All-Cause Admissions and Readmissions, Fall 2018 Cycle: CDP Report

TECHNICAL REPORT

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NATIONAL QUALITY FORUM

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Executive Summary

Quality improvement has a critical goal of reducing avoidable hospital admissions and readmissions. Avoidable admissions and readmissions take patients away from their daily lives and contribute to unnecessary healthcare spending. However, concerns about the unintended consequences of using measures of admissions and readmissions in accountability programs have prompted important study and discussion about how to meet quality goals while protecting access to necessary and appropriate care. NQF currently has 50 endorsed all-cause and condition-specific admissions and readmissions measures addressing numerous settings. Several federal quality improvement programs have adopted these measures to reduce unnecessary admissions and readmissions by fostering improved care coordination across the healthcare system.

For this project, the Standing Committee evaluated seven newly submitted measures against NQF's standard evaluation criteria. The Committee recommended four measures for endorsement and did not recommend three measures. The Consensus Standards Approval Committee (CSAC) approved the Standing Committee's recommendations. The following four measures are endorsed:

- 3366 Hospital Visits after Urology Ambulatory Surgical Center Procedures
- 3449 Hospitalization for Ambulatory Care Sensitive Conditions for Dual Eligible Beneficiaries
- 3457 Minimizing Institutional Length of Stay
- 3470 Hospital Visits after Orthopedic Ambulatory Surgical Center Procedures

The following measures are not endorsed:

- 3443 All-Cause Emergency Department Utilization Rate for Medicaid Beneficiaries with Complex Care Needs and High Costs (BCNs)
- 3445 All-Cause Inpatient Admission Rate for Medicaid Beneficiaries with Complex Care Needs and High Costs (BCNs)
- 3456 Admission to an Institution from the Community

The body of this report briefly summarizes the measures under review; Appendix A provides detailed summaries of the Committee's discussion and ratings of the criteria for each measure.

Introduction

Avoiding preventable admissions has been a key focus of quality improvement efforts. NQF-endorsed performance measures are critical to supporting these improvement efforts. Avoidable admissions can be defined as those hospitalizations that could potentially be prevented if a person is given appropriate care in a community-based setting.[1] Avoidable admissions have long been considered a reflection of lack of access to care and poor quality of primary care.[2] Avoidable admissions to hospitals or other inpatient facilities, such as a skilled nursing facility, increase healthcare spending and can lower a person's quality of life. Given the potential to lower costs and improve person-centeredness,[3] measures of avoidable hospitalizations have proliferated in quality improvement programs and value-based purchasing, including alternative payment models.

Avoidable admissions and length of stay are critical outcomes to measure and improve. Evidence supports that many patients prefer to manage their conditions at home, rather than in an inpatient setting.[4] However, the recent focus on measuring avoidable hospitalizations has raised important questions and concerns about potential negative unintended consequences of the use of these measures. The best studied example may be the implications of the Hospital Readmissions Reduction Program (HRRP). The Affordable Care Act created the HRRP to incentivize hospitals to reduce readmissions by penalizing them financially if they have higher-than-expected risk-standardized 30-day readmission rates for selected conditions.[5] The HRRP has reduced readmissions,[6] but concerns have been raised about penalizing safety net providers and a potential increase in mortality.

To date, there is mixed evidence on the association of the HRRP and increased mortality. Recent studies by MedPAC and Khera et al.[7] did not reveal evidence for an increased risk of mortality after implementation of the HRRP. However, a recent study by Wadhera et al.[8] found an association between the implementation of readmissions measures in HRRP and 30-day mortality post-hospitalization for heart failure and pneumonia. Committee members noted that this could reflect patients not receiving needed care due to provider concerns about avoiding readmissions. This supports earlier work by Gupta et al.[9] demonstrating a potential relationship between implementation of the HRRP and an increase in heart failure mortality.

The need to improve on performance on this important quality issue while protecting patients from unintended consequences, such as limiting access to necessary care, requires that measures recommended for NQF endorsement be scientifically sound and appropriately applied. Balancing measures that monitor for potential negative unintended consequences should be considered. In this project, reducing readmissions while protecting access to care was a key theme of the Committee's review.

Penchansky and Thomas outlined access as a correlation of the characteristics and expectations of providers and patients[10] and outlined five A's of access to care: affordability, availability, accessibility, accommodation, and acceptability.[11] Some of these access challenges may reflect quality problems. Using the five A's of access model, providers may be more likely to be able to improve availability, acceptability, and accommodation. For example, an ambulatory surgery center (ASC) could improve post-discharge instructions and planning, and ensure patients have access to a nurse hotline if they

experience concerning symptoms after surgery. However, other challenges such as affordability and accessibility may be more immutable and linked to a person's social risk factors, which may be outside a provider's control.[12] For example, a provider cannot make patients buy a prescribed medication if they cannot afford it, nor can a provider control whether home and community-based services are available in the community.

NQF Portfolio of Performance Measures for All-Cause Admissions and Readmissions

The All-Cause Admissions and Readmissions Standing Committee (Appendix C) oversees NQF's portfolio of admissions and readmissions measures (Appendix B) that includes measures for all-cause and condition-specific measures. This portfolio contains 50 admission and readmission measures addressing numerous healthcare settings (Table 1).

Table 1. NQF Admissions and Readmissions Portfolio of Measures

	All-Cause	Condition-Specific
Hospital	5	14
Home health	4	0
Skilled nursing facility	4	0
Long-term care facility	1	0
Inpatient rehab facility	1	0
Inpatient psychiatric facility	1	0
Dialysis facility	2	0
Health plan	1	0
Population-based	4	11
Hospital outpatient/ambulatory surgery center	0	1
Integrated delivery system	1	0
Total	24	26

Additional measures are assigned to other portfolios. These include patient-reported outcome and transition-of-care measures (Patient Experience and Function), and a variety of condition-specific readmissions measures (Surgery and Perinatal).

All-Cause Admissions and Readmissions Measure Evaluation

On February 7, 2019, the All-Cause Admissions and Readmissions Standing Committee evaluated seven new measures against NQF's standard evaluation criteria.

Table 2. All-Cause Admissions and Readmissions Measure Evaluation Summary

	New	Total
Measures under consideration	7	7
Measures endorsed	4	4
Measures not recommended for endorsement	3	3
Reasons for not recommending	Importance – 0 Scientific Acceptability – 3 Overall Suitability – 0 Competing Measure – 0	

Comments Received Prior to Committee Evaluation

NQF solicits comments on endorsed measures on an ongoing basis through the Quality Positioning System (QPS). In addition, NQF solicits comments for a continuous 16-week period during each evaluation cycle via an online tool located on the project webpage. For this evaluation cycle, the commenting period opened on December 5, 2018 and closed on April 16, 2019. As of January 25, 2019, no comments were submitted. Therefore, the Committee did not consider any comments prior to the measure evaluation meeting.

Comments Received After Committee Evaluation

The continuous 16-week public commenting period with NQF member support closed on April 16, 2019. Following the Committee's evaluation of the measures under consideration, NQF received nine comments from four member organizations pertaining to the draft report and to the measures under consideration. All comments for each measure under consideration have been summarized in Appendix A.

Throughout the 16-week continuous public commenting period, NQF members had the opportunity to express their support ("support" or "do not support") for each measure submitted for endorsement consideration to inform the Committee's recommendations. Two NQF members provided their expressions of nonsupport on two of the measures (3366 *Hospital Visits after Urology Ambulatory Surgical Center Procedures* and 3470 *Hospital Visits after Orthopedic Ambulatory Surgical Center Procedures).* None of the seven measures under consideration received support from NQF members.

Overarching Issues

During the Standing Committee's discussion of the measures, several overarching issues emerged that were factored into the Committee's ratings and recommendations for multiple measures and are not repeated in detail with each individual measure.

Adjustment for Social Risk Factors

Appropriate adjustment to account for social risk has been an ongoing element of the Standing Committee's deliberations. Prior to 2015, NQF had a policy that prohibited the inclusion of social risk factors in the risk-adjustment models of NQF-endorsed measures. However, based on the findings of NQF's 2014 report, the NQF Board of Directors implemented a trial period during which measures could

be submitted for endorsement with social risk factors when the conceptual and statistical rationale justified their inclusion.

Adjusting for social risk factors remains a controversial issue. Proponents of adjustment argue that it is necessary to ensure a level playing field for providers in value-based purchasing programs and ensure access for patients, while opponents fear that adjusting the measures could mask disparities in care.

The Committee raised concerns that measure developers may be holding social risk factors to a higher standard for inclusion in the risk-adjustment model than clinical factors. Specifically, judging social risk factors by their ability to independently change the rankings of many providers or improve model performance on discrimination or calibration statistics may be too high of a bar. Committee members noted that in addition to considering if a factor changes model performance, developers should consider if there was an effect on outliers when a social risk factor was included.

The appropriateness of adjustment may depend on the context of a measure's use and the quality improvement program goal. Several Committee members noted that measures used for payment purposes may need to adjust for social risk factors, while measures for public reporting should not be adjusted to make differences transparent. However, the endorsement process supports measures for accountability applications broadly and does not distinguish between payment and public reporting applications.

When discussing the candidate measures, the Committee raised questions about the role of adjusting for social risk in protecting access to care. Adequate risk adjustment can be an important protection against selection bias. The Committee noted that without appropriate risk adjustment, including for social risk factors, providers or health plans could be disincentivized to accept more complex or vulnerable patients.

Finally, the Committee recommended that measure users proactively monitor negative consequences of not adjusting for social risk. One recommended strategy may be the implementation of patient-reported outcome measures that could monitor disparities by asking patients about their experience with care and whether they had access challenges.

Ensuring Access to the Appropriate Level of Care

There is a challenging relationship between access to care and admissions and readmissions measures. The Committee recognized that patients may prefer lower levels of care (for example, having a procedure performed at an ambulatory surgery center instead of in a hospital outpatient department or receiving home and community-based services rather than inpatient care). This can improve a person's quality of life by minimizing disruptions while also helping to lower healthcare spending. However, the Committee also recognized that admissions to a hospital or other inpatient facility can reflect an inability to access lower levels of care.

Access challenges may have varying root causes, stemming from either community characteristics, such as lack of providers in a community, or patient characteristics, such as a person not having health insurance, experiencing transportation challenges, being unable to afford a copay, or being unable to

take time off work for a medical appointment. Measurement must reflect the multidimensional nature of access and the varying causes of access challenges. Admission and readmission measures provide important but potentially blunt information that does not provide details on the underlying cause of the potentially avoidable admission or readmission. The Committee recognized the value of reducing avoidable admissions and readmissions but cautioned that the measures should be used in a way that does not limit access and prevent patients from getting needed care.

Candidate measures represented important outcomes that could improve through higher quality care but the ideal rates for these outcomes are not known and will never be zero. Committee members warned about artificial pressure to drive admission rates constantly lower and noted that caution must be taken to ensure that care is not stinted and patients receive needed and desired services. Value-based purchasing or alternative payment models already have financial incentives to avoid more costly inpatient care, and quality measures should be cautious of that incentive.

Additionally, the Committee cautioned that measurement can result in selection bias, specifically focusing on the potential threat to access from "cherry picking" or "lemon dropping" as providers or plans may be less willing to accept a more challenging patient who could negatively impact their results. For example, patients with complex social risk factors may be less likely to have a procedure at an ambulatory surgery center rather than a hospital outpatient department. The Committee considered another unintended consequence for patients: access to downstream providers. For example, a nursing home may decline to accept a hospitalized, complex patient with social risk who does not have a clear discharge plan. This could result in the patient having to stay in the hospital longer than necessary.

Committee members recommended that measure implementers consider approaches to mitigate negative consequences to patients. Admission measures could be included in programs with measures assessing balancing outcomes, such as patient experience and mortality. The Committee emphasized a need for patient-reported outcomes to ensure assumptions about quality and where people want to receive care are truly in line with the person's wishes and goals. The Committee also noted a need for robust protections within the measures themselves, such as appropriate inclusion and exclusion criteria and adequate risk-adjustment models.

Assessing the Impact of Data Variability Across States

The Committee recognized the challenges of the current state of measurement for Medicaid. They noted that the current lack of standardized and validated measures limits the comparability and, potentially, the usefulness of information that states gather through measurement. Additionally, Committee members noted that the candidate measures had important focus areas and represented important areas for improvement for the Medicaid or dual-eligible population. However, Medicaid benefits vary by state, and states have different definitions and eligibility requirements, leading to variability in the underlying population. This variation could potentially skew the sample and obscure true differences in performance.

The Committee recognized the need for better data but cautioned that the NQF endorsement process determines the suitability of a measure for accountability purposes—not just quality improvement. Committee members strongly questioned whether the variability in access to services and in the

underlying populations results in a true measurement of quality of care, or just simply differences in the underlying population. The Committee recognized the delicate balance between ensuring measures are available to help drive improvement and the potential for them to be used beyond voluntary efforts.

Finally, the Committee emphasized the limitations of administrative data. One critical challenge can be that data availability limits the ability to adequately risk adjust. For example, for some outcomes, functional status can be the most predictive risk factor, but administrative data currently contain limited functional status information. The Committee also noted the variation of data availability by state. Finally, the Committee encouraged CMS and state Medicaid agencies to work together to develop better data collection processes and to encourage routine, standardized data submission across states.

Summary of Measure Evaluation

The following summaries of the measure evaluation highlight the major issues that the Committee considered. Details of the Committee's discussion and ratings of the criteria for each measure are included in Appendix A. Because a quorum was not reached during the Committee's February 7 meeting, each criterion was discussed, and voting was completed later via survey (votes were collected via SurveyMonkey until a quorum of the Committee was reached. Quorum was the standard 66 percent of Committee members, or 14 of the 21 total). Committee members who did not attend reviewed the meeting recording and transcript prior to voting. However, if a measure did not pass a must-pass criterion, subsequent votes for remaining criteria are not captured in this report.

3366 Hospital Visits after Urology Ambulatory Surgical Center Procedures (YNHH/Yale Center for Outcomes Research and Evaluation): Endorsed

Description: Facility-level risk-standardized rate of acute, unplanned hospital visits within 7 days of a urology procedure performed at an ambulatory surgical center (ASC) among Medicare Fee-For-Service (FFS) patients aged 65 years and older. An unplanned hospital visit is defined as an emergency department (ED) visit, observation stay, or unplanned inpatient admission. **Measure Type**: Outcome; **Level of Analysis**: Facility; **Setting of Care**: Outpatient Services; **Data Source**: Claims, Enrollment Data

NQF 3366 is a measure of hospital visits after urology ambulatory surgical center (ASC) procedures. This measure captures information on whether a patient experienced an adverse event after ASC care. The developer provided a logic model demonstrating interventions that an ASC can undertake to prevent hospital stays including patient education, medication reconciliation, and ensuring high technical quality of surgery. The developer noted a measure performance range of 3.7 percent to 10.1 percent, with median measure performance of 5.8 percent. The Standing Committee agreed there was evidence to support that ambulatory survey centers could reduce a patient's risk of requiring a hospital visit after urology procedures as well as reduce a gap in performance across ASCs. The developer demonstrated measure score reliability in two ways: signal-to-noise ratio (SNR) analysis and split-sample. The Committee agreed that the measure demonstrated reliability, but members raised questions about the testing of the measure matching the specifications, as the developer limited testing to facilities with greater than or equal to 30 cases. Validity testing was conducted using face validity, which is acceptable for new measures submitted to NQF for an initial endorsment review. This measure uses a statistical risk-adjustment model with nine risk factors. Specifically, the measure uses a two-level hierarchical

logistic regression model to estimate ASC-level risk-standardized hospital visit rates (RSHVRs). With respect to the risk-adjustment model, the Standing Committee noted concerns with the low c-statistic (0.61) and lack of sociodemographic status (SDS) risk adjustment, but acknowledged that NQF does not define absolute thresholds. The Committee agreed that the measure is highly feasible to report given that it is a claims-based measure. Committee members did not identify issues related to the measure's potential use and usability. The Standing Committee could not reach consensus on the measure's validity at the in-person meeting and did not vote on an overall recommendation for endorsement at that time. At the post-comment call, the Committee discussed the additional measure testing and risk adjustment justification submitted by the developer and ultimately agreed that the measure passed validity and recommended it for endorsement.

