



Measure Information

This document contains the information submitted by measure developers/stewards, but is organized according to NQF's measure evaluation criteria and process. The item numbers refer to those in the submission form but may be in a slightly different order here. In general, the item numbers also reference the related criteria (e.g., item 1b.1 relates to sub criterion 1b).

Brief Measure Information

NQF #: 3597

Corresponding Measures:

De.2. Measure Title: Clinician-Group Risk-Standardized Acute Hospital Admission Rate for Patients with Multiple Chronic Conditions under the Merit-based Incentive Payment System

Co.1.1. Measure Steward: Centers for Medicare & Medicaid Services

De.3. Brief Description of Measure: Risk-Standardized rate of acute, unplanned hospital admissions among Medicare Fee-for-Service (FFS) patients aged 65 years and older with multiple chronic conditions (MCCs).

1b.1. Developer Rationale: Hospital admission rates are an effective marker of ambulatory care quality. Hospital admissions from the outpatient setting reflect a deterioration in patients' clinical status and as such reflect an outcome that is meaningful to both patients and providers. Patients receiving optimal, coordinated high-quality care should use fewer inpatient services than patients receiving fragmented, low-quality care. Thus, high population rates of hospitalization may, at least to some extent, signal poor quality of care or inefficiency in health system performance.

Patients with MCCs are at high risk for hospital admission, often for potentially preventable causes, such as exacerbation of pulmonary disease. [1] Evidence from several Medicare demonstration projects suggests that care coordination results in decreased hospital admission rates among high-risk patients. [2] In addition, studies have shown that the types of ambulatory care clinicians this measure targets (for example, primary care providers and specialists caring for patients with MCCs) can influence admission rates through primary care clinician supply, continuity of care, and patient-centered medical home interventions such as team-based and patient-oriented care. [3-5] More recent studies speak directly to the positive effect that individual providers and group practices can have on lowering patients' hospital visit rates. In particular, they support that comprehensive and continuous care by individual providers can decrease care utilization. [6-7]

Thus, the anticipated net benefits of this unplanned hospital admission measure include, but are not limited to:

- Reduced numbers of hospitalizations and days hospitalized;
- Improved outpatient disease management;
- Reduced rates of complications, including mortality; and
- Cost savings resulting from fewer hospitalizations.

Overall, this measure will provide CMS with a valuable tool for assessing the performance of TINs (individual clinicians and groups of clinicians) in the MIPS program.

Citations

1. Abernathy K, Zhang J, Mauldin P, et al. Acute Care Utilization in Patients With Concurrent Mental Health and Complex Chronic Medical Conditions. *J Prim Care Community Health*. 2016;7(4):226-233.
2. Brown RS, Peikes D, Peterson G, Schore J, Razafindrakoto CM. Six features of Medicare coordinated care demonstration programs that cut hospital admissions of high-risk patients. *Health Aff (Millwood)*. 2012;31(6):1156-1166.
3. van Loenen T, van den Berg MJ, Westert GP, Faber MJ. Organizational aspects of primary care related to avoidable hospitalization: a systematic review. *Fam Pract*. 2014;31(5):502-516.
4. Dale SB, Ghosh A, Peikes DN, et al. Two-Year Costs and Quality in the Comprehensive Primary Care Initiative. *N Engl J Med*. 2016;374(24):2345-2356.
5. Casalino LP, Pesko MF, Ryan AM, et al. Small primary care physician practices have low rates of preventable hospital

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admissions. Health Aff (Millwood). 2014;33(9):1680-1688

6. Bazemore, A., et al. (2018). "Higher Primary Care Physician Continuity is Associated With Lower Costs and Hospitalizations." Ann Fam Med. 16(6): 492-497.

7. O'Malley, A. S., et al. (2019). "New approaches to measuring the comprehensiveness of primary care physicians." Health Serv Res. 54(2): 356-366.

S.4. Numerator Statement: The outcome for this measure is the number of acute admissions per 100 person-years at risk for admission during the measurement period.

S.6. Denominator Statement: Patients included in the measure (target patient population)

The target patient population for the outcome includes Medicare FFS patients aged 65 years and older with multiple chronic conditions (MCCs).

Provider types included for measurement

- Primary care providers (PCPs): CMS designates PCPs as physicians who practice internal medicine, family medicine, general medicine, or geriatric medicine, and non-physician providers, including nurse practitioners, certified clinical nurse specialists, and physician assistants.
- Relevant specialists: Specialists covered by the measure are limited to those who provide overall coordination of care for patients with MCCs and who manage the chronic diseases that put the MCCs patients in the measure at risk of admission. These specialists were chosen with input from our Technical Expert Panel (TEP) and include cardiologists, pulmonologists, nephrologists, neurologists, endocrinologists, and hematologists/oncologists. However, as indicated below and in Section S.9, the measure is not designed to assess the quality of care of cancer specialists who are actively managing cancer patients, and thus patients attributed to hematologists and oncologists are excluded from the measure.

Patient attribution

We begin by assigning each patient to the clinician most responsible for the patient's care. The patient can be assigned to a PCP, a relevant specialist, or can be left unassigned.

- A patient who is eligible for attribution can be assigned to a relevant specialist only if the specialist has been identified as "dominant". A specialist is considered "dominant" if they have two or more visits with the patient, as well as at least two more visits than any PCP or other relevant specialist. For example, if a patient saw a cardiologist four times in the measurement year, a PCP twice, and a nephrologist twice, the patient would be assigned to the cardiologist, having met the definition of "dominant" specialist. Note: Hematologists and oncologists are considered relevant specialists as they could be expected to manage MCCs patients' care, especially during periods of acute cancer treatment. However, as indicated below in Section S.9, the measure is not designed to assess the quality of care of cancer specialists who are actively managing cancer patients, and thus patients attributed to hematologists and oncologists are excluded from the measure.
- There are two scenarios where a patient can be assigned to a PCP. First, the patient must have seen at least one PCP. The patient will then be assigned to the PCP with the highest number of visits as long as there is no relevant specialist who is considered "dominant." Second, if the patient has had more than one visit with a relevant specialist but no "dominant" specialist has been identified, and has two or more visits with a PCP, they will be assigned to that PCP.
- Finally, the patient will be unassigned if they only saw non-relevant specialists, if the patient has not seen a PCP and no "dominant" specialist can be identified, or if the patient has not had more than one visit with any individual PCP.

Patients are then assigned at the Taxpayer Identification Number (TIN) level, which includes solo clinicians and groups of clinicians who have chosen to report their quality under a common TIN.

- At the TIN level, patients are first assigned to the clinician (unique National Provider Identifier (NPI)/TIN combination since a given provider can be affiliated with more than one TIN) most responsible for their care (using the algorithm for individual clinician-level attribution above) and then patients "follow" their clinician to the TIN designated by the clinician. Patients unassigned at the individual clinician level continue to be unassigned at the TIN level.

(Note that an alternative attribution approach was considered and assessed as described in section 2b.3.11 of the testing attachment and in Appendix C of the attached methodology report.)

