing Committee evaluated the validity of the developer's decision to not include SDS adjustment in the risk adjustment model based on the empirical analysis provided. The Committee ultimately decided to recommend continued endorsement for the three measures without SDS adjustment.

MEASURE REVIEW SUMMARY

These measures estimate hospital-level, risk-standardized episode-of-care payment starting with inpatient admission to a short term acute-care facility and extending 30 days post-admission for Medicare fee-for-service (FFS) patients who are 65 years of age or older with a principal discharge diagnosis of AMI, HF or Pneumonia.

The developers explored the impact of race categorized as Black and Non-Black and Medicaid enrollment/Dual Status (as a proxy for low income) categorized as Medicaid and Non-Medicaid on the risk adjustment model as these variables were often cited in the literature for these outcomes and other similar outcomes. The developer and the Committee agreed that there was sufficient conceptual rationale for an exploration of these variables for consideration in the risk adjustment approach. Based on the results of the empirical analysis, the developers chose **NOT** to include the variables in the model. The developers cited the nominal impact of the SDS variables on the risk model performance and payment outcomes as their rationale not to change the measure.

Ultimately the Committee voted to continue endorsement of the measures without inclusion of SDS factors in the risk-adjustment approach. The empirical results do not suggest that accounting for Black versus non-Black and Medicaid dual-eligibility status is needed when estimating facility-level episode-of-care payments for AMI, HF, or pneumonia.

Comment Themes

The results of the Standing Committee's review were posted for public and NQF member commenting. Eleven comments were received from five organizations.

Theme 1 – Guidelines for Variables Reviewed

Historically, NQF has not been prescriptive in its approach to the variables included in risk adjustment models. Measure developers are responsible for the selection of the variables included in the model and for defending the selection of those variables to the Standing Committees. This approach applies to both the selection of clinical and sociodemographic factors. However, a number of commenters raised concerns with this approach and asked for NQF to establish guidelines for what SDS factors should be considered. Commenters recommend that providing developers this additional guidance would allow for a more consistent and thorough trial period.

Potential Response: Historically, NQF has not been prescriptive in its approach to the variables included in risk adjustment models. Measure developers are responsible for the selection of the variables included in the model and for defending the selection of those variables to the Standing Committees. This approach applies to both the selection of clinical and sociodemographic factors. The selection of SDS variables to include in risk adjustment models should be guided by the conceptual relationship between the SDS factor and the outcome, and the results of the empirical testing. The NQF Disparities Standing Committee will consider this issue during their January 20-21, 2016 meeting.

Theme 2 – Concern about the Variables Selected

Commenters raised a number of concerns about the variables selected by the developer for inclusion in the risk adjustment model. First, commenters expressed concerns about the inclusion of race as a factor as well as the limited number of categories used to express this construct. Commenters also expressed their concern with the potential use of race as a proxy for sociodemographic status. Next, commenters expressed disappointment that the developers did not analyze the data by nine digit zip code. Some commenters suggested that five digit zip code be considered as an interim step until nine digit zip code information becomes available. Finally, commenters suggested that the Low Income Subsidy (LIS) should be used in combination with Medicaid status.

Potential Response: The CMS Yale Team justified the inclusion of race in the empirical analysis as it is often used as the SDS factor examined in these outcomes in the literature. The Standing Committee agreed that the use of this variable was sufficiently justified to allow for additional empirical examination. The Standing Committee was not in favor of the developers beginning empirical analysis using data linked on the basis of 5-digit ZIP Code. The Committee preferred the developers to use their resources analyzing the 9-digit ZIP Code data once it is available to them since the 5-digit ZIP code data is often too heterogeneous. The CMS/Yale Team explained that while the Committee recommended the use of the low income subsidy (LIS) variable in conjunction with the Medicaid variable as a proxy for income, when they performed their analysis of the LIS data they chose not to use it as the patients captured with their current method to identify patients based on dual status alone sufficiently overlapped with those captured with the dual plus LIS variables.

Theme 3 – No Analysis of Post-Acute Care (PAC) Portion of the Payment

Commenters expressed concern that the developers did not perform analyses of the post-acute portion of the payment to assess the impact of SDS factors. Commenters noted that the post-acute expenses are a significant source of variation in these measures and are not mitigated by using a standardized DRG payment for the hospital expenditures. Thus, commenters noted that analysis of the post-acute portion of the payment may be more sensitive to SDS factors.

Potential Response: The measure developers focused their analysis of the impact of SDS factors on the entire episode payment rather than segments of the episode.

NEXT STEPS

The results of the NQF ad hoc review process will considered by the Board of Directors and will be subject to an appeals period. The results of this review will also be shared with the Disparities Standing Committee during their January 2016 meeting.