3443 All-Cause Emergency Department Utilization Rate for Medicaid Beneficiaries with Complex Care Needs and High Costs (BCNs) (Centers for Medicare & Medicaid Services/Mathematica Policy Research [CMS/RTI]): Not Recommended

Description: All-cause emergency department (ED) utilization rate for adult Medicaid beneficiaries who meet BCN population eligibility criteria. The measure is calculated as the number of ED visits per 1,000 beneficiary months and is intended to be reported at the state level. For the purpose of this measure, the BCN population is defined as Medicaid beneficiaries who are age 18 to 64 during the lookback year (the 12 months prior to the measurement year) and the measurement year and have at least one inpatient admission and at least two chronic conditions, as defined by the Chronic Conditions Data Warehouse (CCW), during the lookback year. Beneficiaries dually enrolled in Medicaid and Medicare and beneficiaries who had fewer than 10 months of Medicaid eligibility in the lookback year are not included in the analytic sample because we did not have enough utilization data to include them in testing. We further limited the analytic file to beneficiaries that met the BCN definition criteria described above. **Measure Type**: Outcome; **Level of Analysis**: Population: Regional and State; **Setting of Care**: Emergency Department and Services; **Data Source**: Claims

NQF 3443 assesses all-cause emergency department utilization for Medicaid beneficiaries between 18 and 64 years old who meet the criteria of presenting complex care needs and high costs. This measure was developed with the intention of pairing it with NQF 3445. The Committee agreed there was sufficient evidence that the measured entity could influence the outcome. Specifically, the Committee noted that the developer cited several studies demonstrating that emergency department visits in complex patients could be reduced through improved care management and agreed that performance varied. The developer conducted signal-to-noise (SNR) reliability testing for this measure using Medicaid Analytic eXtract (MAX) data from 10 states. Committee members did not have any concerns about the reliability of the measure. However, the Committee raised a number of points under the validity subcriterion. The Committee noted that the developer assessed face validity systematically which met the testing requirement for a new measure and noted that the risk-adjustment model demonstrated adequate discrimination and calibration. However, the Committee expressed concerns that the variability of the underlying population could present a threat to validity. The Committee agreed that the measure is highly feasible to report, given that it is a claims-based measure. During the Use and Usability discussion, the Committee members raised concerns about the generalizability of the data and the impact that may have on the usefulness of the measure. The Committee did not recommend this

measure for endorsement due to concerns about the measure's validity. During the public comment period, the measure developer submitted a request for reconsideration of the Standing Committee's decision not to recommend this measure for endorsement. The Committee reviewed additional submitted materials and elected not to reconsider the measure because the validity concerns were not resolved to their satisfaction. However, they encouraged the developer to continue to test the measure with more data and to resubmit for a future cycle of work. The CSAC will review the request by the developer and the Committee's decision not to reconsider the measure. The result of the CSAC's review will be published as an addendum to this report once their deliberations are complete.

3445 All-Cause Inpatient Admission Rate for Medicaid Beneficiaries with Complex Care Needs and High Costs (BCNs) (CMS/RTI): Not Recommended

Description: All-cause inpatient admission rate for adult Medicaid beneficiaries who meet BCN population eligibility criteria. The measure is calculated as the number of inpatient admissions per 1,000 beneficiary months and is intended to be reported at the state level. For the purpose of this measure, the BCN population is defined as Medicaid beneficiaries who are age 18 to 64 during the lookback year (the 12 months prior to the measurement year) and the measurement year and have at least one inpatient admission and at least two chronic conditions, as defined by the Chronic Conditions Data Warehouse (CCW), during the lookback year. Beneficiaries dually enrolled in Medicaid and Medicare and beneficiaries who had fewer than 10 months of Medicaid eligibility in the lookback year are not included in the analytic sample because we did not have enough utilization data to include them in testing. We further limited the analytic file to beneficiaries that met the BCN definition criteria described above. **Measure Type**: Outcome; **Level of Analysis**: Population: Regional and State; **Setting of Care**: Inpatient/Hospital; **Data Source**: Claims

NQF 3445 measures an all-cause inpatient admissions rate for Medicaid beneficiaries between 18 and 64 years old who meet the criteria of presenting complex care needs and high costs. It was developed with the intention of pairing it with NQF 3443. The Committee agreed there was evidence that the measured entity could influence outcomes, citing evidence showing multiple interventions that could decrease inpatient utilization of complex patients. To demonstrate a performance gap, the developer cited both disparities in terms of race and ethnicity in performance for admission rates. The Committee also noted variation in performance across states. The developer provided conducted signal-to-noise (SNR) reliability testing using MAX data from 10 states. Committee members noted that the scores ranged from 0.95 to 0.99 and agreed that the measure was adequately reliable. The developer conducted convergent validity testing by examining the correlation between this measure and the Healthcare Effectiveness Data and Information Set (HEDIS) inpatient hospital utilization measure (IHU). However, the Committee raised concerns that the generalizability of the testing data threatened validity. The Committee agreed that the measure is highly feasible to report given that it is a claims-based measure. During the Use and Usability discussion, Committee members again raised concerns about the generalizability of the sample population to the larger Medicaid population and noted the potential for negative unintended consequences. The Committee did not recommend this measure for endorsement due to concerns about the measure's validity. During the public comment period, the measure developer submitted a request for reconsideration of the Standing Committee's decision not to recommend this measure for endorsement. The Committee reviewed additional submitted materials

and elected not to reconsider the measure because the validity concerns were not resolved to their satisfaction. However, they encouraged the developer to continue to test the measure with more data and to resubmit for a future cycle of work. The CSAC will review the request by the developer and the Committee's decision not to reconsider the measure. The result of the CSAC's review will be published as an addendum to this report once their deliberations are complete.

3449 Hospitalization for Ambulatory Care Sensitive Conditions for Dual Eligible Beneficiaries (CMS/RTI): Endorsed

Description: For dual eligible beneficiaries age 18 years and older, state-level observed and risk-adjusted rates of hospital admissions for ambulatory care sensitive conditions (ACSC) per 1,000 beneficiaries for ACSC by chronic and acute conditions. This measure has three rates reported as both observed and risk-adjusted rates:

- Chronic Conditions Composite
- Acute Conditions Composite
- Total (Acute and Chronic Conditions) Composite

The observed and risk-adjusted rates are stratified and reported for three populations: (1) community-dwelling home and community-based services (HCBS) users; (2) community-dwelling non-HCBS users; or, (3) non-community-dwelling (institutionalized) population.

This measure is planned for public reporting and quality improvement at the state level. This population health measure can help states understand the underlying quality of outpatient care, including home and community-based services provided to dual eligible beneficiaries for acute conditions, chronic conditions, and overall. The state-level measure can assess the quality of a breadth of outpatient services by providers that may not be linked to a single accountable healthcare facility. **Measure Type**: Composite; **Level of Analysis**: Population: Regional and State; **Setting of Care**: Home Care, Outpatient Services, Post-Acute Care; **Data Source**: Claims

NQF 3449 is a composite measure of hospitalizations for ambulatory care sensitive conditions for dual eligible beneficiaries. The developer provided evidence that improvement on this outcome requires early identification of complications from acute or chronic conditions and initiation of treatment or referral to treatment. Information on measure performance variation across states was also presented. The Standing Committee did not raise concerns related to the measure's importance to measure and report. Reliability was tested at the measure score level, which is an NQF requirement for composite measures. The Committee did not note any concerns about the reliability of the measure. The measure developer conducted empirical validity testing of both the overall composite measure score and the component measure scores. However, Committee members raised concerns about the validity of the measure. The Committee's concerns related to state variability in the covered population, the generaliziability of the tested Medicaid data to the population for which the measure will be deployed, and churn in the covered Medicaid population. The Committee agreed that the measure is highly feasible to report given that it is a claims-based measure. During the Use and Usability discussion, members highlighted that the potential for negative unintended consequences is lower given the measure's focus on assessing outcomes in a vulnerable population. The Standing Committee recommended this measure for endorsement.

3456 Admission to an Institution from the Community (CMS/RTI): Not Endorsed

Description: The number of managed long-term services and supports (MLTSS) plan enrollee admissions to an institution (nursing facility or intermediate care facility for individuals with intellectual disabilities [ICF/IID]) from the community that result in a short-term (1 to 20 days), medium-term (21 to 100 days), or long-term stay (greater than or equal to 101 days) during the measurement year per 1,000 enrollee months.

The following rates are reported across four age groups: 18-64, 65-74, 75-84, and 85 and older:

- Short-term Stay. The rate of admissions resulting in a short-term (1 to 20 days) stay per 1,000 MLTSS enrollee months.
- Medium-term Stay. The rate of admissions resulting in a medium-term (21 to 100 days) stay per 1,000 MLTSS enrollee months.
- Long-term Stay. The rate of admissions resulting in a long-term (greater than or equal to 101 days) stay per 1,000 MLTSS enrollee months.

This measure focuses on one critical outcome for the population of Medicaid beneficiaries enrolled in MLTSS plans—reducing avoidable admissions to institutions. The use of three rates reported by four age categories facilitates appropriate cross-plan comparisons by outcome and population and illuminates corresponding successes or opportunities for improvement. The use of multiple rates, instead of a single metric, aligns with the measure's proposed use for internal and external quality improvement. The measurement year is January 1 through December 31, i.e., is equivalent to the calendar year. **Measure Type**: Outcome; **Level of Analysis**: Health Plan; **Setting of Care**: Home Care, Inpatient/Hospital, Other, Post-Acute Care; **Data Source**: Claims, Enrollment Data

NQF 3456 assesses the number of managed long-term services and supports plan enrollee admissions that occur from the community to an institution at varying stay durations (i.e., short-, medium-, and long-term stays). The Committee agreed that there is a strong need for measures like this, but that the state-to-state variability in the MLTSS population could present challenges in determining if performance variation is due to differences in state performance or differences in the populations across states. Committee members noted that this measure may never reach zero, as there are appropriate admissions. The measure developer agreed, noting that like many outcome measures, the measure does not assume that a rate of zero is possible or desirable. Committee members agreed there was a gap in care.

The Committee noted that the results of the signal to noise analysis were sufficient for longer stays but showed more variability for shorter stay groups. The Committee discussed risk adjustment extensively. The measure is adjusted using age strata. The Standing Committee was not sure what the conceptual basis was to develop the strata presented by the developer. The measure developer indicated that evidence demonstrates a direct relationship between increased age and risk of institutional admission, and this relationship was supported empirically in the measure testing results. The proposed age strata were also reviewed and supported by a group of experts in risk adjustment and the technical expert panel that supported the development of the measure. The Committee suggested that stratification by clinical condition should be considered for this measure. The developer explained that it explored regression-based risk adjustment, but the rarity of outcome events made it impossible

to develop a robust model. The developer noted that one of the primary predictors of institutional admission is functional status. Although the developer tried to obtain functional status data from the plans that participated in testing, the health plans were unable to provide it in standardized formats, and such data are not routinely available in administrative data. Further, Committee members noted that the measure does not distinguish appropriate vs. inappropriate admissions to an institution from the community. Committee members were concerned that a lack of risk adjustment for the measure could set up incentives to "cherry pick/lemon drop" and noted that it is important not to set up incentives to avoid a higher risk population. Finally, Committee members noted that every state has its own nursing home level of care definition that affects rates of institutionalization, which affects the ability of the measure to be compared across health plans operating in different states. Committee members generally agreed that the measure is feasible.

Committee members noted that this measure may be more useful as a quality improvement tool than a publicly reported measure, and that data collected at this time could be used to help improve the measure. Committee members flagged concerns on unintended consequences, highlighting the risk of the measure causing people to lose access to HCBS. Finally, they noted the limited ability of the measure to compare across health plans due to the unevenness of access to HCBS. The Committee also noted general concerns about whether the measure is assessing quality or access and warned that driving down institutionalization may lead to lower overall quality outcomes for patients. The measure developer responded that there is strong evidence from a rigorous national evaluation of the 10-year Money Follows the Person Demonstration showing that people report higher quality of life when receiving long-term services in the community, rather than in institutional settings. The Standing Committee did not recommend this measure for endorsement due to concerns about the measure's validity.

3457 Minimizing Institutional Length of Stay (CMS/RTI): Endorsed

Description: The proportion of admissions to an institutional facility (e.g., nursing facility, intermediate care facility for individuals with intellectual disabilities [ICF/IID]) for managed long-term services and support (MLTSS) plan enrollees that result in successful discharge to the community (community residence for 60 or more days) within 100 days of admission. This measure is reported as an observed rate and a risk-adjusted rate. **Measure Type**: Outcome; **Level of Analysis**: Health Plan; **Setting of Care**: Home Care, Other, Post-Acute Care; **Data Source**: Claims, Enrollment Data

NQF 3457 assesses the number of managed long-term services and supports plan enrollees that are admitted to an institutional facility and who are subsequently discharged to the community. Many of the issues with this measure were discussed earlier during the summary of NQF 3456. The Committee agreed that the evidence for this measure is stronger than the companion measure NQF 3456. They noted that incentives currently exist in Medicaid managed long-term services and supports plans to keep patients out of long-term facilities. Generally, the Committee had no concerns with feasibility. During the use and usability discussion, Committee members noted the potential upstream unintended consequence; specifically, nursing homes may not accept patients without a clear discharge plan, leading to reduced access to care. The developer responded that MLTSS health plans are the accountable entity for this measure, not nursing homes. If MLTSS plans found that nursing homes

refused to accept their enrollees, the MLTSS health plan care coordinators on staff would have more incentive to ensure timely access to HCBS, or home-based post-acute care after a hospitalization, as an alternative to nursing home care. The Standing Committee recommended this measure for endorsement.

3470 Hospital Visits after Orthopedic Ambulatory Surgical Center Procedures (Yale New Haven Health Services Corporation/Center for Outcomes Research and Evaluation [YNHHSC/CORE]): Endorsed

Description: Facility-level risk-standardized rate of acute, unplanned hospital visits within 7 days of an orthopedic procedure performed at an ambulatory surgical center (ASC) among Medicare fee-for-service (FFS) patients aged 65 years and older. An unplanned hospital visit is defined as an emergency department (ED) visit, observation stay, or unplanned inpatient admission. **Measure Type**: Outcome; **Level of Analysis**: Facility; **Setting of Care**: Outpatient Services; **Data Source**: Claims

NQF 3470 assesses unplanned hospital visits among Medicare beneficiaries aged 65 years and older who underwent an orthopedic procedure performed at an ambulatory surgical center up to seven days prior. With respect to evidence, the developer provided a logic model demonstrating interventions that can be undertaken by ASC, including appropriate patient selection, patient education, medication reconciliation, and ensuring the technical quality of surgery. One Committee member inquired about patient selection, noting that some patients are more likely to have complications. In these instances, hospital care may be more appropriate than care delivered at an ambulatory surgical center. Committee members also noted the information provided on performance gap showed important outliers despite a narrow distribution. The developer noted that the reliability construct for this measure is similar to NQF 3366, but testing yielded slightly different results. The developer assessed the face validity of the measure. The measure uses a two-level hierarchical logistic regression model to estimate ASC-level risk-standardized hospital visit rates (RSHVRs). The Committee noted that the c-statistic was 0.67, and the risk-adjustment model demonstrated good calibration. The Committee raised several concerns about the risk-adjustment model. Specifically, the Committee was concerned that not including social factors, such as dual status, may incentivize clinicians to send patients who present one or more of the social risk factors to a hospital outpatient department in order to avoid measurement at an ASC. The Committee discussed unintended consequences associated with omitting certain factors from the risk-adjustment model. The technical expert panel (TEP) convened by the developer performed face validity. The TEP encouraged the measure developers to adjust for opioid history, tobacco, and obesity, as these factors are associated with adverse health effects and unintended readmissions following surgery. The Committee called for CMS to conduct continuous monitoring to identify and address any unintended consequences. The Committee agreed that the measure is highly feasible to report given that it is a claims-based measure. Committee members did not identify issues related to the measure's potential use and usability. The Committee discussed data adequacy, noting that there are important data elements worth capturing which are not necessarily reliable and/or valid (e.g., weight, hybrid data, etc.). The Standing Committee recommended this measure for endorsement.

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Appendix A: Details of Measure Evaluation

Rating Scale: H=High; **M**=Moderate; **L**=Low; **I**=Insufficient; **NA**=Not Applicable

Endorsed Measures

3366 Hospital Visits after Urology Ambulatory Surgical Center Procedures

Submission | Specifications

Description: Facility-level risk-standardized rate of acute, unplanned hospital visits within 7 days of a urology procedure performed at an ambulatory surgical center (ASC) among Medicare Fee-For-Service (FFS) patients aged 65 years and older. An unplanned hospital visit is defined as an emergency department (ED) visit, observation stay, or unplanned inpatient admission.

Numerator Statement: The outcome being measured is acute, unplanned hospital visits (ED visit, observation stay, or unplanned inpatient admission) occurring within 7 days of a urology procedure performed at an ASC.