Person-time at risk

Persons are considered at risk for hospital admission if they are alive, enrolled in FFS Medicare, and not in the hospital during the measurement period. In addition to time spent in the hospital, we also exclude from at-risk time: 1) time spent in a SNF or acute

rehabilitation facility; 2) the time within 10 days following discharge from a hospital, SNF, or acute rehabilitation facility; and 3) time after entering hospice care.

S.8. Denominator Exclusions: We exclude patients from the cohort for these reasons:

1. Patients without continuous enrollment in Medicare Part A or B during the measurement period.
2. Patients enrolled in hospice at any time during the year prior to the measurement year or at start of the measurement year.
3. Patients with no E&M visit to a MIPS eligible clinician.
4. Patients assigned to clinicians who do not participate in the QPP on the MIPS track.
5. Patients attributed to hematologists and oncologists.
6. Patients not at risk for hospitalization during the measurement year.

De.1. Measure Type: Outcome

S.17. Data Source: Claims, Enrollment Data, Other

S.20. Level of Analysis: Clinician : Group/Practice

IF Endorsement Maintenance – Original Endorsement Date: Most Recent Endorsement Date:

IF this measure is included in a composite, NQF Composite#/title:

IF this measure is paired/grouped, NQF#/title:

De.4. IF PAIRED/GROUPED, what is the reason this measure must be reported with other measures to appropriately interpret results? Not applicable; this is not a paired or grouped measure.

1. Evidence, Performance Gap, Priority – Importance to Measure and Report

Extent to which the specific measure focus is evidence-based, important to making significant gains in healthcare quality, and improving health outcomes for a specific high-priority (high-impact) aspect of healthcare where there is variation in or overall less-than-optimal performance. **Measures must be judged to meet all sub criteria to pass this criterion and be evaluated against the remaining criteria.**

1a. Evidence to Support the Measure Focus – See attached Evidence Submission Form

[NQF_MIPS_MCC_EvidenceAttachment_for_CMS_Review-637418977375542223.docx](#)

1a.1 For Maintenance of Endorsement: Is there new evidence about the measure since the last update/submission?

Do not remove any existing information. If there have been any changes to evidence, the Committee will consider the new evidence. Please use the most current version of the evidence attachment (v7.1). Please use red font to indicate updated evidence.

1b. Performance Gap

Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating:

- considerable variation, or overall less-than-optimal performance, in the quality of care across providers; and/or
- Disparities in care across population groups.

1b.1. Briefly explain the rationale for this measure (e.g., how the measure will improve the quality of care, the benefits or improvements in quality envisioned by use of this measure)

If a COMPOSITE (e.g., combination of component measure scores, all-or-none, any-or-none), SKIP this question and answer the composite questions.

Hospital admission rates are an effective marker of ambulatory care quality. Hospital admissions from the outpatient setting reflect a deterioration in patients' clinical status and as such reflect an outcome that is meaningful to both patients and providers. Patients receiving optimal, coordinated high-quality care should use fewer inpatient services than patients receiving fragmented, low-quality care. Thus, high population rates of hospitalization may, at least to some extent, signal poor quality of care or inefficiency in health

system performance.

Patients with MCCs are at high risk for hospital admission, often for potentially preventable causes, such as exacerbation of pulmonary disease. [1] Evidence from several Medicare demonstration projects suggests that care coordination results in decreased hospital admission rates among high-risk patients. [2] In addition, studies have shown that the types of ambulatory care clinicians this measure targets (for example, primary care providers and specialists caring for patients with MCCs) can influence admission rates through primary care clinician supply, continuity of care, and patient-centered medical home interventions such as team-based and patient-oriented care. [3-5] More recent studies speak directly to the positive effect that individual providers and group practices can have on lowering patients' hospital visit rates. In particular, they support that comprehensive and continuous care by individual providers can decrease care utilization. [6-7]

Thus, the anticipated net benefits of this unplanned hospital admission measure include, but are not limited to:

- Reduced numbers of hospitalizations and days hospitalized;
- Improved outpatient disease management;
- Reduced rates of complications, including mortality; and
- Cost savings resulting from fewer hospitalizations.

Overall, this measure will provide CMS with a valuable tool for assessing the performance of TINs (individual clinicians and groups of clinicians) in the MIPS program.

Citations

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4. Dale SB, Ghosh A, Peikes DN, et al. Two-Year Costs and Quality in the Comprehensive Primary Care Initiative. N Engl J Med. 2016;374(24):2345-2356.
5. Casalino LP, Pesko MF, Ryan AM, et al. Small primary care physician practices have low rates of preventable hospital admissions. Health Aff (Millwood). 2014;33(9):1680-1688
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7. O'Malley, A. S., et al. (2019). "New approaches to measuring the comprehensiveness of primary care physicians." Health Serv Res. 54(2): 356-366.

1b.2. Provide performance scores on the measure as specified (current and over time) at the specified level of analysis. *(This is required for maintenance of endorsement. Include mean, std dev, min, max, interquartile range, scores by decile. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities include.) This information also will be used to address the sub-criterion on improvement (4b1) under Usability and Use.*

In the calendar year 2018 performance period, a total of 4,659,922 Medicare FFS MCC patients were attributed to 58,435 MIPS-eligible TINs. Acute, unplanned hospital admissions were identified using 2018 Medicare FFS institutional inpatient claims. Overall, across all TINs with at least one attributed MCC patient, RSAAR measure scores ranged from 17.5 to 131.5 per 100 person-years, with a median of 38.7 and an interquartile range of 36.5 to 41.8. The mean RSAAR and standard deviation were 39.5 ± 5.8 admissions per 100 person-years. Generally, similar distributions in measure scores were found across TINs with different provider composition. Below we show the range of RSAAR within each decile for all TINs with at least one attributed MCC patient:

Decile_1// 17.5 - 33.5

Decile_2// 33.5 - 35.7

Decile_3// 35.7 - 37.1

Decile_4// 37.1 - 38.1

Decile_5// 38.1 - 38.7

Decile_6// 38.7 - 39.7

Decile_7// 39.7 - 41.0

Decile_8// 41.0 - 42.8

Decile_9// 42.8 - 46.3
Decile_10// 46.3 - 131.5

1b.3. If no or limited performance data on the measure as specified is reported in 1b2, then provide a summary of data from the literature that indicates opportunity for improvement or overall less than optimal performance on the specific focus of measurement.

N/A; we provide performance data in 1b.2.

1b.4. Provide disparities data from the measure as specified (current and over time) by population group, e.g., by race/ethnicity, gender, age, insurance status, socioeconomic status, and/or disability. (*This is required for maintenance of endorsement. Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities included.*) For measures that show high levels of performance, i.e., "topped out", disparities data may demonstrate an opportunity for improvement/gap in care for certain sub-populations. This information also will be used to address the sub-criterion on improvement (4b1) under Usability and Use.

Please note that this is a new measure, not a maintenance measure.

Using 2018 Medicare claims data for 4,659,922 Medicare FFS beneficiaries with multiple chronic conditions (MCCs), the final patient-level model includes two social risk factors: the Agency for Healthcare Research and Quality (AHRQ) Socioeconomic Status (SES) Index (lowest quartile vs. upper three quartiles) and an area-level measure of specialist physician density (lowest quartile vs. upper three quartiles). In the multivariable model that included both of these social risk factors along with the demographic and clinical risk adjusters, we found relatively modest effects for the social risk factor variables. Their rate ratios and 95% confidence intervals were 1.08 (1.07, 1.08) for the AHRQ SES variable and 1.04 (1.04, 1.05) for the specialist density variable.

The measure does not adjust for dual eligibility (DE). Below we show the distribution of measure scores by TINs stratified by the proportion of patients with the DE social risk factor for all TINs with at least one attributed patient.

Quartile for proportion of DE patient (range of proportion)//Q1 (0.0%- 0.0%)//Q2 (0.2%-8.3%)//Q3 (8.3%-28.5%)//Q4 (28.6% - 100.0%)

Number of TINs//17,773//11,578//14,393//14,691

Mean//38.7//38.8//40.5//40.2

Standard Deviation (SD)//3.5//6.5//6.5//6.4

Maximum// 68.5//91.3//104.4//131.5

99th Percentile//50.0//57.7//61.9//62.4

95th Percentile//44.6//50.3//52.2//51.7

90th Percentile//42.5//47.0//48.5//47.4

Upper Quartile//40.3//42.4//43.4//42.4

Median//38.6//38.1//39.4//39.1

Lower Quartile//37.2//34.4//36.4//37.0

10th Percentile//34.9//31.4//33.7//33.9

5th Percentile// 33.3//29.6//31.9//31.6

1st Percentile//29.5//26.1//28.4//26.8

Minimum//20.1//17.5//22.0//18.0

For the 4,044 TINs with at least 15 providers and at least 18 patients, the measure scores by quartile of patients with social risk factors is as follows:

Number of TINs: 118//1,335//1,814//777

Mean: 38.9//39.8//41.9 //42.3

Std Dev: 6.1//7.0//7.4//8.9

Maximum: 63.1//91.3//98.7//77.9

99th Percentile: 57.7//59.3//64.6//71.3

95th Percentile: 49.7//51.3//54.4//58.9

90th Percentile: 47.2//48.0//50.6//54.0

Upper Quartile: 41.3//43.6//46.0//46.9
Median: 38.1//39.3//41.1//40.9
Lower Quartile: 34.5//35.0//36.9//36.2
10th Percentile: 32.5//31.7//33.7//32.4
5th Percentile: 30.8//29.6//31.3//30.3
1st Percentile: 28.8//25.9//28.7//25.8
Minimum: 28.5//20.4//23.7//22.2

For more information about the testing of disparities data, please review section 1.8 and section 2b3.3 in the testing attachment.

1b.5. If no or limited data on disparities from the measure as specified is reported in 1b.4, then provide a summary of data from the literature that addresses disparities in care on the specific focus of measurement. Include citations. Not necessary if performance data provided in 1b.4

Please see testing described in section 1b.4 above and in sections 1.8 and 2b3.3 of the testing attachment.

2. Reliability and Validity—Scientific Acceptability of Measure Properties

Extent to which the measure, as specified, produces consistent (reliable) and credible (valid) results about the quality of care when implemented. **Measures must be judged to meet the sub criteria for both reliability and validity to pass this criterion and be evaluated against the remaining criteria.**

2a.1. Specifications The measure is well defined and precisely specified so it can be implemented consistently within and across organizations and allows for comparability. eMeasures should be specified in the Health Quality Measures Format (HQMF) and the Quality Data Model (QDM).

De.5. Subject/Topic Area (check all the areas that apply):

De.6. Non-Condition Specific(check all the areas that apply):

De.7. Target Population Category (Check all the populations for which the measure is specified and tested if any):

S.1. Measure-specific Web Page (Provide a URL link to a web page specific for this measure that contains current detailed specifications including code lists, risk model details, and supplemental materials. Do not enter a URL linking to a home page or to general information.)

Not applicable.

S.2a. If this is an eMeasure, HQMF specifications must be attached. Attach the zipped output from the eMeasure authoring tool (MAT) - if the MAT was not used, contact staff. (Use the specification fields in this online form for the plain-language description of the specifications)

This is not an eMeasure Attachment:

S.2b. Data Dictionary, Code Table, or Value Sets (and risk model codes and coefficients when applicable) must be attached. (Excel or csv file in the suggested format preferred - if not, contact staff)

Attachment Attachment: [NQF_MIPS_MCC_DataDictionary_07302020-637402642885077993.xlsx](#)

S.2c. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales, etc.)? Attach copy of instrument if available.

No, this is not an instrument-based measure Attachment:

S.2d. Is this an instrument-based measure (i.e., data collected via instruments, surveys, tools, questionnaires, scales,

etc.)? Attach copy of instrument if available.

Not an instrument-based measure

S.3.1. For maintenance of endorsement: Are there changes to the specifications since the last updates/submission. If yes, update the specifications for S1-2 and S4-22 and explain reasons for the changes in S3.2.

No

S.3.2. For maintenance of endorsement, please briefly describe any important changes to the measure specifications since last measure update and explain the reasons.

Not applicable. This is a new measure.

S.4. Numerator Statement (Brief, narrative description of the measure focus or what is being measured about the target population, i.e., cases from the target population with the target process, condition, event, or outcome) DO NOT include the rationale for the measure.

IF an OUTCOME MEASURE, state the outcome being measured. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

The outcome for this measure is the number of acute admissions per 100 person-years at risk for admission during the measurement period.

S.5. Numerator Details (All information required to identify and calculate the cases from the target population with the target process, condition, event, or outcome such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b)

IF an OUTCOME MEASURE, describe how the observed outcome is identified/counted. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

Outcome Definition

The outcome for this measure is the number of acute, unplanned hospital admissions per 100 person-years at risk for admission during the measurement period.

Time Period

Number of admissions are counted while the patient is considered at risk for an admission during the measurement year.

Excluded Admissions

The numerator (outcome) does not include the following admissions because they do not reflect the quality of care provided by ambulatory care clinicians who are managing the care of MCC patients:

1. Planned hospital admissions;
2. Admissions that occur directly from a skilled nursing facility (SNF) or acute rehabilitation facility;
3. Admissions that occur within a 10-day “buffer period” of time after discharge from a hospital, SNF, or acute rehabilitation facility;
4. Admissions that occur after the patient has entered hospice;
5. Admissions related to complications of procedures or surgeries;
6. Admissions related to accidents or injuries; or
7. Admissions that occur prior to the first visit with the assigned clinician or clinician group.