Denominator Statement: The target population for this measure is Medicare FFS patients age 65 years and older, who have undergone a urology procedure in ASCs.

Exclusions: The measure excludes surgeries for patients without 7 or more days of continuous enrollment in Medicare FFS Parts A and B after the urology procedure. The measure excludes these patients to ensure all patients have full data available for outcome assessment.

Adjustment/Stratification: Statistical risk model

Level of Analysis: Facility

Setting of Care: Outpatient Services

Type of Measure: Outcome

Data Source: Claims, Enrollment Data

Measure Steward: Centers for Medicare & Medicaid Services (CMS)

STANDING COMMITTEE MEETING [02/07/2019]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence: 1b. Performance Gap)

1a. Evidence: **Y-17; N-0** 1b. Performance Gap: **H-0; M-12; L-5; I-0**

Rationale:

- This measure of hospital visits after urology ambulatory surgical center procedures captures adverse patient outcomes associated with ASC care and an important area for quality improvement.
- The developer provided a logic model demonstrating interventions that can be undertaken by ASC, including patient education, medication reconciliation, technical quality of surgery, and other ASC interventions to prevent unplanned hospital visits.
- The Standing Committee agreed there was evidence to support that ambulatory surgical centers could reduce a patient's risk of requiring a hospital visit after urology procedures. Such interventions include patient education, medication reconciliation, and the technical quality of surgery.

- Developers reported a measure performance range of 3.7 percent to 10.1 percent and a median measure performance of 5.8 percent. Moreover, developers noted a median odds ratio of 1.27 which would suggest that the odds of an unplanned hospital visit is 27 percent higher at a higher-risk ASC versus a lower-risk ASC. Committee members interpreted these results as generally indicative of an opportunity for improvement.

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2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria.</u>

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity

2a. Reliability: **H-0; M-10; L-5; I-0** 2b. Validity: **H-0; M-12; L-5; I-1**

<u>Rationale</u>:

- The developer demonstrated measure score reliability in two ways: signal-to-noise ratio (SNR) analysis and split-sample. The results of the split-sample ICC (2,1) were 0.45. The results of the signal to noise ratio (for facilities with >=30 cases) median reliability were 0.69.
- Committee members raised questions about testing of the measure matching the specifications as the developer limited testing to facilities with greater than or equal to 30 cases. Committee members expressed concerns about the potentially biased coefficients and risk adjustment results when low volume centers are excluded from reliability testing.
- Validity testing was conducted using face validity performed by a TEP. The TEP indicated strong support of face validity.
- This measure uses a statistical risk-adjustment model with nine risk factors. Specifically, the measure uses a two-level hierarchical logistic regression model to estimate ASC-level risk-standardized hospital visit rates (RSHVRs).
- With respect to the risk-adjustment model, developers conducted preliminary testing to determine whether sociodemographic factors at the patient-level are associated with the outcome of interest. The adjusted odds ratio output (1.3) suggested a strong association between dual-eligible status and the outcome of interest. As such, developers conducted a comparative analysis of two measures – one including dual status and one omitting dual status. The developers noted that their results suggest that dual status does not have a significant effect on hospital performance scores between the SDS-adjusted measure and the non SDS-adjustment and thus did not include dual status in the risk model.
- The Standing Committee noted concerns with the risk adjustment model's low c-statistic (0.61).
- The Committee generally agreed that the risk adjustment model is well-calibrated, based on the intercept term (-0.05) and slope term (0.98).

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3. Feasibility: H-14; M-3; L-0; I-0

(3a. Data generated during care; 3b. Electronic sources; and 3c. Data collection can be implemented (eMeasure feasibility assessment of data elements and logic)

<u>Rationale</u>:

- The Committee agreed the measure is highly feasible to report given that it is a claims-based measure.

4. Use and Usability

(4a. Use; 4a1. Accountability and transparency; 4a2. Feedback on the measure by those being measured and others; 4b. Usability; 4b1. Improvement; 4b2. The benefits to patients outweigh evidence of unintended negative consequences to patients)

4a. Use: **Y-17; N-0** *4b. Usability:* **H-1; M-6; L-6; I-4**

Rationale:

- Committee members did not identify issues related to the measure's potential use and usability.

5. Related and Competing Measures

- No related or competing measures noted.

6. Standing Committee Recommendation for Endorsement: **Yes-14; No-5**

7. Public and Member Comment

- Commenters raised concerns about the validity and usability of this measure.
- Under the validity subcriterion commenters questioned the lack of adjustment for social risk factors. Specifically, commenters questioned the developer's decision to test the impact of social risk factors after the clinical factors had been added to the model.
- The Committee agreed that the relationship between social risk factors and patient outcomes is an important area of emerging research. Risk adjustment, including adjustment for social risk factors, is essential to isolating true differences in provider quality. The Committee agreed that it is critical that developers examine the conceptual and empirical relationship between social risk factors and the measured outcome. The Committee recognized the opposing views on the appropriateness of adjusting measures for social risk factors and concerns from some stakeholders on making it transparent that differences in quality performance may be based on social risk factors. However, the Committee also recognized the need to maximize the predictive value of a risk-adjustment model and ensuring that providers serving vulnerable populations are not penalized unfairly.
- While the Committee generally accepted the findings of the analyses conducted by the developer, the Committee agreed that more work is needed to identify more robust data elements and methods to isolate and account for unmeasured clinical and social risk for patients. The Committee encouraged the developer to continue testing the risk-adjustment model with additional social risk factors to understand their independent contribution to explaining variation in patient outcomes.
- The Committee also noted the need for additional guidance on adjustment for social risk factors to support the fair evaluation of measures for NQF-endorsement. The Committee recommended that the Scientific Methods Panel and the Disparities Standing Committee provide guidance to the Standing Committees making endorsement decisions on methodologies to support a developer's decision to adjust or not adjust a measure for social risk and how a Standing Committee should consider a developer's decisions.

- Concerns about the usability of this measure related to the narrow range of performance across facilities. Commenters questioned if this measure gave useful information for accountability purposes.
- The Committee agreed that this measure demonstrated relatively limited variation across ambulatory surgery centers. However, the Committee believed that the measures provide important information on outliers despite a narrow distribution, and the odds ratios provided may indicate overall less than optimal performance on this measure.

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8. Consensus Standards Approval Committee (CSAC) Vote: Y-12; N-0 (6/5/2019)

Decision: Approved for endorsement

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9. Appeals

No Appeals received.

3449 Hospitalization for Ambulatory Care Sensitive Conditions for Dual Eligible Beneficiaries

Submission | Specifications

Description: For dual eligible beneficiaries age 18 years and older, state-level observed and risk-adjusted rates of hospital admissions for ambulatory care sensitive conditions (ACSC) per 1,000 beneficiaries for ACSC by chronic and acute conditions. This measure has three rates reported as both observed and risk-adjusted rates:

- Chronic Conditions Composite
- Acute Conditions Composite
- Total (Acute and Chronic Conditions) Composite

Theis observed and risk-adjusted rates isare stratified and reported for three populations: (1) community-dwelling home and community-based services (HCBS) users; (2) community-dwelling non-HCBS users; or, (3) non-community-dwelling (institutionalized) population.

This measure is planned for public reporting and quality improvement at the state level. This population health measure can help states understand the underlying quality of outpatient care, including home- and community-based services, provided to dual eligible beneficiaries for acute conditions, chronic conditions, and overall. The state-level measure can assess the quality of a breadth of outpatient services by providers that may not be linked to a single accountable healthcare facility.

Numerator Statement: Chronic Composite: Number of acute inpatient hospital admissions in the measurement year for diabetes short term complications, diabetes long term complications, uncontrolled diabetes, low-extremity amputation, chronic obstructive pulmonary disease (COPD), asthma, hypertension, and heart failure.

Acute Composite: Number of acute inpatient hospital admissions in the measurement year for bacterial pneumonia, urinary tract infection, cellulitis and pressure ulcers.

Total Composite: Sum of acute and chronic composites

Denominator Statement: Dual eligible adults age 18 years and older

Exclusions:

- See the numerator details section for exclusions from the individual composite indicators

- Hospitalizations for obstetrics
- Hospice
- Acute hospital transfers

Adjustment/Stratification: Statistical risk model

Level of Analysis: Population : Regional and State

Setting of Care: Home Care, Outpatient Services, Post-Acute Care

Type of Measure: Composite

Data Source: Claims

Measure Steward: Centers for Medicare and Medicaid Services

STANDING COMMITTEE MEETING [02/07/2019]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Y-17; N-0**; 1b. Performance Gap: **H-11; M-6; L-0; I-0;** 1c. Composite – Quality Construct and Rationale: **H-9; M-8; L-0; I-0**

Rationale:

- This is a composite measure of ambulatory sensitive conditions for dual-eligible beneficiaries. This measure is constructed from individual ambulatory care sensitive condition-specific measures. This composite measure provides an overall rate of hospitalization for ambulatory care sensitive conditions for dual eligible adults in the state, which could help states understand a more complete picture of the quality of outpatient care for dual eligible beneficiaries.
- The composite has three rates: chronic conditions, acute conditions, and total (combined chronic and acute conditions).
- The developer provided evidence that improvement on this outcome requires adequate outpatient care to identify complications from acute or chronic conditions. Early identification in an outpatient setting and initiation of treatment or referral to treatment is critical to avoiding inappropriate hospitalizations.
- The developer noted significant variation across states in performance with regard to risk adjusted total rate of hospitalization for community-dwelling HCBS population, non-HCBS population, and institutionalized populations.
- The Standing Committee agreed that there were actions states and localities could undertake to improve the outcome of this measure. The Standing Committee did not raise concerns related to the measure's importance to measure and report.

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2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity

2a. Reliability: **H-8; M-6; L-1; I-0** 2b. Validity: **H-6; M-8; L-1; I-0;** 2c. Composite construction: **H-1; M-14; L-0; I-0**

Rationale:

- Reliability testing was conducted using a signal to noise analysis (using a nonparametric method developed by Morris) to evaluate reliability for each composite rate for each strata: (1)

community-dwelling home and community-based services (HCBS) users, (2) community-dwelling non-HCBS users, or (3) non-community-dwelling (institutionalized) population.

- Data used for testing obtained from all 50 states and DC (October 2014 – September 2015)
- The results of the signal-to-noise ratio were:
    - Community-dwelling HCBS stratum: Mean reliability >0.89 for the acute, chronic, and total groups (ranging between 0.48-0.99)
    - Community-dwelling non-HCBS stratum: Mean reliability >0.94 for the acute, chronic, and total groups (ranging between 0.71-0.99)
    - Institutionalized stratum: Mean reliability >0.86 for the acute, chronic, and total groups (ranging between 0.34-0.99)
- The Committee did not note any concerns about the reliability of the measure.
- Empirical validity testing of both the overall composite measure score and the component measure scores was conducted.
- The developer calculated the Spearman rank correlation between each rate (acute, chronic, total) for each strata (HCBS, non-HCBS, institutionalized—a "within measure" analysis), and for selected rates/strata with four other measures (a similar dual-eligible FFS HCBS measure of hospitalization for ambulatory sensitive conditions and Medicare FFS readmission measures for AMI, heart failure, and COPD). The developer hypothesized that states that perform well on one rate (acute, chronic, and composite) are likely to perform well on the other rates, particularly for similar rates across each strata of beneficiaries (HCBS, non-HCBS, institutionalized).
- Additionally, the developer calculated the Spearman rank correlation between each component rate (acute and chronic) with the 10 components of a similar dual-eligible FFS HCBS measure of hospitalization for ambulatory sensitive conditions and with two other measures of hospitalization (for cellulitis and pressure ulcer).
- The risk-adjustment models included 95 risk factors for the acute component measure, 83 risk factors for the chronic component measure, and 106 risk factors for the overall composite measure.
    - The modeling methodology employed a two-step design, first using logistic regression to model the log-odds of having any qualifying ACSC admission during the measurement period, and the second using Poisson regression to model the total count of qualifying ACSC admissions experienced over the measurement period.
    - Model discrimination for stage one of the model was analyzed via the c-statistic. Values ranged from 0.661 to 0.851 in the development sample and from 0.661 to 0.854 in the validation sample.
    - To examine calibration of the modeling approach, developers developed risk-decile plots to compare observed vs. predicted values across rates/strata and also calculated observed-to-predicted ratios for various subgroup populations across rates/strata. The developers interpreted the results as demonstrating that the risk models are well-calibrated.
- The developer used the Cronbach's alpha statistic to assess internal consistency of the measure components. However, these were not calculated separately by rate/strata. Values ranged from 0.69 to 0.82. The developer also presented observed rates and overall percentages for each of the individual components that formed the acute and chronic components of the measure, although this was done at the state level rather than by strata.
- Committee members raised a number of concerns about the validity of the measure. Given that the measure includes Medicare and Medicaid dual eligible beneficiaries, the Committee was less concerned about state-to-state variability in the underlying population. Still, Committee

members noted that there may be variation in how aggressive a state is in terms of enrolling eligible populations.
- Committee members also raised concerns about excluding acute care transfers but given that the measure is specified at the state-level, the concerns were generally mitigated.

3. Feasibility: H-11; M-6; L-0; I-0

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)

Rationale:

- The Committee generally agreed the measure is highly feasible to report, given that it is a claims-based measure.

4. Use and Usability

4a. Use; 4a1. Accountability and transparency; 4a2. Feedback on the measure by those being measured and others; 4b. Usability; 4b1. Improvement; 4b2. The benefits to patients outweigh evidence of unintended negative consequences to patients)

4a. Use: **Y-17; N-0** *4b. Usability:* **H-3; M-12; L-0; I-2**

Rationale:

- The Committee agree that this measure was generally usable for state-wide reporting.

5. Related and Competing Measures

- No related or competing measures noted.

6. Standing Committee Recommendation for Endorsement: **Yes-17; No-0**

7. Public and Member Comment

- No public and member comments were received on this measure.

8. Consensus Standards Approval Committee (CSAC) Vote: Y-12; N-0 (6/5/2019)

Decision: Approved for endorsement

9. Appeals

No Appeals received.

3457 Minimizing Institutional Length of Stay

Submission | Specifications

Description: The proportion of admissions to an institutional facility (e.g., nursing facility, intermediate care facility for individuals with intellectual disabilities [ICF/IID]) for managed long-term services and support (MLTSS) plan enrollees that result in successful discharge to the community (community

residence for 60 or more days) within 100 days of admission. This measure is reported as an observed rate and a risk-adjusted rate.

Numerator Statement: The count of discharges from an institutional facility to the community that occurred within 100 days or less from admission and resulted in successful discharge to the community (community residence for 60 or more days).

Denominator Statement: New admissions to an institutional setting for MLTSS enrollees age 18 and older.

Exclusions: None.

Adjustment/Stratification: Statistical risk model

Level of Analysis: Health Plan

Setting of Care: Home Care, Other, Post-Acute Care

Type of Measure: Outcome

Data Source: Claims, Enrollment Data

Measure Steward: Centers for Medicare & Medicaid Services, Centers for Medicaid & CHIP Services

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STANDING COMMITTEE MEETING 2/9/2018

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Y-16; N-1;** 1b. Performance Gap: **H-4; M-11; L-1; I-1;**

Rationale:

- This is a measure of how well managed long-term services and supports (MLTSS) plans can minimize MLTSS enrollee length of stay in institutions.
- The developer notes that improvement on this outcome will require MLTSS plans to develop discharge plans in collaboration with nursing facility staff, and coordinate appropriate home and community based services to ensure a successful transition.
- The developer noted significant variation across health plan product lines. The risk adjusted median performance is 36.49 with a range of 0.0 to 65.88.
- The Committee agreed there is evidence to support this measure. They noted that incentives currently exist in Medicaid managed long-term services and supports plans to keep patients out of long-term facilities. The Committee agreed there is a performance gap for this measure.

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2. Scientific Acceptability of Measure Properties: The measure meets the Scientific Acceptability criteria

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity

2a. Reliability: **H-7; M-5; L-2; I-1** 2b. Validity: **H-3; M-9; L-2; I-1**

Rationale:

- Reliability was assessed at the measure score level. The developer used a signal-to-noise analysis supported by the Morris methodology.
- The developer provided clarification on the source of their testing data. There are no existing, nationally standardized datasets for Medicaid beneficiaries enrolled in MLTSS plans, which is the target population for this measure. Therefore, the developer worked directly with health plans to obtain enrollment and claims data needed to support measure testing. These data

represented four parent health plan organizations, and 14 different health plan product lines (HPPLs) from 10 states, located in geographically diverse regions of the country. Health plans are anticipated to calculate this measure utilizing their own data, similar to reporting for the Healthcare Effectiveness Data and Information Set (HEDIS) measures. The measure also specifies that only enrollees with both LTSS and medical benefits are eligible. This ensures that health plans should have access to information on both LTSS enrollment and services provided as well as institutional admissions.

- Average and plan-level SNRs reported: Plan SNRs ranged 0.63 to 0.99.
- The Committee noted the average reliability score (signal to noise) for this measure was high, and did not have any concerns with the reliability of the measure.
- The developer noted that this measure identifies new admissions, therefore they remove transfers from another institution (defined as a Medicaid or Medicare certified nursing facility or institutional care facility for individuals with intellectual disabilities) in order to correctly identify the first stay in a sequence of stays. Similarly, in a sequence where institutional stay #1 is followed by a hospital stay and then institutional stay #2, only the first stay is counted in the measure. Institutional stays that end in death are not counted in the measure, given these enrollees do not have an opportunity for successful discharge.
- The developer conducted score-level validity testing (construct validity) by comparing measure results with results from two other measures (#3456: Admission to an institution from the community and #3458: Successful transition after long-term institutional stay).
- Results of the analyses were generally as hypothesized:
    - There was a moderate, negative correlation between a measure of utilization of long-stay institutional care and performance on this measure of minimizing institutional length of stay.
    - There was an even stronger positive correlation between a measure of successful transition to the community after long-stay institutional stay and this measure of minimizing institutional length of stay (correlation= 0.89, p-value= 0.0005).
- The developer did include dual eligible status in the risk adjustment model for this measure, but did not include race and ethnicity, primarily due to data issues.
- The Committee inquired about the rationale for the 100-day cut point in the measure, noting that it is somewhat arbitrary. The developer noted that three months is a critical time frame in which individuals are more likely to lose their support services or housing. This timeframe is also when Medicare SNF benefits run out.
- A Committee member raised concerns about the method of selecting risk adjustment variables for the risk adjustment model. Selection of risk adjustment factors should be based on clinical input and a conceptual rationale. However, selection based on a stepwise approach, as used here, can be problematic as it allows for the selection of variables based primarily on statistical significance.
- A Committee member also noted the sample size was somewhat small, and another Committee member requested more information on whether the sample was representative of the LTSS population. The developer stated they did the best they could to ensure their sample matched the national LTSS population.

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3. Feasibility: H-9; M-4; L-3; I-1

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)

Rationale:

- Generally, the Committee had no concerns with feasibility, since the measure is calculated with claims data.

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4. Use and Usability

4a. Use; 4a1. Accountability and transparency; 4a2. Feedback on the measure by those being measured and others; 4b. Usability; 4b1. Improvement; 4b2. The benefits to patients outweigh evidence of unintended negative consequences to patients)

4a. Use: **Y-15; N-2** *4b. Usability:* **H-0; M-10; L-3; I-4**

Rationale:

- During the use and usability discussion, Committee members noted the potential upstream unintended consequence, specifically that implementation of this measure may incentivize nursing homes not to accept patients without a clear discharge plan, leading to reduced access to care.
- The Committee also noted patients with various issues (such as substance use or smoking history) already have trouble finding places in SNFs or rehabs because these facilities are being more selective of the type of patients they accept. Implementation of this measure could make discharge to SNFs from inpatient settings more difficult – potentially leading to longer hospital length of stay.
- The developer responded that MLTSS health plans are the accountable entity for this measure, not nursing homes, and if MLTSS plans found that nursing homes refused to accept their enrollees, the MLTSS health plan care coordinators on staff would have more incentive to ensure timely access to HCBS, or home-based post-acute care after a hospitalization, as an alternative to nursing home care.

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5. Related and Competing Measures

- No related or competing measures noted.

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6. Standing Committee Recommendation for Endorsement: **Y-12**; **N-5**

Rationale

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7. Public and Member Comment

- No public and member comments were received on this measure.

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8. Consensus Standards Approval Committee (CSAC) Vote: Y-12; N-0 (6/5/2019)

Decision: Approved for endorsement

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9. Appeals

No Appeals received.

3470 Hospital Visits after Orthopedic Ambulatory Surgical Center Procedures

Submission | Specifications

Description: Facility-level risk-standardized rate of acute, unplanned hospital visits within 7 days of an orthopedic procedure performed at an ambulatory surgical center (ASC) among Medicare fee-for-service (FFS) patients aged 65 years and older. An unplanned hospital visit is defined as an emergency department (ED) visit, observation stay, or unplanned inpatient admission.

Numerator Statement: The outcome being measured is acute, unplanned hospital visits (ED visit, observation stay, or unplanned inpatient admission) occurring within 7 days of an orthopedic procedure performed at an ASC.

Denominator Statement: The target population for this measure is Medicare FFS patients aged 65 years and older who have undergone an orthopedic procedure at an ASC.

Exclusions: The measure excludes surgeries for patients without 7 or more days of continuous enrollment in Medicare FFS Parts A and B after the surgery. The measure excludes these patients to ensure all patients have full data available for outcome assessment.

Adjustment/Stratification: Statistical risk model

Level of Analysis: Facility

Setting of Care: Outpatient Services

Type of Measure: Outcome

Data Source: Claims

Measure Steward: Centers for Medicare & Medicaid Services (CMS)

STANDING COMMITTEE MEETING [02/07/2019]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence, 1b. Performance Gap)

1a. Evidence: **Y-17; N-0**; 1b. Performance Gap: **H-0; M-14; L-2; I-1;**

Rationale:

- This measure of hospital visits after orthopedic ambulatory surgical center procedures captures adverse patient outcomes associated with ASC care and an important area for quality improvement.
- The developer provides a logic model demonstrating interventions that can be undertaken by ASC, including appropriate patient selection, patient education, medication reconciliation, technical quality of surgery, and other ASC interventions to prevent unplanned hospital visits.
- Committee members did not identify issues related to the measure's evidence.
- Developers reported a measure performance range of 1.6 percent to 4.4 percent and a median measure performance of 2.5 percent. Moreover, developers noted a median odds ratio of 1.22 that would suggest that the odds of an unplanned hospital visit are 22 percent higher at a higher-risk ASC versus a lower-risk ASC.
- Committee members noted the information provided on performance gap showed important outliers despite a narrow distribution.

2. Scientific Acceptability of Measure Properties: <u>The measure meets the Scientific Acceptability criteria</u>

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity

2a. Reliability: **H-0; M-11; L-3; I-1** 2b. Validity: **M-11; L-3; I-1**

<u>Rationale</u>:

- Score-level reliability was demonstrated in two ways: Signal-to-noise ratio (SNR) using the Adams method and split-sample interclass correlation coefficient (ICC) (2,1)
- The developer calculated the signal to noise to calculate the median reliability of 0.66 using two years of data.
- The split-sample ICC (2,1) was 0.25 demonstrating fair agreement, according to Landis and Koch classification.
- The Committee generally agreed that the reliability testing results demonstrated sufficient reliability of the measure score.
- The developer assessed the face validity of the measure.
- The measure uses a two-level hierarchical logistic regression model to estimate ASC-level risk-standardized hospital visit rates (RSHVRs). The model contains 29 risk factors: age, 27 comorbidity variables, and one surgical complexity variable.
- The Committee noted that the c-statistic was 0.67 and the risk adjustment model demonstrated good calibration.
- The inclusion of dual-eligible status as a risk factor presented little variability among providers and was ultimately not included in the risk adjustment model.
- The Committee raised several concerns about the risk adjustment model. Specifically, the Committee was concerned that not including SDS factors, such as duals status, may incentivize clinicians to send patients who present one or more of the SDS risk factors to a hospital outpatient department in order to avoid measurement at an ASC.
- The Committee discussed unintended consequences associated with omitting certain factors from the risk adjustment model. The TEP that performed face validity encouraged the developers to adjust for opioid history, tobacco, and obesity, as these factors are associated with adverse health effects and unintended readmissions following surgery. The Committee called for CMS (the measure's steward) to conduct continuous monitoring to identify and address any unintended consequences.
- The Committee discussed data adequacy, noting that there are important data elements that should be included in this measure that may not be available in administrative claims data (e.g. weight).

3. Feasibility: H-13; M-4; L-0; I-0

(3a. Clinical data generated during care delivery; 3b. Electronic sources; 3c.Susceptibility to inaccuracies/ unintended consequences identified 3d. Data collection strategy can be implemented)

<u>Rationale</u>:

- The Committee agreed the measure is highly feasible to report, given that it is a claims-based measure.

4. Use and Usability

4a. Use; 4a1. Accountability and transparency; 4a2. Feedback on the measure by those being measured and others; 4b. Usability; 4b1. Improvement; 4b2. The benefits to patients outweigh evidence of unintended negative consequences to patients)

4a. Use: **Y-17; N-0** *4b. Usability:* **H-0; M-8; L-4; I-5**

Rationale:

- Committee members did not identify issues related to the measure's potential use and usability.

5. Related and Competing Measures

- No related or competing measures noted.

6. Standing Committee Recommendation for Endorsement: **Yes-13; No-4**

7. Public and Member Comment

- Commenters raised concerns about the validity and usability of this measure.
- Under the validity subcriterion, commenters questioned the lack of adjustment for social risk factors. Specifically, commenters questioned the developer's decision to test the impact of social risk factors after the clinical factors had been added to the model.
- The Committee agreed that the relationship between social risk factors and patient outcomes is an important area of emerging research. Risk adjustment, including adjustment for social risk factors, is essential to isolating true differences in provider quality. The Committee agreed that it is critical that developers examine the conceptual and empirical relationship between social risk factors and the measured outcome. The Committee recognized the opposing views on the appropriateness of adjusting measures for social risk factors and concerns from some stakeholders on making it transparent that differences in quality performance may be based on social risk factors. However, the Committee also recognized the need to maximize the predictive value of a risk-adjustment model and ensuring that providers serving vulnerable populations are not penalized unfairly.
- While the Committee generally accepted the findings of the analyses conducted by the developer, the Committee agreed that more work is needed to identify more robust data elements and methods to isolate and account for unmeasured clinical and social risk for patients. The Committee encouraged the developer to continue testing the risk-adjustment model with additional social risk factors to understand their independent contribution to explaining variation in patient outcomes.
- The Committee also noted the need for additional guidance on adjustment for social risk factors to support the fair evaluation of measures for NQF-endorsement. The Committee recommended that the Scientific Methods Panel and the Disparities Standing Committee provide guidance to the Standing Committees making endorsement decisions on methodologies to support a developer's decision to adjust or not adjust a measure for social risk and how a Standing Committee should consider a developer's decisions.
- Concerns about the usability of this measure related to the narrow range of performance across facilities.

- The Committee agreed that this measure demonstrates relatively limited variation across ambulatory surgery centers. However, the Committee believed that this measure provides important information on outliers despite a narrow distribution and potentially overall less than optimal performance. Specifically, the Committee noted that the measure developer reported a measure performance range of 1.6 percent to 4.4 percent and a median measure performance of 2.5 percent. Moreover, developers noted a median odds ratio of 1.22 that would suggest that the odds of an unplanned hospital visit are 22 percent higher at a higher-risk ASC versus a lower-risk ASC.

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8. Consensus Standards Approval Committee (CSAC) Vote: Y-12; N-0 (6/5/2019)

Decision: Approved for endorsement

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9. Appeals

No Appeals received.

Measures Not Recommended

3443 All-Cause Emergency Department Utilization Rate for Medicaid Beneficiaries with Complex Care Needs and High Costs (BCNs)

Submission

Description: All-cause emergency department (ED) utilization rate for adult Medicaid beneficiaries who meet BCN population eligibility criteria. The measure is calculated as the number of ED visits per 1,000 beneficiary months and is intended to be reported at the state level.

For the purpose of this measure, the BCN population is defined as Medicaid beneficiaries who are age 18 to 64 during the lookback year (the 12 months prior to the measurement year) and the measurement year and have at least one inpatient admission and at least two chronic conditions, as defined by the Chronic Conditions Data Warehouse (CCW), during the lookback year. Beneficiaries dually enrolled in Medicaid and Medicare and beneficiaries who had fewer than 10 months of Medicaid eligibility in the lookback year are not included in the analytic sample because we did not have enough utilization data to include them in testing. We further limited the analytic file to beneficiaries that met the BCN definition criteria described above.

Numerator Statement: The number of ED visits in the measurement year among adult Medicaid beneficiaries who meet BCN population eligibility criteria.

Denominator Statement: Number of Medicaid-eligible months ("beneficiary months") among adult Medicaid beneficiaries who meet BCN population eligibility criteria.

Exclusions: N/A

Adjustment/Stratification: Statistical risk model

Level of Analysis: Population : Regional and State

Setting of Care: Emergency Department and Services

Type of Measure: Outcome

Data Source: Claims

Measure Steward: Centers for Medicare & Medicaid Services, Centers for Medicaid & CHIP Services

STANDING COMMITTEE MEETING [2/7/2019]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence: 1b. Performance Gap)

1a. Evidence: **Y-17; N-0** 1b. Performance Gap: **H-4; M-13; L-0; I-0**

Rationale:

- This measure of emergency department utilization for Medicaid beneficiaries with complex care needs and high costs (BCNs) assesses a heterogeneous population with disproportionately high use of inpatient and ED use.
- The developer noted that improvement on this outcome may involve strengthening beneficiaries' relationships with health care providers in the community, improved care coordination, and chronic disease management.
- The developer demonstrates an adjusted performance range of 109.5 admissions per 1,000 beneficiary months to 322.0 admissions per 1,000 beneficiary months.

- The Committee agreed there was evidence that the measured entity could influence the outcome. Specifically, the developer cited several studies demonstrating that emergency department visits in complex patients could be reduced through improved care management and agreed there was variation in performance. The Committee also noted that emergency department use at the population or plan level is directly related to the inability to access care in the community.
- The Committee generally agreed that there was a performance gap in the focus area of this measure.

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2. Scientific Acceptability of Measure Properties: <u>The measure does not meet the Scientific Acceptability criteria</u>

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity

2a. Reliability: **H-3; M-11; L-1; I-0** 2b. Validity: **H-0; M-3; L-8; I-4**

<u>Rationale</u>:

- The developer conducted signal-to-noise (SNR) reliability testing for this measure using MAX data from 10 states. Average signal-to-noise reliability estimate was 0.92 (ranging between 0.59 to 0.99 across the ten states in the sample).
- Committee members raise concerns about the measure's generalizability to all 50 states, given the representativeness of the data used in testing.
- The Committee raised several concerns under the validity sub-criterion. The Committee noted that the developer tested the validity of the measure using a face validity test. The Committee was concerned that only 11 out of the 17 TEP members responded to whether the measure was a good indicator of quality.
- The risk-adjustment approach was developed using data from 10 states. The risk-adjustment model included 69 risk factors. While the measure demonstrated adequate discrimination and calibration of the risk adjustment model, the Committee expressed concerns that the variability of the underlying patient population could present a threat to validity.
- The developer noted that they included all predictors that were theoretically associated with the measure, including those that were not statistically significant or "protective" in nature. The developer stated that in general, the risk factors associated with a lower adjusted risk of ED utilization reflected more serious conditions (e.g. colorectal cancer). This lower risk likely reflects higher substitution away from ED care towards inpatient care. Because BCN-1 will ultimately be paired with a measure of inpatient care, the developer believed it was important to include the "protective" risk factors in the BCN-1 risk adjustment model.
- The data set used to develop the measure is not necessarily representative of the country or the population that the measure is intended to be applied. Of the 50 states, 34 were excluded due to data issues.
- Further, the Committee discussed that there is significant variation in the eligible population for this measure due to the differences in the Medicaid populations between states. Thus, applying this measure to the heterogeneous Medicaid populations across states makes differences in measure performance across states difficult to interpret. Are the differences due to actual health system performance differences or are the differences due to underlying differences in the Medicaid populations? The inability for the developer to distinguish this brought into question the validity of the measure as currently constructed.

- Committee members did agree there are real differences in both performance and quality between states, but ultimately believed that the threats to validity were too strong and the measure did not pass this criterion.

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3. Feasibility: H-X; M-X; L-X; I-X

(3a. Data generated during care; 3b. Electronic sources; and 3c. Data collection can be implemented (eMeasure feasibility assessment of data elements and logic)

Rationale:

- The Standing Committee did not recommend this measure for endorsement due to concerns about the measure's validity. Because quorum was not reached during the meeting, each criterion was discussed and voting was completed later. Validity is a must-pass criterion; therefore, subsequent votes for remaining criteria are not captured.
- The Committee agreed the measure is feasible to report given that it is a claims-based measure. The Committee did note concerns with Medicaid churn since the measure is constructed to include patients who had coverage for ten months, and that may exclude a large number of people in some states.