Clarification regarding the 10-day “buffer period”

The 10-day “buffer period” is a numerator (or outcome) exclusion but it also affects the denominator (person-time at risk); see below in Section S.6 and S.7. The 10-day buffer period (10 days following discharge from a hospital) is a period of transition back to community-based care, and other factors in addition to ambulatory care, including care received in the hospital and post-discharge planning, contribute to the risk of admission; therefore, the measure does not hold clinicians accountable for admissions in this timeframe. This buffer period allows time for patients to be seen within 7 days of discharge as recommended in CMS’s Transitional Care Management (TCM) service guidelines and for the ambulatory care provider’s care plan to take effect. CMS’s TCM service guidelines encourage providers to have a face-to-face visit within 7 days of discharge for Medicare patients with high medical decision complexity.

Identification of Planned Admissions

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To identify planned admissions, the measure adopted an algorithm previously developed for CMS's hospital readmission measures, CMS's Planned Readmission Algorithm Version 4.0. [1,2] In brief, the algorithm uses the procedure codes and principal discharge diagnosis code on each hospital claim to identify admissions that are typically planned. A few specific, limited types of care are always considered planned (for example, major organ transplant, rehabilitation, and maintenance chemotherapy). Otherwise, a planned admission is defined as a non-acute admission for a scheduled procedure (for example, total hip replacement or cholecystectomy). Admissions for an acute illness are never considered planned. For specific codes included in the planned admission algorithm please see Tables PAA1-PAA4 with the codes for the CMS Planned Admission Algorithm in the accompanying data dictionary.

Identification of admissions that occur directly from an SNF or acute rehabilitation facility

Claims for SNF and acute rehabilitation facility stays, which help determine the outcome definition, were obtained using CMS's Integrated Data Repository (IDR) and Medicare Provider Analysis and Review (MedPAR) files, respectively.

Identification of admissions that occur after the patient has entered hospice

The status of enrollment in Medicare Parts A and B and Medicare's hospice benefit for the measurement year and the year prior were obtained from the CMS Medicare Enrollment Database.

Identification of admissions related to complications of procedures or surgeries (including small bowel obstruction), and accidents or injuries

Using the Agency for Healthcare Research and Quality's (AHRQ's) Clinical Classifications Software (CCS), which clusters diagnoses into clinically meaningful categories using International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) codes, we exclude from the outcome admissions related to the following 23 CCS categories. For specific ICD codes included, please refer to AHRQ's CCS Version 2019.1, Fiscal Year 2020.

a) Complications of procedures or surgeries

1. 145: Intestinal obstruction without hernia
2. 237: Complication of device; implant or graft
3. 238: Complications of surgical procedures or medical care
4. 257: Other aftercare

b) Accidents or injuries

5. 2601 E Codes: Cut/pierce
6. 2602 E Codes: Drowning/submersion
7. 2604 E Codes: Fire/burn
8. 2605 E Codes: Firearm
9. 2606 E Codes: Machinery
10. 2607 E Codes: Motor vehicle traffic (MVT)
11. 2608 E Codes: Pedal cyclist; not MVT
12. 2609 E Codes: Pedestrian; not MVT
13. 2610 E Codes: Transport; not MVT
14. 2611 E Codes: Natural/environment
15. 2612 E Codes: Overexertion
16. 2613 E Codes: Poisoning
17. 2614 E Codes: Struck by; against
18. 2615 E Codes: Suffocation
19. 2616 E Codes: Adverse effects of medical care
20. 2618 E Codes: Other specified and classifiable
21. 2619 E Codes: Other specified; NEC
22. 2620 E Codes: Unspecified
23. 2621 E Codes: Place of occurrence

Citations

1. Yale New Haven Health Services Corporation – Center for Outcomes Research & Evaluation (YNHHSC/CORE). 2018 All-Cause

Hospital Wide Measure Updates and Specifications Report - Hospital-Level 30-Day Risk-Standardized Readmission Measure – Version 7.0. Centers for Medicare & Medicaid Services; March 2018.

2. 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.

S.6. Denominator Statement (*Brief, narrative description of the target population being measured*)

Patients included in the measure (target patient population)

The target patient population for the outcome includes Medicare FFS patients aged 65 years and older with multiple chronic conditions (MCCs).

Provider types included for measurement

- Primary care providers (PCPs): CMS designates PCPs as physicians who practice internal medicine, family medicine, general medicine, or geriatric medicine, and non-physician providers, including nurse practitioners, certified clinical nurse specialists, and physician assistants.
- Relevant specialists: Specialists covered by the measure are limited to those who provide overall coordination of care for patients with MCCs and who manage the chronic diseases that put the MCCs patients in the measure at risk of admission. These specialists were chosen with input from our Technical Expert Panel (TEP) and include cardiologists, pulmonologists, nephrologists, neurologists, endocrinologists, and hematologists/oncologists. However, as indicated below and in Section S.9, the measure is not designed to assess the quality of care of cancer specialists who are actively managing cancer patients, and thus patients attributed to hematologists and oncologists are excluded from the measure.

Patient attribution

We begin by assigning each patient to the clinician most responsible for the patient's care. The patient can be assigned to a PCP, a relevant specialist, or can be left unassigned.

- A patient who is eligible for attribution can be assigned to a relevant specialist only if the specialist has been identified as "dominant". A specialist is considered "dominant" if they have two or more visits with the patient, as well as at least two more visits than any PCP or other relevant specialist. For example, if a patient saw a cardiologist four times in the measurement year, a PCP twice, and a nephrologist twice, the patient would be assigned to the cardiologist, having met the definition of "dominant" specialist. Note: Hematologists and oncologists are considered relevant specialists as they could be expected to manage MCCs patients' care, especially during periods of acute cancer treatment. However, as indicated below in Section S.9, the measure is not designed to assess the quality of care of cancer specialists who are actively managing cancer patients, and thus patients attributed to hematologists and oncologists are excluded from the measure.
- There are two scenarios where a patient can be assigned to a PCP. First, the patient must have seen at least one PCP. The patient will then be assigned to the PCP with the highest number of visits as long as there is no relevant specialist who is considered "dominant." Second, if the patient has had more than one visit with a relevant specialist but no "dominant" specialist has been identified, and has two or more visits with a PCP, they will be assigned to that PCP.
- Finally, the patient will be unassigned if they only saw non-relevant specialists, if the patient has not seen a PCP and no "dominant" specialist can be identified, or if the patient has not had more than one visit with any individual PCP.

Patients are then assigned at the Taxpayer Identification Number (TIN) level, which includes solo clinicians and groups of clinicians who have chosen to report their quality under a common TIN.

- At the TIN level, patients are first assigned to the clinician (unique National Provider Identifier (NPI)/TIN combination since a given provider can be affiliated with more than one TIN) most responsible for their care (using the algorithm for individual clinician-level attribution above) and then patients "follow" their clinician to the TIN designated by the clinician. Patients unassigned at the individual clinician level continue to be unassigned at the TIN level.

(Note that an alternative attribution approach was considered and assessed as described in section 2b.3.11 of the testing attachment and in Appendix C of the attached methodology report.)

Person-time at risk

Persons are considered at risk for hospital admission if they are alive, enrolled in FFS Medicare, and not in the hospital during the measurement period. In addition to time spent in the hospital, we also exclude from at-risk time: 1) time spent in a SNF or acute rehabilitation facility; 2) the time within 10 days following discharge from a hospital, SNF, or acute rehabilitation facility; and 3) time

after entering hospice care.

S.7. Denominator Details (All information required to identify and calculate the target population/denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b.)

IF an OUTCOME MEASURE, describe how the target population is identified. Calculation of the risk-adjusted outcome should be described in the calculation algorithm (S.14).

Patients included in the measure (target patient population)

The cohort, or group of patients included in the measure, is comprised of patients whose combinations of chronic conditions put them at high risk of admission and whose admission rates could be lowered through better care. This definition reflects NQF's "Multiple Chronic Conditions Measurement Framework," which defines patients with MCCs as people "having two or more concurrent chronic conditions that ... act together to significantly increase the complexity of management, and affect functional roles and health outcomes, compromise life expectancy, or hinder self-management." [1]

The specific inclusion criteria are as follows.

1. Patient is alive at the start of the measurement period and has two or more of nine chronic condition disease groups in the year prior to the measurement period.

Chronic conditions, except for diabetes, are defined using CMS's Chronic Conditions Data Warehouse (CCW). For diabetes, we used the diabetes cohort definition from the Accountable Care Organization (ACO) diabetes admission measure developed by CORE (v2018a ACO-36) as opposed to the definition used in CCW, which includes diagnoses for secondary and drug-induced diabetic conditions that are not the focus of the MIPS MCCs admission measure. See Table 1 in the accompanying data dictionary for the specific codes used to define the nine cohort-qualifying conditions.

1. Acute myocardial infarction (AMI),
2. Alzheimer's disease and related disorders or senile dementia,
3. Atrial fibrillation,
4. Chronic kidney disease (CKD),
5. Chronic obstructive pulmonary disease (COPD) or asthma,
6. Depression,
7. Diabetes,
8. Heart failure, and
9. Stroke or transient ischemic attack (TIA).

Rationale: As noted above, this definition of MCCs is consistent with NQF's "Multiple Chronic Conditions Measurement Framework." The specific list of chronic conditions, except for diabetes, is the same as is used in the MCCs admission measure for ACOs (ACO-38) currently implemented the Medicare Shared Savings Program. This measure has been vetted nationally and published in the literature. [2] In brief, it reflects the chronic conditions that most increased risk of admission. In adapting the ACO measure for the MIPS setting, we added diabetes as a cohort-qualifying condition based on input from our TEP and further guidance from CMS. In addition, the inclusion of diabetes acknowledges the complexity that diabetes introduces to caring for patients with MCCs.

2. Patient is aged ≥65 years at the start of the year prior to the measurement period.

Rationale: Younger Medicare patients represent a distinct population with dissimilar characteristics and outcomes. Additionally, these patients tend to cluster among certain providers. These factors make risk adjustment difficult.

3. Patient is a Medicare FFS beneficiary with continuous enrollment in Medicare Parts A and B during the year prior to the measurement period.

Rationale: Enrollment is necessary to provide clinical information for cohort identification and risk adjustment.

Provider types included for measurement

Because we use the outcome of acute, unplanned admissions to assess quality, we limit the clinicians covered by the measure to two categories of providers for whom this outcome reflects care quality. This includes primary care providers (PCPs) and a subset of specialists who manage the care of MCCs patients.

Primary Care Providers - CMS designates PCPs as physicians who practice:

1. Internal medicine,
2. Family medicine,
3. General medicine, or
4. Geriatric medicine; and

The following non-physician clinicians:

1. Nurse practitioners,
2. Certified clinical nurse specialists, and
3. Physician assistants. [3]

Relevant specialists - Based on input from the TEP, specialists covered by the measure are limited to those who plausibly provide overall coordination of care for patients with MCCs and who manage the chronic diseases that put the MCCs patients in the measure at risk of admission. These “relevant” specialists, defined using the Medicare Provider Specialty Codes (see Table 4 in the accompanying data dictionary), are:

1. Cardiologists,
2. Pulmonologists,
3. Nephrologists,
4. Neurologists,
5. Endocrinologists, and
6. Hematologists/oncologists.

Note: Hematologists and oncologists are considered relevant specialists as they could be expected to manage MCCs patients’ care, especially during periods of acute cancer treatment. However, as indicated below in Section S.9, the measure is not designed to assess the quality of care of cancer specialists who are actively managing cancer patients, and thus patients attributed to hematologists and oncologists are excluded from the measure.

Patient attribution

As noted in field Section S.6., we use a visit-based algorithm to assign MCCs patients to the individual clinician most responsible for their care. The attribution approach uses the plurality of Evaluation and Management (E&M) visits. (Please see Table 3 in the accompanying data dictionary for specific codes.) Focusing on visits over charges when assigning responsibility acknowledges the importance of provider interaction with the patient in establishing accountability for outcomes. In most instances, the provider with the most visits is a PCP.

Citations

1. National Quality Forum. Multiple Chronic Conditions Measurement Framework. <http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=71227>. Accessed February 20, 2019.
2. Drye EE, Altaf FK, Lipska KJ, et al. Defining Multiple Chronic Conditions for Quality Measurement. *Med Care*. 2018;56(2):193-201.
3. Centers for Medicare & Medicaid Services. Medicare Claims Processing Manual Chapter 4 - Part B Hospital (Including Inpatient Hospital Part B and OPPTS) (section 250.12.1). <https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/clm104c04.pdf>. Accessed February 20, 2019.

S.8. Denominator Exclusions *(Brief narrative description of exclusions from the target population)*

We exclude patients from the cohort for these reasons:

1. Patients without continuous enrollment in Medicare Part A or B during the measurement period.
2. Patients enrolled in hospice at any time during the year prior to the measurement year or at start of the measurement year.
3. Patients with no E&M visit to a MIPS eligible clinician.
4. Patients assigned to clinicians who do not participate in the QPP on the MIPS track.
5. Patients attributed to hematologists and oncologists.

6. Patients not at risk for hospitalization during the measurement year.

S.9. Denominator Exclusion Details *(All information required to identify and calculate exclusions from the denominator such as definitions, time period for data collection, specific data collection items/responses, code/value sets – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format at S.2b.)*

The rationale for each exclusion is provided below:

1. Patients without continuous enrollment in Medicare Part A or B during the measurement period.

Rationale: The measure excludes these patients to ensure full data availability for outcome assessment and attribution.

2. Patients enrolled in hospice at any time during the year prior to the measurement year or at start of the measurement year.

Rationale: The measure excludes these patients even though once a patient enters hospice care, a goal of care is to prevent the need for hospital care. However, ambulatory care providers may have relatively little influence on end-of-life care once a patient is enrolled in hospice and served by a hospice team.

3. Patients with no E&M visit to a MIPS eligible clinician.

Rationale: The measure excludes these patients because they could not be attributed to a provider using the visit-based attribution algorithm (see Section 5.6 for details).

4. Patients assigned to clinicians who do not participate in the QPP on the MIPS track.

Rationale: These patients are excluded because the clinicians to whom they are assigned do not participate in MIPS.