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4. Use and Usability

(4a. Use; 4a1. Accountability and transparency; 4a2. Feedback on the measure by those being measured and others; 4b. Usability; 4b1. Improvement; 4b2. The benefits to patients outweigh evidence of unintended negative consequences to patients)

4a. Use: **Y-X; N-X** 4b. Usability: **H-X; M-X; L-X; I-X**

Rationale:

- The Standing Committee did not recommend this measure for endorsement due to concerns about the measure's validity. Because quorum was not reached during the meeting, each criterion was discussed and voting was completed later. Validity is a must-pass criterion; therefore, subsequent votes for remaining criteria are not captured.
- During the Use and Usability discussion, the Committee members raised concerns about the generalizability of the data and the impact that may have on the usefulness of the measure.

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5. Related and Competing Measures

- No related or competing measures noted.

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6. Standing Committee Recommendation for Endorsement: **Y-X**; **N-X**

Rationale

- The Standing Committee did not recommend this measure for endorsement due to concerns about the measure's validity. Because quorum was not reached during the meeting, each criterion was discussed and voting was completed later. Validity is a must-pass criterion; therefore, subsequent votes for remaining criteria are not captured.

7. Public and Member Comment

- The steward and developer of this measure submitted a request for reconsideration based on an inappropriate application of the validity subcriterion.
- The measure steward and developer responded to the Committee's concerns about the measures' validity. Specifically, they commented on the Committee's concern about differences in Medicaid populations across states, whether the measure was tested with a representative data sample, and the data quality.
- The measure steward and developer provided several clarifications regarding the differences in Medicaid populations across states. They recognized that state Medicaid programs vary substantially both in the covered populations and the quality of data reported to CMS. However, these variations are due to the design of Medicaid of federal-state partnership, and the developer raised concerns that the Committee's emphasis on state variation in Medicaid program created an unrealistic standard for validity.
- The steward and developer noted that they believe the measure was tested using a robust data sample for assessing measure performance. They noted the states providing data varied in location, geography, size, and delivery system (fee-for-service or managed care) while still providing high-quality data. Additionally, they commented that the differences across Medicaid programs due to eligibility policies, mix of delivery models, payment rates, and other features, make it challenging for any sample to be representative of all 50 states. The steward and developer commented that the goal of measure testing is to select a diverse group of states that have high-quality data and whose populations capture, for the key variables in question, the majority of the variation that also occurs within other states. They also clarified that the measure specifications were designed to maximize the likelihood that states could define the denominator population consistently.
- Finally, the steward and developer responded to the Committee's concerns about data quality. The developer worked to evaluate the quality of relevant data in all the states and selected those states whose data met our quality standards. Specifically, the states chosen for testing had indicators that aligned with national inpatient and emergency utilization benchmarks and did not have data anomalies that would raise analytic problems (such as high levels of missing data). Further, NQF has endorsed measures in the past that were tested with Medicaid data from the same data source. The measure steward and developer noted that they do not believe that state variation in data quality should be a key factor in determining suitability of Medicaid measures for endorsement as long as the data used for development is of sufficient quality. Additionally, they noted that even perfect data from all states will not change the fact that state Medicaid programs have differences in design and operational features.
- The Standing Committee reviewed the additional information submitted by the developer but elected not to reconsider (Y-4; N-14). The Committee generally agreed that the additional information did not adequately address their concerns. Committee members noted challenges with the data variability and said that a more standardized data collection approach was required for the measure to be ready for endorsement.
- Final disposition of the request for reconsideration is pending. This report will be updated after a final decision is rendered on the measure.

8. Consensus Standards Approval Committee (CSAC) Vote: N/A: Review of request for reconsideration pending.

3445 All-Cause Inpatient Admission Rate for Medicaid Beneficiaries with Complex Care Needs and High Costs (BCNs)

Submission

Description: All-cause inpatient admission rate for adult Medicaid beneficiaries who meet BCN population eligibility criteria. The measure is calculated as the number of inpatient admissions per 1,000 beneficiary months and is intended to be reported at the state level.

For the purpose of this measure, the BCN population is defined as Medicaid beneficiaries who are age 18 to 64 during the lookback year (the 12 months prior to the measurement year) and the measurement year and have at least one inpatient admission and at least two chronic conditions, as defined by the Chronic Conditions Data Warehouse (CCW), during the lookback year. Beneficiaries dually enrolled in Medicaid and Medicare and beneficiaries who had fewer than 10 months of Medicaid eligibility in the lookback year are not included in the analytic sample because we did not have enough utilization data to include them in testing. We further limited the analytic file to beneficiaries that met the BCN definition criteria described above.

Numerator Statement: The sum of unique inpatient admissions and observation stays in the measurement year among adult Medicaid beneficiaries who meet BCN population eligibility criteria.

Denominator Statement: Number of Medicaid-eligible months ("beneficiary months") among adult Medicaid beneficiaries who meet BCN population eligibility criteria.

Exclusions: Not applicable

Adjustment/Stratification: Statistical risk model

Level of Analysis: Population: Regional and State

Setting of Care: Inpatient/Hospital

Type of Measure: Outcome

Data Source: Claims

Measure Steward: Centers for Medicare & Medicaid Services, Centers for Medicaid & CHIP Services

STANDING COMMITTEE MEETING [2/7/2019]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence: 1b. Performance Gap)

1a. Evidence: **Y-17; N-0** 1b. Performance Gap: **H-4; M-13; L-0; I-0**

Rationale:

- The Committee agreed that the issues raised for #3443 are similar to the issues for #3445.
- The Committee agreed there was evidence the measure entity could influence the outcome, citing evidence showing multiple interventions that could decrease inpatient utilization of complex patients with appropriate managed care.

- To support the evidence of a performance gap, the developers cited both disparities in terms of race and ethnicity in performance for admission rates.
- The Committee also noted variation in performance across states.

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2. Scientific Acceptability of Measure Properties: <u>The measure does not meet the Scientific Acceptability criteria</u>

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity

2a. Reliability: **H-3; M-12; L-0; I-0** 2b. Validity: **H-0; M-6; L-7; I-2**

<u>Rationale</u>:

- The developer conducted signal-to-noise (SNR) reliability testing using MAX data from 10 states. Committee members noted the scores ranged from 0.95 to 0.99 and agreed that the measure demonstrated adequate reliability testing.
- The developer conducted convergent validity testing by examining the correlation between this measure and the HEDIS inpatient hospital utilization measure (IHU).
- The Committee raised a number of points about the validity of this measure. The data set used to develop the measure is not necessarily representative of the country or the population that the measure is intended to be applied. Of the 50 states, 34 were excluded due to data issues.
- Further, the Committee discussed the significant variation in the eligible population for this measure between states – due to the differences in the Medicaid populations between states. Thus, applying this measure to the heterogeneous Medicaid populations across states makes differences in measure performance across states difficult to interpret. Are the differences due to actual health system performance differences or are the differences due to underlying differences in the Medicaid populations? The inability for the developer to distinguish this brought into question the validity of the measure as currently constructed.
- Committee members did agree there are real differences in both performance and quality between states, but ultimately believed that there were significant threats to validity and the measure did not pass this criterion. Therefore, the voting on the remaining criteria was suspended.

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3. Feasibility: H-X; M-X; L-X; I-X

(3a. Data generated during care; 3b. Electronic sources; and 3c. Data collection can be implemented (eMeasure feasibility assessment of data elements and logic)

<u>Rationale</u>:

- The Standing Committee did not recommend this measure for endorsement due to concerns about the measure's validity. Because quorum was not reached during the meeting, each criterion was discussed and voting was completed later. Validity is a must-pass criterion; therefore, subsequent votes for remaining criteria are not captured.
- The Committee agreed the measure is highly feasible to report, given that it is a claims-based measure.

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4. Use and Usability

(4a. Use; 4a1. Accountability and transparency; 4a2. Feedback on the measure by those being measured and others; 4b. Usability; 4b1. Improvement; 4b2. The benefits to patients outweigh evidence of unintended negative consequences to patients)

4a. Use: **Y-X; N-X** 4b. Usability: **H-X; M-X; L-X; I-X**

Rationale:

- The Standing Committee did not recommend this measure for endorsement due to concerns about the measure's validity. Because quorum was not reached during the meeting, each criterion was discussed and voting was completed later. Validity is a must-pass criterion; therefore, subsequent votes for remaining criteria are not captured.
- During the Use and Usability discussion, the Committee members again raised concerns about the generalizability of the data and noted the potential for negative unintended consequences.

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5. Related and Competing Measures

- No related or competing measures noted.

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6. Standing Committee Recommendation for Endorsement: **Y-X**; **N-X**

Rationale

- The Standing Committee does not recommend this measure for endorsement due to concerns about the measure's validity. Because quorum was not reached during the meeting, each criterion was discussed and voting was completed later. Validity is a must-pass criterion; therefore, subsequent votes for remaining criteria are not captured.

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7. Public and Member Comment

- The steward and developer of this measure submitted a request for reconsideration based on an inappropriate application of the validity subcriterion.
- The measure steward and developer responded to the Committee's concerns about the measures' validity. Specifically, they commented on the Committee's concern about differences in Medicaid populations across states, whether the measure was tested with a representative data sample, and the data quality.
- The measure steward and developer provided several clarifications regarding the differences in Medicaid populations across states. They recognized that state Medicaid programs vary substantially both in the covered populations and the quality of data reported to CMS. However, these variations are due to the design of Medicaid of federal-state partnership, and the developer raised concerns that the Committee's emphasis on state variation in Medicaid program created an unrealistic standard for validity.
- The steward and developer noted that they believe the measure was tested using a robust data sample for assessing measure performance. They noted the states providing data varied in location, geography, size, and delivery system (fee-for-service or managed care) while still providing high-quality data. Additionally, they commented that the differences across Medicaid programs due to eligibility policies, mix of delivery models, payment rates, and other features, make it challenging for any sample to be representative of all 50 states. The steward and developer commented that the goal of measure testing is to select a diverse group of states that have high-quality data and whose populations capture, for the key variables in question, the majority of the variation that also occurs within other states. They also clarified that the

measure specifications were designed to maximize the likelihood that states could define the denominator population consistently.

- Finally, the steward and developer responded to the Committee's concerns about data quality. The developer worked to evaluate the quality of relevant data in all the states and selected those states whose data met our quality standards. Specifically, the states chosen for testing had indicators that aligned with national inpatient and emergency utilization benchmarks and did not have data anomalies that would raise analytic problems (such as high levels of missing data). Further, NQF has endorsed measures in the past that were tested with Medicaid data from the same data source. The measure steward and developer noted that they do not believe that state variation in data quality should be a key factor in determining suitability of Medicaid measures for endorsement as long as the data used for development is of sufficient quality. Additionally, they noted that even perfect data from all states will not change the fact that state Medicaid programs have differences in design and operational features.
- The Standing Committee reviewed the additional information submitted by the developer but elected not to reconsider (Y-4; N-14). The Committee generally agreed that the additional information did not adequately address their concerns. Committee members noted challenges with the data variability and a more standardized data collection approach was required for the measures to be ready for endorsement.
- Final disposition of the request for reconsideration is pending. This report will be updated after a final decision is rendered on the measure.

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8. Consensus Standards Approval Committee (CSAC) Vote: N/A: Review of request for reconsideration pending.

3456 Admission to an Institution from the Community

Submission

Description: The number of managed long-term services and supports (MLTSS) plan enrollee admissions to an institution (nursing facility or intermediate care facility for individuals with intellectual disabilities [ICF/IID]) from the community that result in a short-term (1 to 20 days), medium-term (21 to 100 days), or long-term stay (greater than or equal to 101 days) during the measurement year per 1,000 enrollee months.

The following rates are reported across four age groups: 18-64, 65-74, 75-84, and 85 and older:

- Short-term Stay. The rate of admissions resulting in a short-term (1 to 20 days) stay per 1,000 MLTSS enrollee months.
- Medium-term Stay. The rate of admissions resulting in a medium-term (21 to 100 days) stay per 1,000 MLTSS enrollee months.
- Long-term Stay. The rate of admissions resulting in a long-term (greater than or equal to 101 days) stay per 1,000 MLTSS enrollee months.

This measure focuses on one critical outcome for the population of Medicaid beneficiaries enrolled in MLTSS plans – reducing avoidable admissions to institutions. The use of three rates reported by four age categories facilitates appropriate cross-plan comparisons by outcome and population, and illuminates

corresponding successes or opportunities for improvement. The use of multiple rates, instead of a single metric, is aligned with the measure's proposed use for internal and external quality improvement.

*The measurement year is January 1 through December 31, i.e., is equivalent to the calendar year.

Numerator Statement: Number of admissions to an institution (nursing facility or ICF/IID) during the measurement year. Admissions are divided and reported in three categories:

- Admissions that result in a short-term stay (1 to 20 days)
- Admissions that result in a medium-term stay (21 to 100 days)
- Admissions that result in a long-term stay (greater than or equal to 101 days)

Denominator Statement: Number of enrollee months for MLTSS enrollees age 18 and older where the enrollee was residing in the community.

Exclusions: Exclude the month that an enrollee dies, and any subsequent months of enrollment, from the measure denominator.

Adjustment/Stratification: Stratification by risk category/subgroup

Level of Analysis: Health Plan

Setting of Care: Home Care, Inpatient/Hospital, Other, Post-Acute Care

Type of Measure: Outcome

Data Source: Claims, Enrollment Data

Measure Steward: Centers for Medicare & Medicaid Services, Centers for Medicaid & CHIP Services

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STANDING COMMITTEE MEETING [2/7/2019]

1. Importance to Measure and Report: The measure meets the Importance criteria

(1a. Evidence: 1b. Performance Gap)

1a. Evidence: **Y-15; N-2** 1b. Performance Gap: **H-2; M-12; L-2; I-1**

Rationale:

- This measure evaluates the number of MLTSS enrollee admissions to an institution (nursing facility or intermediate care facility for individuals with intellectual disabilities [ICF/IID]) from the community that result in a short-term (less than or equal to 20 days), medium-term (21 to 100 days), or long-term stay (greater than or equal to 101 days) during the measurement year. Additionally, the measure is reported in four age groups: 18-64, 65-74, 75-84, and 85 and older.
- The developer noted that improvement on this outcome will require timely access to high quality services and effective care coordination to individuals providing LTSS in community settings.
- The Committee agreed there is a strong need for measures similar to this, but they raised concerns that the state-to-state variability in the MLTSS population could present challenges. The Committee noted that home and community based services are important in preventing premature or unnecessary institutionalization, and there is a strong need for measures similar to this, but that the variability in the data collection and reporting across states presents challenges.
- The Committee had concerns on the evidence for this measure, noting that while it met the NQF criteria for evidence for an outcome – there is at least one intervention a health plan can do to influence the outcome – there are also concerns regarding the measure concept.

- Conceptually, the Committee struggled with this measure focus area. Specifically, Committee members noted that this measure may never reach zero as there are appropriate admissions, the measure does not meaningfully differentiate between appropriate admissions and avoidable admissions, and the measure focuses on a population in need of services. For these reasons, assuming that all admissions for this population represent poor quality may be problematic.
- The measure developer agreed with this, noting that like many outcome measures, the measure does not assume that a rate of zero is possible or desirable. The measure developer noted the measure is intended to focus on unnecessary admissions, an outcome that matters to consumers and families, and that the measure is not intended to be used to ration care but to deliver appropriate care in the community
- Committee members agreed there was a gap in care.