5. Patients attributed to hematologists and oncologists.

Rationale: The outcomes for patients who are predominantly cared for by hematologists and oncologists, including patients actively being managed for cancer, are unlikely to reflect the quality of care provided by primary care provider (PCP) or other relevant specialists. The aim of this measure is not to assess the quality of care during such instances of active cancer treatment. Excluding patients assigned to hematologists and oncologists takes out of the measure patients who are being actively treated for cancer during the measurement period but retains in the measure patients with MCCs who have a history of cancer or are occasionally being seen by a cancer specialist for follow-up.

6. Patients not at risk for hospitalization during the measurement year.

Rationale: The outcomes for these patients cannot be assessed as they are not at risk. For example, if the first attributed visit occurred after the patient has entered hospice, the patient would not have any time at risk and would thus be excluded. See section 2.4.3 of the attached methodology report for methods used to calculate person-time at risk.

Clarification of 10-day buffer period:

The 10-day “buffer period” is a numerator (or outcome) exclusion (see section 5.5) but it also affects the denominator (person-time at risk). Persons are considered at risk for hospital admission if they are alive, enrolled in FFS Medicare, and not in the hospital during the measurement period. In addition to time spent in the hospital, we also exclude from at-risk time: 1) time spent in a SNF or acute rehabilitation facility; 2) the time within 10 days following discharge from a hospital, SNF, or acute rehabilitation facility; and 3) time after entering hospice care. Note that the patient is not removed from the denominator, we are just subtracting the 10-days of person-time.

The 10-day buffer period (10 days following discharge from a hospital) is a period of transition back to community-based care, and other factors in addition to ambulatory care, including care received in the hospital and post-discharge planning, contribute to the risk of admission; therefore, the measure does not hold clinicians accountable for admissions in this timeframe. This buffer period allows time for patients to be seen within 7 days of discharge as recommended in CMS’s Transitional Care Management (TCM) service guidelines and for the ambulatory care provider’s care plan to take effect. CMS’s TCM service guidelines encourage providers to have a face-to-face visit within 7 days of discharge for Medicare patients with high medical decision complexity.

S.10. Stratification Information *(Provide all information required to stratify the measure results, if necessary, including the stratification variables, definitions, specific data collection items/responses, code/value sets, and the risk-model covariates and coefficients for the clinically-adjusted version of the measure when appropriate – Note: lists of individual codes with descriptors that exceed 1 page should be provided in an Excel or csv file in required format with at S.2b.)*

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N/A; this measure is not stratified.

S.11. Risk Adjustment Type (Select type. Provide specifications for risk stratification in measure testing attachment)

Statistical risk model

If other:

S.12. Type of score:

Rate/proportion

If other:

S.13. Interpretation of Score (Classifies interpretation of score according to whether better quality is associated with a higher score, a lower score, a score falling within a defined interval, or a passing score)

Better quality = Lower score

S.14. Calculation Algorithm/Measure Logic (Diagram or describe the calculation of the measure score as an ordered sequence of steps including identifying the target population; exclusions; cases meeting the target process, condition, event, or outcome; time period for data, aggregating data; risk adjustment; etc.)

We begin by identifying the cohort of patients with MCCs by applying the inclusion/exclusion criteria. We then use the attribution algorithm to assign patients to TINs. Patients are assigned to the individual clinician most responsible for their care, and then subsequently to the TIN designated by the clinician, using our visit-based attribution algorithm. Attribution is done in the measurement period and only patients assigned to a MIPS-eligible clinician will be included in the measure score calculation. The number of admissions and time at risk in the measurement period are then calculated for each patient based on our measure specifications. The measure is risk-adjusted for demographic, clinical, and social risk factors. For the score calculation, the measure uses a hierarchical (two-level) statistical model that accounts for the clustering of patients within MIPS providers and accommodates the varying patient sample sizes of different providers. The measure uses a negative binomial with linear variance (NB-1) model since the measure's outcome is a count of the number of admissions for MCCs patients during the measurement period. The first level of the model adjusts for patient factors. The relationship between patient risk factors and the outcome of admissions is determined based on all patients attributed to MIPS-eligible clinicians. Therefore, the "expected" number of admissions (described below) for each provider is based on the performance of all eligible MIPS providers nationwide.

The second level of the model estimates a random-intercept term that reflects the provider's contribution to admission risk, based on their actual admission rate, the performance of other providers, their case mix, and their sample size.

The measure score is a risk-standardized acute admission rate (RSAAR), calculated as the ratio of the number of predicted admissions to the number of expected admissions multiplied by the crude national rate. The predicted to expected ratio of admissions is analogous to an observed over expected ratio, but the numerator accounts for clustering, sample-size variation, and provider-specific performance. The expected number of admissions is calculated based on the provider's case mix and average intercept among all MIPS providers. The predicted number of admissions is calculated based on the provider's case mix and the estimated provider-specific random intercept term. We multiply the predicted to expected ratio for each provider by a constant – the crude rate of acute, unplanned admissions among all MIPS providers – for ease of interpretation.

S.15. Sampling (If measure is based on a sample, provide instructions for obtaining the sample and guidance on minimum sample size.)

IF an instrument-based performance measure (e.g., PRO-PM), identify whether (and how) proxy responses are allowed.

N/A; this measure is not based on a sample.

S.16. Survey/Patient-reported data (If measure is based on a survey or instrument, provide instructions for data collection and guidance on minimum response rate.)

Specify calculation of response rates to be reported with performance measure results.

N/A; this measure is not based on a survey or instrument.

S.17. Data Source (Check ONLY the sources for which the measure is SPECIFIED AND TESTED).

If other, please describe in S.18.

Claims, Enrollment Data, Other

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S.18. Data Source or Collection Instrument (Identify the specific data source/data collection instrument (e.g. name of database, clinical registry, collection instrument, etc., and describe how data are collected.)

IF instrument-based, identify the specific instrument(s) and standard methods, modes, and languages of administration.

Medicare administrative claims and enrollment data, American Community Survey, Area Health Resource Files; dates vary; see Section 1.7 of the testing attachment for details.

S.19. Data Source or Collection Instrument (available at measure-specific Web page URL identified in S.1 OR in attached appendix at A.1)

No data collection instrument provided

S.20. Level of Analysis (Check ONLY the levels of analysis for which the measure is SPECIFIED AND TESTED)

Clinician : Group/Practice

S.21. Care Setting (Check ONLY the settings for which the measure is SPECIFIED AND TESTED)

Outpatient Services

If other:

S.22. COMPOSITE Performance Measure - Additional Specifications (Use this section as needed for aggregation and weighting rules, or calculation of individual performance measures if not individually endorsed.)

N/A; this measure is not a composite.

2. Validity – See attached Measure Testing Submission Form

NQF_MIPS_MCC_TestingForm_110520-637418981680116771.docx

2.1 For maintenance of endorsement

Reliability testing: If testing of reliability of the measure score was not presented in prior submission(s), has reliability testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.

No

2.2 For maintenance of endorsement

Has additional empirical validity testing of the measure score been conducted? If yes, please provide results in the Testing attachment. Please use the most current version of the testing attachment (v7.1). Include information on all testing conducted (prior testing as well as any new testing); use red font to indicate updated testing.

No

2.3 For maintenance of endorsement

Risk adjustment: For outcome, resource use, cost, and some process measures, risk-adjustment that includes social risk factors is not prohibited at present. Please update sections 1.8, 2a2, 2b1, 2b4.3 and 2b5 in the Testing attachment and S.140 and S.11 in the online submission form. NOTE: These sections must be updated even if social risk factors are not included in the risk-adjustment strategy. You MUST use the most current version of the Testing Attachment (v7.1) -- older versions of the form will not have all required questions.

No - This measure is not risk-adjusted

3. Feasibility

Extent to which the specifications including measure logic, require data that are readily available or could be captured without undue burden and can be implemented for performance measurement.

3a. Byproduct of Care Processes

For clinical measures, the required data elements are routinely generated and used during care delivery (e.g., blood pressure, lab test, diagnosis, medication order).

3a.1. Data Elements Generated as Byproduct of Care Processes.

Coded by someone other than person obtaining original information (e.g., DRG, ICD-9 codes on claims)

If other:

3b. Electronic Sources

The required data elements are available in electronic health records or other electronic sources. If the required data are not in electronic health records or existing electronic sources, a credible, near-term path to electronic collection is specified.

3b.1. To what extent are the specified data elements available electronically in defined fields (i.e., data elements that are needed to compute the performance measure score are in defined, computer-readable fields) Update this field for **maintenance of endorsement**.

ALL data elements are in defined fields in a combination of electronic sources

3b.2. If ALL the data elements needed to compute the performance measure score are not from electronic sources, specify a credible, near-term path to electronic capture, OR provide a rationale for using other than electronic sources. For **maintenance of endorsement**, if this measure is not an eMeasure (eCQM), please describe any efforts to develop an eMeasure (eCQM).

N/A; all data elements are from electronic sources.

3b.3. If this is an eMeasure, provide a summary of the feasibility assessment in an attached file or make available at a measure-specific URL. Please also complete and attach the NQF Feasibility Score Card.

Attachment:

3c. Data Collection Strategy

Demonstration that the data collection strategy (e.g., source, timing, frequency, sampling, patient confidentiality, costs associated with fees/licensing of proprietary measures) can be implemented (e.g., already in operational use, or testing demonstrates that it is ready to put into operational use). For eMeasures, a feasibility assessment addresses the data elements and measure logic and demonstrates the eMeasure can be implemented or feasibility concerns can be adequately addressed.

3c.1. Required for maintenance of endorsement. Describe difficulties (as a result of testing and/or operational use of the measure) regarding data collection, availability of data, missing data, timing and frequency of data collection, sampling, patient confidentiality, time and cost of data collection, other feasibility/implementation issues.

IF instrument-based, consider implications for both individuals providing data (patients, service recipients, respondents) and those whose performance is being measured.

This measure uses administrative claims data and, as such, imposes no data collection burden to measure entities.

3c.2. Describe any fees, licensing, or other requirements to use any aspect of the measure as specified (e.g., value/code set, risk model, programming code, algorithm).

N/A; there are no fees, licensing, or other requirements to use any aspect of this measure as specified.

4. Usability and Use

Extent to which potential audiences (e.g., consumers, purchasers, providers, policy makers) are using or could use performance results for both accountability and performance improvement to achieve the goal of high-quality, efficient healthcare for individuals or populations.

4a. Accountability and Transparency

Performance results are used in at least one accountability application within three years after initial endorsement and are publicly reported within six years after initial endorsement (or the data on performance results are available). If not in use at the time of initial endorsement, then a credible plan for implementation within the specified timeframes is provided.

4.1. Current and Planned Use

NQF-endorsed measures are expected to be used in at least one accountability application within 3 years and publicly reported within 6 years of initial endorsement in addition to performance improvement.

Specific Plan for Use	Current Use (for current use provide URL)
Payment Program	

Not in use

4a1.1 For each CURRENT use, checked above (update for maintenance of endorsement), provide:

- Name of program and sponsor
- Purpose
- Geographic area and number and percentage of accountable entities and patients included
- Level of measurement and setting

N/A; the measure is not yet in use.

4a1.2. If not currently publicly reported OR used in at least one other accountability application (e.g., payment program, certification, licensing) what are the reasons? (e.g., Do policies or actions of the developer/steward or accountable entities restrict access to performance results or impede implementation?)

N/A; the measure is not currently publicly reported or used in an accountability application. CMS may propose this measure for use under the Merit-based Incentive Payment System.

4a1.3. If not currently publicly reported OR used in at least one other accountability application, provide a credible plan for implementation within the expected timeframes -- any accountability application within 3 years and publicly reported within 6 years of initial endorsement. (Credible plan includes the specific program, purpose, intended audience, and timeline for implementing the measure within the specified timeframes. A plan for accountability applications addresses mechanisms for data aggregation and reporting.)

N/A; the measure is not currently publicly reported or used in an accountability application. CMS may propose this measure for use under the Merit-based Incentive Payment System.

4a2.1.1. Describe how performance results, data, and assistance with interpretation have been provided to those being measured or other users during development or implementation.

How many and which types of measured entities and/or others were included? If only a sample of measured entities were included, describe the full population and how the sample was selected.

During development of the measure, CORE and CMS provided performance results, data, and/or assistance with interpretation in several ways.

1) CORE recruited and met with a national Technical Expert Panel (TEP) throughout measure development. TEP members and commenters included representatives of the measured entities and patients covered by the measure to ensure the measure is as meaningful as possible to all stakeholders. CORE provided performance results and data to TEP members periodically for their review and input. CORE reviewed, considered, and responded to all TEP input.

2) CORE hosted a public comment after reviewing the measure with the TEP. We notified CMS listservs, CORE's stakeholders and stakeholder organization listservs including:

- ? Business and consumer advocacy organizations.
- ? Condition-related registries.
- ? Electronic Health Record vendors.
- ? Healthcare quality-focused organizations.
- ? Insurance and purchaser organizations.
- ? National professional associations and clinician societies.
- ? Patient advocacy groups and patient safety organizations.
- ? Quality improvement and measurement organizations.
- ? Research organizations.
- ? State medical societies.
- ? Topic knowledge-related organizations.
- ? The project's national Technical Expert Panel (TEP).

? TEPs and Clinician Committees for related MIPS cost or quality measures under development not covered by this project.

CORE solicited public comments on the measure, and we took all comments into consideration, addressing them individually.

Therefore, performance results and data were provided to members of the TEP and then made public through public comment.

3) CORE presented the measure to clinicians and practice managers in the voluntary Clinician Champions Program to elicit feedback.

4) CORE presented the measure at national conferences (CMS Quality Conference, Academy Health).