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2. Scientific Acceptability of Measure Properties: <u>The measure does not meet the Scientific Acceptability criteria</u>

(2a. Reliability - precise specifications, testing; 2b. Validity - testing, threats to validity

2a. Reliability: **H-1; M-11; L-3; I-0** 2b. Validity: **H-1; M-1; L-9; I-4**

<u>Rationale</u>:

- Reliability was assessed at the measure score level. Specifically, signal-to-noise analysis using the Morris method. HPPLs with 10 or fewer outcome events (i.e. admissions) were excluded based on CMS standards; note that this testing is not aligned with the measure specifications, which do not identify a minimum case volume. The developer clarified that this was in order to be consistent with CMS's criteria for public sharing of results. Additionally, they noted they did not include this in the measure specifications in order to allow state Medicaid agencies to apply their own criteria for minimum events as appropriate.
- The Committee noted the results of the signal to noise analysis was good for longer stays but showed more variability for shorter stay groups.
- The Committee discussed the risk adjustment approach extensively. The measure is adjusted using an age stratification. The Standing Committee was not clear what the conceptual basis was to develop the strata presented by the developer. In response, the measure developer indicated that evidence demonstrates a direct relationship between increased age and risk of institutional admission, and this relationship was supported empirically in the measure testing results. The proposed age strata were also reviewed and supported by a group of experts in risk adjustment and the TEP that supported the measure's development.
- The Committee expressed concern on the lack of risk adjustment given the heterogeneity of the underlying population. The Committee suggested that stratification by clinical condition should be considered for this measure. The developer explained that regression-based risk-adjustment was explored, but it was not possible to develop a robust model due to the rarity of outcome events. The developer noted one of the primary predictors of institutional admission is functional status; although they tried to obtain functional status data from the plans that participated in testing, the health plans were unable to provide it in standardized formats, and such data are not routinely available in administrative data.
- Since statistical risk adjustment is not included in this measure, Committee members questioned if the measure should be used to compare performance across plans. They were concerned that the measure would not be able to detect differences in measure performance as opposed to differences in case mix.

- Committee members were concerned that a lack of risk adjustment for the measure could set up incentives to "cherry pick".
- The Committee noted the measure does not distinguish appropriate vs. inappropriate admissions to an institution from the community.
- Finally, Committee members noted every state has its own nursing home level of care definition that affects rates of institutionalization, which affects the ability of the measure to be compared across health plans operating in different states. Committee members noted that this measure may be better suited for quality improvement within a state.
- Due to the concerns raised about the variability of the data, missing data, lack of statistical risk adjustment, potential inability to measure meaningful differences, and the lack of meaningful data on functional status, the Committee did not pass the measure on validity.

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3. Feasibility: H-X; M-X; L-X; I-X

(3a. Data generated during care; 3b. Electronic sources; and 3c. Data collection can be implemented (eMeasure feasibility assessment of data elements and logic)

Rationale:

- The Standing Committee did not recommend this measure for endorsement due to concerns about the measure's validity. Because quorum was not reached during the meeting, each criterion was discussed and voting was completed later. Validity is a must-pass criterion; therefore, subsequent votes for remaining criteria are not captured.
- Committee members generally agreed the measure is feasible.

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4. Use and Usability

(4a. Use; 4a1. Accountability and transparency; 4a2. Feedback on the measure by those being measured and others; 4b. Usability; 4b1. Improvement; 4b2. The benefits to patients outweigh evidence of unintended negative consequences to patients)

4a. Use: **Y-X; N-X** *4b. Usability:* **H-X; M-X; L-X; I-X**

Rationale:

- The Standing Committee did not recommend this measure for endorsement due to concerns about the measure's validity. Because quorum was not reached during the meeting, each criterion was discussed and voting was completed later. Validity is a must-pass criterion; therefore, subsequent votes for remaining criteria are not captured.
- Committee members noted that this measure may be more useful as a quality improvement tool than a publicly reported measure, and that data collected at this time could be used to help improve the measure. The Committee had a number of concerns with the measure's use accountability applications.
- Committee members flagged concerns on unintended consequences, highlighting the risk of limiting access to care or HCBS.
- Committee members noted the limited ability of the measure to compare across health plans due to the unevenness of access to HCBS. Finally, they noted general concerns about whether the measure is assessing quality or access, noting that many rural areas simply do not have available home and community based services, and noted that driving down institutionalization may end up leading to lower quality outcomes for patients.
- The measure developer responded that there is strong evidence from a rigorous national evaluation of the 10-year Money Follows the Person Demonstration demonstrating that people

report higher quality of life when receiving long-term services in the community, rather than in institutional settings.

5. Related and Competing Measures

- No related or competing measures noted.

6. Standing Committee Recommendation for Endorsement: **Y-X**; **N-X**

Rationale

- The Standing Committee does not recommend this measure for endorsement due to concerns about the measure's validity. Because quorum was not reached during the meeting, each criterion was discussed and voting was completed later. Validity is a must-pass criterion; therefore, subsequent votes for remaining criteria are not captured.

7. Public and Member Comment

- The measure developer provided several clarifications about the measure and the Standing Committee's deliberations on it. First, the developer noted that the intention of the measure is to reduce unnecessary admissions to nursing homes and other facilities by delivering appropriate long-term services and supports in the community. The developer commented that this concept is important to patients and families and that MLTSS plans can reduce unnecessary admissions by increasing the use and quality of home and community-based services through person-centered assessment, care planning, and care coordination. The developer agreed that a rate of zero on this measure is not desirable or possible but that the measure's intent is to gauge the strength and performance of health plans' ability to provide timely access to high-quality HCBS, not discourage the use of all institutional care.
- Additionally, the developer clarified that the measure is designed to compare performance of MLTSS plans within states, not across them and that this may address some of the Committee's concerns about variation among states in data availability and benefit design. The developer noted the measure is specified at the health plan level of analysis and would allow each state to compare the performance of the MLTSS plans with which they are contracting. In addition, the measure will give beneficiaries the chance to compare plan performance when choosing plans in which to enroll.
- Thirdly, the developer provided clarifications on the measure's risk-adjustment strategy. Based on the recommendations of its risk-adjustment workgroup and other experts, the developer adopted an age-stratification approach to risk adjustment. They believe this is the best option for this measure in that it provides an easily understandable method for reporting plan performance across relevant age groups.
- Finally, the developer provided a response to the Committee's concerns about lowering quality and access. The developer noted that in in most states Medicaid beneficiaries enrolled in managed care plans, including MLTSS plans, are required to enroll in such plans to receive services. Mandatory enrollment does not eliminate the potential for plans to avoid high-risk enrollees (that is, to cherry-pick), but it greatly reduces their ability to engage in such behavior. Additionally, the developer notes that this measure could help identify areas were HCBS services are in short supply, and MLTSS plans can use several proven strategies to improve access to HCBS, thereby improving their performance on this measure. Moreover, the developer notes that lowering rates of institutionalization should not be assumed to lower quality of outcomes

and notes that the evidence does not support the assumption that institutionalization has uniformly better effects than HCBS. This measure would allow for within-state plan comparisons that could help states identify best practices in balancing access to HCBS with access to institutions.

- The Committee noted their appreciation for the clarifying comments but ultimately agreed with their decision to not recommend the measure for endorsement.

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8. Consensus Standards Approval Committee (CSAC) Vote: Y-12; N-0 (6/5/2019)

Decision: Not approved for endorsement

Appendix B: All-Cause Admissions and Readmissions Portfolio—Use in Federal Programs[a]

NQF #	Title	Finalized in Federal Programs: Finalized as of January 5, 2019
0171	Acute Care Hospitalization During the First 60 Days of Home Health	Home Health Quality Reporting, Home Health Value Based Purchasing
0173	Emergency Department Use without Hospitalization During the First 60 Days of Home Health	Home Health Quality Reporting, Home Health Value Based Purchasing
0275	Chronic Obstructive Pulmonary Disease (COPD) or Asthma in Older Adults Admission Rate (PQI 5)	Medicare Shared Savings Program, Medicaid
0277	Heart Failure Admission Rate (PQI 8)	Medicare Shared Savings Program, Medicaid
0330	Hospital 30-day, all-cause, risk-standardized readmission rate (RSRR) following heart failure (HF) hospitalization	Hospital Inpatient Quality Reporting, Hospital Readmission Reduction Program
0505	Hospital 30-day all-cause risk-standardized readmission rate (RSRR) following acute myocardial infarction (AMI) hospitalization.	Hospital Inpatient Quality Reporting, Hospital Readmission Reduction Program
0506	Hospital 30-day, all-cause, risk-standardized readmission rate (RSRR) following pneumonia hospitalization	Hospital Inpatient Quality Reporting, Hospital Readmission Reduction Program
1551	Hospital-level 30-day, all-cause risk-standardized readmission rate (RSRR) following elective primary total hip arthroplasty (THA) and/or total knee arthroplasty (TKA)	Hospital Inpatient Quality Reporting, Hospital Readmission Reduction Program, Hospital Compare
1891	Hospital 30-Day, All-Cause, Risk-Standardized Readmission Rate (RSRR) following Chronic Obstructive Pulmonary Disease (COPD) Hospitalization	Hospital Inpatient Quality Reporting, Hospital Readmission Reduction Program, Hospital Compare
1768	Plan All-Cause Readmissions (PCR)	Medicare Part C Star Rating, Medicaid, Qualified Health Plan (QHP) Quality Rating System (QRS)
1789	Hospital-Wide All-Cause Unplanned Readmission Measure (HWR)	Hospital Inpatient Quality Reporting, Medicare Shared Savings Program, Hospital Compare, Merit-Based Incentive Payment System (MIPS) Program

[a] Per CMS Measures Inventory Tool as of February 25, 2019

NQF #	Title	Finalized in Federal Programs: Finalized as of January 5, 2019
2380	Rehospitalization During the First 30 Days of Home Health	Home Health Quality Reporting
2496	Standardized Readmission Ratio	End Stage Renal Disease-Quality Incentive Program
2502	All-Cause Unplanned Readmission Measure for 30 Days Post Discharge from Inpatient Rehabilitation Facilities (IRF)	Inpatient Rehabilitation Facility Quality Reporting
2505	Emergency Department Use without Hospital Readmission During the First 30 Days of Home Health	Home Health Quality Reporting
2510	Skilled Nursing Facility 30-Day All-Cause Readmission Measure	Skilled Nursing Facility Value-Based Purchasing
2512	30-Day All Cause Post Long-Term Care Hospital (LTCH) Discharge Hospital Readmission Measure	Long-term Care Hospital Quality Reporting
2515	Hospital 30-day, all-cause, unplanned, risk-standardized readmission rate (RSRR) following coronary artery bypass graft (CABG) surgery	Hospital Inpatient Quality Reporting, Hospital Readmission Reduction Program, Hospital Compare
2539	Facility 7-Day Risk-Standardized Hospital Visit Rate after Outpatient Colonoscopy	Hospital Outpatient Quality Reporting, Ambulatory Surgical Center Quality Reporting, Hospital Compare
2860	Thirty-day all-cause unplanned readmission following psychiatric hospitalization in an inpatient psychiatric facility (IPF)	Inpatient Psychiatric Facility Quality Reporting
2879	Hybrid Hospital-Wide Readmission (HWR) Measure with Claims and Electronic Health Record Data	Hospital Compare, Hospital Inpatient Quality Reporting
2886	Risk-Standardized Acute Admission Rates for Patients with Heart Failure	Medicare Shared Savings Program
2887	Risk-Standardized Acute Admission Rates for Patients with Diabetes	Medicare Shared Savings Program
2888	Risk-Standardized Acute Admission Rates for Patients with Multiple Chronic Conditions	Medicare Shared Savings Program

Appendix C: All-Cause Admissions and Readmissions Standing Committee and NQF Staff

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Appendix D: Measure Specifications

3366 Hospital Visits after Urology Ambulatory Surgical Center Procedures

STEWARD

Centers for Medicare & Medicaid Services (CMS)

DESCRIPTION

Facility-level risk-standardized rate of acute, unplanned hospital visits within 7 days of a urology procedure performed at an ambulatory surgical center (ASC) among Medicare Fee-For-Service (FFS) patients aged 65 years and older. An unplanned hospital visit is defined as an emergency department (ED) visit, observation stay, or unplanned inpatient admission.

TYPE

Outcome

DATA SOURCE

Claims, Enrollment Data Medicare administrative claims and enrollment data.

LEVEL

Facility

SETTING

Outpatient Services

NUMERATOR STATEMENT

The outcome being measured is acute, unplanned hospital visits (ED visit, observation stay, or unplanned inpatient admission) occurring within 7 days of a urology procedure performed at an ASC.

NUMERATOR DETAILS

Outcome Definition

The outcome is unplanned hospital visits, defined as an ED visit, observation stay, or unplanned inpatient admission, occurring within 7 days of the urology procedure performed at an ASC identified using the Centers for Medicare & Medicaid Services (CMS) Medicare administrative claims data. The codes used to identify ED visits and observation stays are in the attached Data Dictionary, sheet "S.5 Numerator-ED Obs Def."

Time Period for Data

Numerator time window: within 7 days of ASC procedure.

Denominator time window: urology ASC procedures performed during the measurement period

Identification of Planned Admissions

The measure outcome includes hospital visits within 7 days following the urology procedure, unless that inpatient admission is deemed a "planned" admission. We used CMS's Planned Readmission Algorithm v4.0 to identify planned admissions [1]. Planned admissions are defined as those planned by providers for anticipated medical treatment or procedures that must be provided in the inpatient setting. CMS seeks to count only unplanned admissions in the measure outcome because variation in planned admissions does not reflect quality differences. The

algorithm (see the flowchart in the Data Dictionary, first tab, "S.6 Planned Adm Alg Flowchart") identifies inpatient admissions that are typically planned and may occur after the patients' index urology procedure, considering a few, specific, limited types of care planned (e.g., major organ transplant, rehabilitation, or maintenance chemotherapy). Otherwise, the algorithm defines a planned admission as a non-acute inpatient admission for a scheduled procedure (e.g., total hip replacement or cholecystectomy), and the algorithm never considers inpatient admissions for acute illness or for complications of care planned. The algorithm considers inpatient admissions that include potentially planned procedures with acute diagnoses, or with diagnoses that might represent complications of a urology procedure, as "unplanned" and thus counts these inpatient admissions in the measure outcome.

Details of the planned admission algorithm and International Classification of Diseases, 9th Revision (ICD-9)/ International Classification of Diseases, 10th Revision (ICD-10) codes to identify planned admissions are in the attached Data Dictionary, sheets: (1) "S.5 Planned Adm Alg Overview," (2) "S.5 Planned Adm Alg Flowchart," and (3) "S.5 Planned Adm Alg."

Definition of ED Visits and Observation Stay

The measure defines ED visits and observation stays using one of the specified billing codes or revenue center codes identified in Medicare Part B Outpatient hospital claims.

The codes used to define ED visits and observation stays are in the attached Data Dictionary, sheet "S.5 Numerator-ED Obs Def."

Citations

1. Horwitz L, Grady J, Cohen D, et al. Development and validation of an algorithm to identify planned readmissions from claims data. Journal of Hospital Medicine. Oct 2015; 10(10):670-677.

DENOMINATOR STATEMENT

The target population for this measure is Medicare FFS patients age 65 years and older, who have undergone a urology procedure in ASCs.

DENOMINATOR DETAILS

Target Population

The target population is Medicare FFS patients aged 65 years and older who are undergoing outpatient urology procedures performed at ASCs. We limit the measure to patients who have been enrolled in Medicare FFS Parts A and B for the 12 months prior to the date of the urology procedure to ensure that we have adequate data for identifying comorbidities for risk adjustment.

To identify eligible ASC urology procedures, we first identified a list of procedures from Medicare's 2015 ASC list of covered procedures, which includes procedures for which ASCs can be reimbursed under the ASC payment system. This list of surgeries is publicly available at: https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalOutpatientPPS/Hospital-Outpatient-Regulations-and-Notices-Items/CMS-1589-FC.html (refer to Addendum AA on the website).

Surgeries on the ASC list of covered procedures do not involve or require major or prolonged invasion of body cavities, extensive blood loss, major blood vessels, or care that is either emergent or life-threatening. The ASC list is publicly available, is annually reviewed and updated by Medicare, and includes a transparent public comment submission and review process for addition and/or removal of procedure codes. Using an existing, defined list of surgeries, rather than defining surgeries de novo, is useful for long-term measure maintenance. Procedures listed

in Medicare's list of covered ASC procedures are defined using Healthcare Common Procedure Coding System (HCPCS) and Common Procedural Terminology (CPT®) codes.

Ambulatory procedures include a heterogeneous mix of non-surgical procedures, minor surgeries, and more substantive surgeries. The measure is not intended to include very low-risk (minor) surgeries or non-surgical procedures. We, therefore, further limited the list of covered ASC procedures to "major" and "minor" procedures defined using Medicare's Global Surgical Package [1]. Specifically, we identified "major" and "minor" surgeries using the global surgery indicator (GSI) values of 090 and 010, respectively, which correspond to the number of post-operative days included in Medicare's global surgery payment for the procedure. However, we also included cystoscopy with intervention, which has the GSI value of 000, since this is a common procedure, often performed for therapeutic intervention by surgical teams, and has an outcome rate similar to other procedures in the urology measure cohort.

Finally, to initially define the urology cohort, we used the Clinical Classifications Software (CCS) developed by the Agency for Healthcare Research and Quality (AHRQ). The CCS is a tool for clustering procedures into clinically meaningful categories using CPT® codes by operation site. We included all procedures defined by the CCS as "operations on the urinary system" and "operations on the male genital organs" and retained all of those typically performed by urologists. Examples of urology procedures include removal of prostate gland, cystoscopy, and fragmenting of kidney stones. The coding list for the body systems is available at: http://www.hcup-us.ahrq.gov/toolssoftware/ccs/AppendixDMultiPR.txt.

The codes used to define the procedures in the urology cohort are in the attached Data Dictionary, sheet "S.7 Codes Used to Define Cohort."

Citations

1. Department of Health and Human Services, Centers for Medicare and Medicaid Services. Global surgery fact sheet 2017. https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/GloballSurgery-ICN907166.pdf. Accessed June 7.

EXCLUSIONS

The measure excludes surgeries for patients without 7 or more days of continuous enrollment in Medicare FFS Parts A and B after the urology procedure. The measure excludes these patients to ensure all patients have full data available for outcome assessment.

EXCLUSION DETAILS

Lack of 7 or more days of continuous enrollment in Medicare FFS after the ASC surgery is determined by patient enrollment status in FFS Parts A and B using the Medicare Enrollment file (unless lack of enrollment was due to death). The procedure must be 7 or more days from the end of the month or the enrollment indicators must be appropriately marked for the month that falls within 7 days of the procedure date (unless disenrollment is due to death); otherwise, the procedure is excluded.

RISK ADJUSTMENT

Statistical risk model

STRATIFICATION

N/A.

TYPE SCORE

Rate/proportion better quality = lower score

ALGORITHM

The measure uses a two-level hierarchical logistic regression model to estimate ASC-level risk-standardized hospital visit rates (RSHVRs). This approach accounts for the clustering of patients within ASCs and variation in sample size across ASCs. The RSHVR is calculated as the ratio of the predicted to the expected number of post-surgical unplanned hospital visits among an ASC's patients, multiplied by the national observed rate of unplanned hospital visits. For each ASC, the numerator of the ratio is the number of hospital visits predicted for the ASC's patients, accounting for its observed rate, the number and complexity of urology procedures performed at the ASC, and the case mix. The denominator is the number of hospital visits expected nationally for the ASC's case/procedure mix. To calculate an ASC's predicted-to-expected (P/E) ratio, the measure uses a two-level hierarchical logistic regression model (see Appendix C). The log-odds of the outcome for an index procedure is modeled as a function of the patient demographic, comorbidity, procedure characteristics, and a random ASC-specific intercept. A ratio greater than one indicates that the ASC's patients have more visits than expected, compared to an average ASC with similar patient and procedural complexity. A ratio less than one indicates that the ASC's patients have fewer post-surgical visits than expected, compared to an average ASC with similar patient and procedural complexity. An ASC's P/E ratio is then multiplied by the overall national rate of unplanned hospital visits to calculate the ASC-level RSHVR. This approach is analogous to an observed-to-expected ratio, but accounts for within-facility correlation of the observed outcome and sample size differences and accommodates the assumption that underlying differences in quality across ASCs lead to systematic differences in outcomes, and is tailored to and appropriate for a publicly reported outcome measure as articulated in published scientific guidelines [1-3].

Please see Appendix C of the measure's technical report for details.The measure's technical report can be found at https://www.qualitynet.org/dcs/ContentServer?cid=1228776662386&pagename=QnetPublic%2FPage%2FQnetTier3&%20c=Page

Citations

1. Normand S-LT, Shahian DM. Statistical and clinical aspects of hospital outcomes profiling. Statistical Science. 2007; 22(2):206-226.

2. Krumholz HM, Brindis RG, Brush JE, et al. Standards for statistical models used for public reporting of health outcomes: An American Heart Association scientific statement from the Quality of Care and Outcomes Research Interdisciplinary Writing Group: cosponsored by the Council on Epidemiology and Prevention and the Stroke Council endorsed by the American College of Cardiology Foundation. Circulation. 2006; 113(3):456-462.

3. National Quality Forum. Measure evaluation criteria and guidance for evaluating measures for endorsement. 2015. Available at: http://www.qualityforum.org/Measuring_Performance/Submitting_Standards/2015_Measure_Evaluation_Criteria.aspx. Accessed June 7, 2017. 146313| 121025| 141015| 135548| 114481

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Not applicable.

3449 Hospitalization for Ambulatory Care Sensitive Conditions for Dual Eligible Beneficiaries

STEWARD

Centers for Medicare and Medicaid Services

DESCRIPTION

For dual eligible beneficiaries age 18 years and older, state-level observed and risk-adjusted rates of hospital admissions for ambulatory care sensitive conditions (ACSC) per 1,000 beneficiaries for ACSC by chronic and acute conditions. This measure has three rates reported as both observed and risk-adjusted rates:

- Chronic Conditions Composite
- Acute Conditions Composite
- Total (Acute and Chronic Conditions) Composite

The observed and risk-adjusted rates are stratified and reported for three populations: (1) community-dwelling home and community-based services (HCBS) users; (2) community-dwelling non-HCBS users; or, (3) non-community-dwelling (institutionalized) population.

This measure is planned for public reporting and quality improvement at the state level. This population health measure can help states understand the underlying quality of outpatient care, including home- and community-based services, provided to dual eligible beneficiaries for acute conditions, chronic conditions, and overall. The state-level measure can assess the quality of a breadth of outpatient services by providers that may not be linked to a single accountable healthcare facility.

TYPE

Composite

DATA SOURCE

Claims Not applicable

LEVEL

Population : Regional and State

SETTING

Home Care, Outpatient Services, Post-Acute Care

NUMERATOR STATEMENT

Chronic Composite: Number of acute inpatient hospital admissions in the measurement year for diabetes short term complications, diabetes long term complications, uncontrolled diabetes, low-extremity amputation, chronic obstructive pulmonary disease (COPD), asthma, hypertension, and heart failure.

Acute Composite: Number of acute inpatient hospital admissions in the measurement year for bacterial pneumonia, urinary tract infection, cellulitis and pressure ulcers.

Total Composite: Sum of acute and chronic composites

NUMERATOR DETAILS

Chronic ACSC: Follow the steps below to identify the number of chronic ACSC acute inpatient admissions.

Step 1: Identify all acute inpatient admissions during the measurement year. To identify acute inpatient admissions:

1. Identify all acute and nonacute inpatient stays (Inpatient Stay Value Set).
2. Exclude nonacute inpatient stays (Nonacute Inpatient Stay Value Set).
3. Identify the discharge date for the stay.

Step 2: Acute-to-acute transfers (e.g. transfers from one hospital to another hospital): Keep the original discharge and drop the transfer's discharge. Organizations must identify "transfers" using their own methods and then confirm the acute inpatient care setting using the process in step 1.

Note non-acute-to-acute transfers should be included in the measure numerator.

Step 3: For the remaining acute inpatient discharges, identify discharges with any of the following:

- Primary diagnosis for diabetes short-term complications (i.e., ketoacidosis, hyperosmolarity or coma; Diabetes Short Term Complications Value Set).
- Primary diagnosis for diabetes with long-term complications (i.e., renal, eye, neurological, circulatory or unspecified complications; Diabetes Long Term Complications Value Set).
- Primary diagnosis for uncontrolled diabetes (Uncontrolled Diabetes Value Set).
- A procedure code for lower extremity amputation (Lower Extremity Amputation Procedures Value Set) and any diagnosis for diabetes (Diabetes Diagnosis Value Set).
    - Exclude any discharge with a diagnosis for traumatic amputation of the lower extremity (Traumatic Amputation of Lower Extremity Value Set) or toe amputation procedure (Toe Amputation Value Set).
- Primary diagnosis of COPD (COPD Diagnosis Value Set), excluding any discharge with a diagnosis for cystic fibrosis and anomalies of the respiratory system (Cystic Fibrosis and Respiratory System Anomalies Value Set).
- Primary diagnosis for asthma (Asthma Diagnosis Value Set), excluding any discharge with a diagnosis for cystic fibrosis and anomalies of the respiratory system (Cystic Fibrosis and Respiratory System Anomalies Value Set).
- Primary diagnosis for acute bronchitis (Acute Bronchitis Diagnosis Value Set) and diagnosis for COPD (COPD Diagnosis Value Set).
    - Exclude any discharge with a diagnosis for cystic fibrosis and anomalies of the respiratory system (Cystic Fibrosis and Respiratory System Anomalies Value Set).
- Primary diagnosis for heart failure (Heart Failure Diagnosis Value Set), excluding any discharges with a cardiac procedure (Cardiac Procedure Value Set).
- Primary diagnosis for hypertension (Hypertension Value Set), excluding any discharge with a cardiac procedure (Cardiac Procedure Value Set) or diagnosis of Stage I-IV kidney disease (Stage I-IV Kidney Disease Value Set) with a dialysis procedure (Dialysis Value Set).

Note: For criteria that include multiple events, codes must be on the same claim.

Acute ACSC: Follow the steps below to identify the number of acute ACSC acute inpatient admissions.

Step 1: Identify all acute inpatient discharges during the measurement year. To identify acute inpatient admissions:

1. Identify all acute and nonacute inpatient stays (Inpatient Stay Value Set).
2. Exclude nonacute inpatient stays (Nonacute Inpatient Stay Value Set).
3. Identify the discharge date for the stay.

Step 2: Acute-to-acute transfers (e.g. transfers from one hospital to another hospital): Keep the original discharge and drop the transfer discharge. Organizations must identify "transfers" using their own methods and then confirm the acute inpatient care setting using the process in step 1. Note non-acute-to-acute transfers should be included in the measure numerator.

Step 3: For the remaining acute inpatient discharges, identify discharges with the any of the following:

- Primary diagnosis of bacterial pneumonia (Bacterial Pneumonia Value Set), excluding any discharge with a diagnosis of sickle cell anemia, HB-S disease (Sickle Cell Anemia and HB-S Disease Value Set) or procedure or diagnosis for immunocompromised state (Immunocompromised State Value Set).
- Primary diagnosis of urinary tract infection (Urinary Tract Infection Value Set), excluding any discharge with a diagnosis of kidney/urinary tract disorder (Kidney and Urinary Tract Disorder Value Set) or procedure or diagnosis for immunocompromised state (Immunocompromised State Value Set).
- Primary diagnosis of cellulitis (Cellulitis Value Set) excluding any discharge with a procedure or diagnosis for immunocompromised state (Immunocompromised State Value Set).
- Primary diagnosis of pressure ulcer (Pressure Ulcer Value Set) excluding any discharge with a procedure or diagnosis for immunocompromised state (Immunocompromised State Value Set).

Note: For criteria that include multiple events, codes must be on the same claim.

Total ACSC: Count of inpatient stays with a discharge date during the measurement year for a chronic or acute ACSC. Sum the events from the Chronic ACSC and Acute ACSC categories to obtain a total ACSC.

DENOMINATOR STATEMENT

Dual eligible adults age 18 years and older

DENOMINATOR DETAILS

Dual eligible adults age 18 years and older continuously enrolled in Medicaid and Medicare for at least 18 months (measurement year plus six months prior)

EXCLUSIONS

- See the numerator details section for exclusions from the individual composite indicators
- Hospitalizations for obstetrics
- Hospice

- Acute hospital transfers

EXCLUSION DETAILS

- See the numerator details section for exclusions from the individual composite indicators
- Discharges for obstetrics. Exclude inpatient stays with newborn/obstetrics claim type code from the numerator (admission type code = 4 “Newborn”).
- Discharges to hospice: Exclude inpatient stays for individuals receiving hospice care from the numerator, and exclude beneficiaries receiving hospice care at the start of the measurement period from the denominator (admission source code = F “Transfer from Hospice and is under a Hospice Plan of Care or Enrolled in a Hospice Program - The patient was admitted to this facility as a transfer from a hospice”).
- Acute hospital transfers: See numerator details for details on excluding transfers from acute hospitals.

RISK ADJUSTMENT

Statistical risk model

STRATIFICATION

Stratification groups are defined based on use of LTSS services in the first month of the measurement year using enrollment data to divide the dual eligible population into three mutually exclusive groups: (1) community-dwelling HCBS users; (2) community dwelling non-HCBS users; or, (3) non-community-dwelling (institutionalized) population. These designations come from the Medicare Modernization Act files that states send to CMS.

TYPE SCORE

Rate/proportion better quality = lower score

ALGORITHM

Calculation of Observed Rate

The number of observed discharges divided by the number of members in the eligible population, multiplied by 1,000 within each stratification and for each ACSC category and Total ACSC.

Calculation of Risk-Adjusted Rate at the Reporting Level

Steps:

For each outcome type/subpopulation strata:

1. Apply the risk adjustment prediction model to calculate the expected number of ACSC admissions for all dual-eligible beneficiaries in the reporting level (i.e., state). This constitutes the denominator, termed the “expected” count.
2. Sum the actual ACSC admissions for all dual eligible beneficiaries in the reporting level. This constitutes the numerator, termed the “observed” count.
3. Divide the numerator by the denominator to find the reporting level’s observed to expected (O/E) ratio.
4. Multiply this O/E ratio by the observed national rate to find the reporting level’s risk-adjusted ACSC rate.

Explanation:

The risk-adjusted rate is calculated as the ratio of the number of observed to the number of expected ACSC admissions for a given reporting level, multiplied by the national observed ACSC admission rate. This approach conceptually provides a way to compare a particular reporting level's performance given its case mix to an average reporting level's performance with the same case mix. Hence, a lower observed-to-expected ratio indicates lower-than-expected ACSC admission rates, or better quality. A higher ratio indicates higher-than-expected ACSC admission rates, or worse quality. The observed number of ACSC admissions is calculated directly from the data by counting the total number of ACSC admissions across all eligible beneficiaries in a reporting level during the measure period. The expected number of ACSC admissions is obtained by using the coefficients estimated by the person-level risk-adjustment model described in the corresponding testing attachment. The estimated regression coefficients are subsequently multiplied by the patient characteristics. The results are then transformed and summed over all patients in the reporting level to get an expected value. This calculation transforms the ratio of observed over expected into a rate that is compared to the national observed ACSC admission rate. 148065

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3457 Minimizing Institutional Length of Stay

STEWARD

Centers for Medicare & Medicaid Services, Centers for Medicaid & CHIP Services

DESCRIPTION

The proportion of admissions to an institutional facility (e.g., nursing facility, intermediate care facility for individuals with intellectual disabilities [ICF/IID]) for managed long-term services and support (MLTSS) plan enrollees that result in successful discharge to the community (community residence for 60 or more days) within 100 days of admission. This measure is reported as an observed rate and a risk-adjusted rate.

TYPE

Outcome

DATA SOURCE

Claims, Enrollment Data Not applicable.

LEVEL

Health Plan

SETTING

Home Care, Other, Post-Acute Care Nursing Home/Skilled Nursing Facility, ICF/IID, Community Settings

NUMERATOR STATEMENT

The count of discharges from an institutional facility to the community that occurred within 100 days or less from admission and resulted in successful discharge to the community (community residence for 60 or more days).

NUMERATOR DETAILS

The count of discharges from an institutional facility to the community between July 1 of the year prior to the measurement year* and October 31 of the measurement year that occurred within 100 days or less of admission. Discharges that result in death, hospitalization or re-admission to the institution within 60 days of discharge from the institution do not meet the numerator criteria.

The measure focuses on discharges within 100 days because it is generally considered a cross-over point in long-term care. After that time, evidence shows that: (1) residence in the institutional facility becomes considered semi-permanent, (2) dual eligible enrollees lose Medicare coverage for their institutional stay, and (3) they often lose any community-based housing they were previously using further limiting the probability they will ever return to the community.

Institutional facility: Medicaid- or Medicare- certified nursing facilities providing skilled nursing/medical care; rehabilitation needed due to injury, illness or disability; and long-term care (also referred to as "custodial care") or Medicaid certified Intermediate Care Facility for Individuals with Intellectual Disabilities (ICF/IID). (see Institutional Facility Value Set).

Community residence: Any residence that is not an institutional facility (see definition above). Note community residence may include assisted living, adult foster care, or other care in another setting that is not defined as an institution.

*The measurement year is January 1 through December 31, i.e., is equivalent to the calendar year.

DENOMINATOR STATEMENT

New admissions to an institutional setting for MLTSS enrollees age 18 and older.

DENOMINATOR DETAILS

New admissions to an institutional setting between July 1 of the year prior to the measurement year and June 30 of the measurement year among MLTSS enrollees age 18 and older who receive both medical and LTSS benefits through the accountable health plan (see value set Institutional Facility).

Include all admissions to the institutional setting directly from the community. Include admissions to the institutional setting from the hospital setting only if the MLTSS enrollee lived in the community prior to the hospital admission. These are considered "new admissions."

Do not include admissions to the institutional setting from the hospital setting if the MLTSS enrollee was residing in an institution prior to the hospital admission. Do not include admissions to the institutional setting that are transfers from another institution. These admissions are NOT considered "new admissions."

Do not include admissions where the MLTSS enrollee dies in the institution, dies within one day of discharge from the institution or is discharged to a hospital and dies in the hospital between July 1 of the year prior to the measurement period. Due to differences in coding practices, death within one day of discharge is considered a death in the institution. These admissions are

considered admissions where there was not opportunity for discharge (i.e., death occurred within 100 days of admission) or the individual was near end of life and discharge may not have been clinically appropriate.

Do not include admissions where the MLTSS enrollee was discharged to a hospital between July 1 of the year prior to the measurement year and remained in the hospital until the end of the measurement year.

Do not include admissions for MLTSS enrollees who were not continuously enrolled in the MLTSS plan on the day of the new admission through 160 days following the new admission date.

An enrollee can be counted more than once in the denominator if the individual had more than one admission to an institutional setting during the measurement year.

EXCLUSIONS

None.

EXCLUSION DETAILS

Not applicable.

RISK ADJUSTMENT

Statistical risk model

STRATIFICATION

None.

TYPE SCORE

Rate/proportion better quality = higher score

ALGORITHM

CALCULATION OF THE OBSERVED RATE DENOMINATOR - STEPS TO IDENTIFY INSTITUTION ADMISSIONS FROM THE COMMUNITY

Step 1: Identify all admissions to institutional facilities between July 1 of the year prior to the measurement period and June 30 of the measurement year.

Step 2: Remove admissions that are transfers from another institution.

Step 3: Remove admissions from the hospital that originated from an institution.

Step 4: Remove admissions that result in death in the institution or death within 1 day of discharge from the institution.

Step 5: Remove admissions for MLTSS enrollees who were not continuously enrolled in the MLTSS plan on the day of the new admission through 160 days following the new admission date. All resulting admissions directly from the community and from the hospital that originated in the community make up the denominator for the observed rate.

CALCULATING THE RISK ADJUSTMENT WEIGHTS FOR THE DENOMINATOR

For each qualified admission in the denominator, use the following steps to identify risk adjustment weights based on dual eligibility, age and gender, diagnoses from the qualified admission, and number of hospital stays and months of enrollment in the classification period. Risk adjustment weights are provided in the attached Excel file.

Step 1: Identify the base weight

Step 2: Link the age and gender weights for each qualified admission

Step 3: For each qualified admission with dual eligibility, link the dual eligibility weight.

Step 4: For each qualified admission with a Chronic Conditions Warehouse (CCW) category, link the qualified CCW category weight.

Step 5: For each qualified admission with 1 or more hospitalizations prior to qualified admission, link the number of hospitalization weight.

Step 6: For each qualified admission with six months or more of enrollment prior to the qualified admission, link the six months enrollment weight.

Step 7: Sum all weights associated with the qualified admission (i.e., base, age and gender, dual eligibility, qualified CCW categories, number of hospitalizations, and six months enrollment weight) to calculate the expected estimated probability of Successful Discharge to the Community for each qualified admission.

Expected Discharge Probability = [exp (sum of weights for IFA)]/[1+exp(sum of weights for IFA)]

Note: "Exp" refers to the exponential or antilog function.

Step 8: Calculate the count of successful discharges to the community. The count of expected discharges is the sum of the estimated discharge probability calculated in Step 7 for each qualified admission.

Count of Expected Discharges = Sum of (estimated discharge probability for each qualified admission)

CALCULATION OF OBSERVED RATE NUMERATOR – STEPS TO IDENTIFY DISCHARGES TO THE COMMUNITY WITH A LENGTH OF STAY (LOS) OF LESS THAN OR EQUAL TO 100 DAYS

Step 1: Identify all qualified admissions (see Denominator criteria above).

Step 2: Look for location of the first discharge for each qualified admission between July 1 of the year prior to the measurement year and October 31 of the measurement year.

? If the enrollee is discharged to the community, calculate LOS as the date of institution discharge minus the index admission date.

? If there is no discharge, calculate LOS as the date of the last day of the measurement year minus index admission date.

? If the enrollee is discharged to the hospital, look for the hospital discharge and location of discharge. If the enrollee is discharged from the hospital to the community, calculate LOS as the date of institution discharge minus the qualified index admission date.

? If the enrollee is discharged to the hospital and dies in the hospital, exclude the admission from the qualified index admission.

? If the enrollee is discharged to the hospital and remains in the hospital at the end of the measurement year, exclude the admission from the qualified index admission.

? If the enrollee is discharged from the hospital to the institution, repeat step 2 until there is a discharge to the community or the end of the measurement period.

? If the enrollee is discharged to a different institution (i.e. a transfer), repeat step 2 until there is a discharge to the community or the end of the measurement period.

? When counting the duration of each stay within a measurement period, include the day of entry (admission) but not the day of discharge unless the admission and discharge occurred on the same day in which case the number of days in the stay is equal to 1.

Step 3: Using information from step 2, identify all qualified admissions with length of stay of less than or equal to 100 days. This should include only discharges to the community (either directly from the institution or from the institution to the hospital to the community).

Step 4: Remove discharge if the MLTSS enrollee was hospitalized, died or was re-admitted to the institution within 60 days of the day of discharge.

CALCULATION OF OBSERVED PERFORMANCE RATE

Calculate the observed discharge rate by dividing the the numerator (step 4 under numerator) by the denominator (step 5 under denominator).

CALCULATION OF RISK-ADJUSTED RATE: EXPECTED RATE

Calculate the expected discharge rate by dividing the expected count of successful discharges by the denominator (count of new admissions). Report the expected discharge rate as the expected performance rate of the Minimizing Institutional Length of Stay measure.

Plans can understand their results by calculating the ratio of their observed to expected (O/E) rates. A ratio of greater than 1 implies a higher than expected rate of successful discharges, whereas a ratio of less than 1 implies lower than expected rate of successful discharges.

CALCULATION OF THE RISK ADJUSTED RATE: RISK ADJUSTED PERFORMANCE RATE

Reporting of a risk-adjusted rate requires standardization of the O/E ratio using a multi-plan, population rate.

States should calculate the multi-plan population rate by taking the sum of all observed numerator events and dividing by the sum of all observed denominator events.

The risk-adjusted rate of Minimizing Institutional Length of Stay for each plan is calculated by multiplying the plan O/E ratio by the multi-plan population rate.

Plan Risk Adjusted Rate = O/E Ratio x Multi-plan population rate 118061

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Not applicable.

3470 Hospital Visits after Orthopedic Ambulatory Surgical Center Procedures

STEWARD

Centers for Medicare & Medicaid Services (CMS)

DESCRIPTION

Facility-level risk-standardized rate of acute, unplanned hospital visits within 7 days of an orthopedic procedure performed at an ambulatory surgical center (ASC) among Medicare fee-for-service (FFS) patients aged 65 years and older. An unplanned hospital visit is defined as an emergency department (ED) visit, observation stay, or unplanned inpatient admission.

TYPE

Outcome

DATA SOURCE

Claims Medicare administrative claims and enrollment data

LEVEL

Facility

SETTING

Outpatient Services

NUMERATOR STATEMENT

The outcome being measured is acute, unplanned hospital visits (ED visit, observation stay, or unplanned inpatient admission) occurring within 7 days of an orthopedic procedure performed at an ASC.

NUMERATOR DETAILS

Outcome Definition

The outcome is unplanned hospital visits, defined as an ED visit, observation stay, or unplanned inpatient admission, occurring within 7 days of the orthopedic procedure performed at an ASC identified Medicare administrative claims data. The codes used to identify ED visits and observation stays are in the attached Data Dictionary, sheet "S.5 Numerator-ED Obs Def."

Time Period for Data

Numerator time window: within 7 days of an ASC procedure

Denominator time window: Orthopedic ASC procedures performed during the measurement period

Identification of Planned Admissions

The measure outcome includes hospital visits within 7 days following the surgery, unless that inpatient admission is deemed a "planned" admission, as identified via the adapted Planned Readmission Algorithm v4.0, which the Centers for Medicare & Medicaid Services (CMS) created for its hospital-wide readmission measure [1]. Planned admissions are defined as those planned by providers for anticipated medical treatment or procedures that must be provided in the inpatient setting. CMS seeks to count only unplanned admissions in the measure outcome because variation in planned admissions does not reflect quality differences. The algorithm identifies inpatient admissions that are typically planned and may occur after the patient's index event, considering few, specific, limited types of care planned (e.g., major organ transplant, rehabilitation, or maintenance chemotherapy). Otherwise, the algorithm defines a planned admission as a non-acute inpatient admission for a scheduled procedure (e.g., total hip replacement or cholecystectomy). The algorithm never considers inpatient admissions for acute illness or for complications of care planned. The algorithm considers inpatient admissions that include potentially planned procedures with acute diagnoses or that might represent complications of a surgery unplanned and thus counts these inpatient admissions in the measure outcome.

Details of the planned admission algorithm and International Classification of Diseases, 9th Revision (ICD-9)/ international Classification of Diseases, 10th Revision (ICD-10) codes to identify planned admissions are in the attached Data Dictionary, sheets: (1) "S.5 Planned Adm Alg Overview," (2) "S.5 Planned Adm Alg Flowchart," and (3) "S.5 Planned Adm Alg."

Definition of ED Visits and Observation Stay

The measure defines ED visits and observation stays using one of the specified billing codes or revenue center codes identified in Medicare Part B Outpatient hospital claims.

The codes used to define ED visits and observation stays are in the attached Data Dictionary, sheet "S.5 Numerator-ED Obs Def."

Citations

1. Horwitz L, Grady J, Cohen D, et al. Development and validation of an algorithm to identify planned readmissions from claims data. Journal of Hospital Medicine. Oct 2015; 10(10):670-677.

DENOMINATOR STATEMENT

The target population for this measure is Medicare FFS patients aged 65 years and older who have undergone an orthopedic procedure at an ASC.

DENOMINATOR DETAILS

Target Population

The target population is Medicare FFS patients aged 65 years and older undergoing orthopedic procedures performed at ASCs. We limit the measure to patients who have been enrolled in Medicare FFS Parts A and B for the 12 months prior to the date of surgery to ensure that we have adequate data for identifying comorbidities for risk adjustment.

To identify eligible outpatient orthopedic surgeries, we first identified a list of procedures from Medicare's 2013 ASC list of covered procedures, which includes procedures for which ASCs can be reimbursed under the ASC payment system. This list of surgeries is publicly available at: https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/HospitalOutpatientPPS/Hospital-Outpatient-Regulations-and-Notices-Items/CMS-1589-FC.html (refer to Addendum AA on the website). Surgeries on the ASC list of covered procedures do not involve or require major or prolonged invasion of body cavities, extensive blood loss, major blood vessels, or care that is either emergent or life-threatening. The ASC list is publicly available, is annually reviewed and updated by Medicare, and includes a transparent public comment submission and review process for addition and/or removal of procedure codes. Using an existing, defined list of surgeries, rather than defining surgeries de novo, is useful for long-term measure maintenance. Procedures listed in Medicare's list of covered ASC procedures are defined using Healthcare Common Procedure Coding System (HCPCS) and Common Procedural Terminology (CPT) codes.

Ambulatory surgeries include a heterogeneous mix of non-surgical procedures, minor surgeries, and more substantive surgeries. The measure is not intended to include very low-risk (minor) surgeries or non-surgical procedures. Therefore, we further limited the list of covered ASC procedures to "major" and "minor" procedures defined using Medicare's Global Surgical Package [1]. Specifically, we identified "major" and "minor" surgeries using the global surgery indicator (GSI) values of 090 and 010, respectively, which correspond to the number of post-operative days included in Medicare's global surgery payment for the procedure. The measure does not include minor/non-surgical procedures identified using the GSI code 000.

Finally, to initially define the orthopedic procedures cohort, we used the Clinical Classifications Software (CCS) developed by the Agency for Healthcare Research and Quality (AHRQ). The CCS is a tool for clustering procedures into clinically meaningful categories using CPT codes by operation site. We included all procedures defined by the CCS as "operations on the musculoskeletal system" and retained all of those typically performed by orthopedic surgeons. Examples of orthopedic procedures include treatment of toe deformities, arthroscopic knee procedures, therapeutic procedures on muscles, tendons, joints, and bones, and treatment of

fractures. The coding list for the body systems is available at: http://www.hcup-us.ahrq.gov/toolssoftware/ccs/AppendixDMultiPR.txt.

The codes used to define the orthopedic procedures are in the attached Data Dictionary, sheet "S.7 Codes Used to Define Cohort."

Citations

1. Department of Health and Human Services, Centers for Medicare & Medicaid Services. Global surgery fact sheet. Available at: https://www.cms.gov/Outreach-and-Education/Medicare-Learning-Network-MLN/MLNProducts/downloads/GloballSurgery-ICN907166.pdf. Accessed June 14, 2017.

EXCLUSIONS

The measure excludes surgeries for patients without 7 or more days of continuous enrollment in Medicare FFS Parts A and B after the surgery. The measure excludes these patients to ensure all patients have full data available for outcome assessment.

EXCLUSION DETAILS

Lack of 7 or more days of continuous enrollment in Medicare FFS after the ASC surgery is determined by patient enrollment status in FFS Parts A and B using the Medicare Enrollment Database (unless lack of enrollment was due to death). The procedure must be 7 or more days from the end of the month or the enrollment indicators must be appropriately marked for the month that falls within 7 days of the procedure date (unless disenrollment is due to death); otherwise, the procedure is excluded.

RISK ADJUSTMENT

Statistical risk model

STRATIFICATION

Not applicable

TYPE SCORE

Rate/proportion better quality = lower score

ALGORITHM

The measure uses a two-level hierarchical logistic regression model to estimate ASC-level risk-standardized hospital visit rates (RSHVRs). This approach accounts for the clustering of patients within ASCs and variation in sample size across ASCs The RSHVR is calculated as the ratio of the predicted to the expected number of post-surgical unplanned hospital visits among an ASC's patients, multiplied by the national observed rate of unplanned hospital visits. For each ASC, the numerator of the ratio is the number of hospital visits predicted for the ASC's patients, accounting for its observed rate, the number and complexity of orthopedic procedures performed at the ASC, and the case mix. The denominator is the number of hospital visits expected nationally for the ASC's case/procedure mix. As noted above, to calculate an ASC's predicted-to-expected (P/E) ratio, the measure uses a two-level hierarchical logistic regression model (see Appendix C). The log-odds of the outcome for an index procedure is modeled as a function of the patient demographics, comorbidities, procedure characteristics, and a random ASC-specific intercept. A ratio greater than one indicates that the ASC's patients have more post-surgical hospital visits than expected, compared to an average ASC with similar patient and

procedural complexity. A ratio less than one indicates that the ASC's patients have fewer post-surgical hospital visits than expected, compared to an average ASC with similar patient and procedural complexity. An ASC's P/E ratio is then multiplied by the overall national rate of unplanned hospital visits to calculate the ASC-level RSHVR. This approach is analogous to an observed-to-expected ratio, but accounts for within-facility correlation of the observed outcome and sample size differences, accommodates the assumption that underlying differences in quality across ASCs lead to systematic differences in outcomes, and is tailored to and appropriate for a publicly reported outcome measure as articulated in published scientific guidelines [1-3].

Please see Appendix C of the technical report for details. The measure's technical report can be found at https://www.qualitynet.org/dcs/ContentServer?cid=1228776661160&pagename=QnetPublic%2FPage%2FQnetTier3&%20c=Page.

Citations

1. Normand S-LT, Shahian DM. Statistical and clinical aspects of hospital outcomes profiling. Statistical Science. 2007; 22(2):206-226.

2. Krumholz HM, Brindis RG, Brush JE, et al. Standards for statistical models used for public reporting of health outcomes: An American Heart Association scientific statement from the Quality of Care and Outcomes Research Interdisciplinary Writing Group: cosponsored by the Council on Epidemiology and Prevention and the Stroke Council endorsed by the American College of Cardiology Foundation. Circulation. 2006; 113(3):456-462.

3. National Quality Forum. Measure evaluation criteria and guidance for evaluating measures for endorsement. 2015. Available at: http://www.qualityforum.org/Measuring_Performance/Submitting_Standards/2015_Measure_Evaluation_Criteria.aspx. Accessed June 7, 2017. 141015| 146313| 135548| 114481| 121025

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