5) CMS included the measure in pre-rulemaking (MAP) and rulemaking (proposed rule) processes. CMS added the measures to the 2019 Measures Under Consideration list for NQF Measures Application Partnership (MAP) review and included it in the Calendar Year 2020 Quality Payment Program proposed rule for stakeholder comment. The NQF MAP reviewed the measure in December 2019 as part of the 2019-2020 pre-rulemaking cycle and included it in their public comment processes as well. CORE and CMS reviewed all comments received on the measure and addressed them through the MAP review and CMS regulatory processes, respectively.

4a2.1.2. Describe the process(es) involved, including when/how often results were provided, what data were provided, what educational/explanatory efforts were made, etc.

CORE met with the TEP periodically and hosted a public comment period during measure development. CORE provided data and results to the TEP and obtained TEP input during four teleconference meetings throughout the measure development process and solicited TEP input via email. CORE presented the measure to the voluntary Clinician Champions and at conferences (CMS Quality Conference, Academy Health) during development, and supported the measure during the MAP's review in fall/winter 2019.

4a2.2.1. Summarize the feedback on measure performance and implementation from the measured entities and others described in 4d.1.

Describe how feedback was obtained.

The measure has not yet been implemented. During measure development, feedback was obtained as described above in 4a2.1.1.

4a2.2.2. Summarize the feedback obtained from those being measured.

The measure has not yet been implemented. Feedback during measure development included recommendations from the TEP with regards to the criteria for inclusion/exclusion of the cohort, outcome definition, risk adjustment, and attribution.

4a2.2.3. Summarize the feedback obtained from other users

The measure is not currently in use. Feedback from the MAP included support for the measure concept but the MAP recommended specific changes to measure specifications: (1) measure should be specified for clinician groups only; (2) minimum reliability should be set at 0.7; (3) patient attestation should be tested by the developer as it becomes available and override claims-based attribution algorithm.

4a2.3. Describe how the feedback described in 4a2.2.1 has been considered when developing or revising the measure specifications or implementation, including whether the measure was modified and why or why not.

In response to MAP feedback described above, the measure was defined for clinician groups and testing results were presented for clinician groups including at least 15 providers. Various cut-points for measure reliability were considered and tested, including a minimum reliability of 0.4 (at least 18 patients with MCC attributed per TIN). The reliability of 0.4 was selected to align with reliability for other MIPS measures and to optimize applicability of the measure to larger proportion of patients with MCCs, provider groups, and to optimize capture of the outcome. Patient attestation has not yet been tested.

Improvement

Progress toward achieving the goal of high-quality, efficient healthcare for individuals or populations is demonstrated. If not in use for performance improvement at the time of initial endorsement, then a credible rationale describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

4b1. Refer to data provided in 1b but do not repeat here. Discuss any progress on improvement (trends in performance results, number and percentage of people receiving high-quality healthcare; Geographic area and number and percentage of accountable entities and patients included.)

If no improvement was demonstrated, what are the reasons? If not in use for performance improvement at the time of initial endorsement, provide a credible rationale that describes how the performance results could be used to further the goal of high-quality, efficient healthcare for individuals or populations.

This is a new measure and there is no information available on performance improvement. This measure is not currently used in a program, but the primary goal of the measure is to provide information necessary to implement focused quality improvement

efforts. Providers could use the measure information to implement practice improvements, such as those outlined in the Evidence attachment. Practice features that are associated with successfully reducing hospitalization include 1) supplementing patient telephone calls with in-person meetings; 2) occasionally meeting in person with providers; 3) acting as a communication hub for providers; 4) providing patients with evidence-based education; 5) providing strong medication management; and 6) providing comprehensive and timely transitional care after hospitalizations.

Once the measure is implemented, we plan to examine trends in improvements by comparing RSAARs over time.

4b2. Unintended Consequences

The benefits of the performance measure in facilitating progress toward achieving high-quality, efficient healthcare for individuals or populations outweigh evidence of unintended negative consequences to individuals or populations (if such evidence exists).

4b2.1. Please explain any unexpected findings (positive or negative) during implementation of this measure including unintended impacts on patients.

N/A;the measure is not yet in use.

4b2.2. Please explain any unexpected benefits from implementation of this measure.

N/A;the measure is not yet in use.

5. Comparison to Related or Competing Measures

If a measure meets the above criteria and there are endorsed or new related measures (either the same measure focus or the same target population) or competing measures (both the same measure focus and the same target population), the measures are compared to address harmonization and/or selection of the best measure.

5. Relation to Other NQF-endorsed Measures

Are there related measures (conceptually, either same measure focus or target population) or competing measures (conceptually both the same measure focus and same target population)? If yes, list the NQF # and title of all related and/or competing measures.

Yes

5.1a. List of related or competing measures (selected from NQF-endorsed measures)

2888 : Accountable Care Organization Risk-Standardized Acute Hospital Admission Rate for Patients with Multiple Chronic Conditions

5.1b. If related or competing measures are not NQF endorsed please indicate measure title and steward.

5a. Harmonization of Related Measures

The measure specifications are harmonized with related measures;

OR

The differences in specifications are justified

5a.1. If this measure conceptually addresses EITHER the same measure focus OR the same target population as NQF-endorsed measure(s):

Are the measure specifications harmonized to the extent possible?

Yes

5a.2. If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden.

The measure specifications are harmonized to the fullest extent possible. The only differences are for the CMS programs and measurement levels for which they are intended: for example, the MIPS measure is attributed and scored for clinician groups under MIPS, and the ACO MCC admission measure is attributed and scored for Medicare ACOs.

5b. Competing Measures

The measure is superior to competing measures (e.g., is a more valid or efficient way to measure);

OR

Multiple measures are justified.

5b.1. If this measure conceptually addresses both the same measure focus and the same target population as NQF-endorsed measure(s):

Describe why this measure is superior to competing measures (e.g., a more valid or efficient way to measure quality); OR provide a rationale for the additive value of endorsing an additional measure. (Provide analyses when possible.)

N/A;there are no competing measures.

Appendix

A.1 Supplemental materials may be provided in an appendix. All supplemental materials (such as data collection instrument or methodology reports) should be organized in one file with a table of contents or bookmarks. If material pertains to a specific submission form number, that should be indicated. Requested information should be provided in the submission form and required attachments. There is no guarantee that supplemental materials will be reviewed.

Attachment **Attachment:** [MIPSMCCMethodologyReport_v1.0.pdf](#)

Contact Information

Co.1 Measure Steward (Intellectual Property Owner): [Centers for Medicare & Medicaid Services](#)

Co.2 Point of Contact: [Helen, Dollar-Maples, Helen.Dollar-Maples@cms.hhs.gov, 410-786-7214-](#)

Co.3 Measure Developer if different from Measure Steward: [Yale New Haven Health Services Corporation/Center for Outcomes Research and Evaluation \(YNHHSC/CORE\)](#)

Co.4 Point of Contact: [Doris, Peter, Doris.peter@yale.edu, 203-764-5700-](#)

Additional Information

Ad.1 Workgroup/Expert Panel involved in measure development

Provide a list of sponsoring organizations and workgroup/panel members' names and organizations. Describe the members' role in measure development.

The CORE measure development team met regularly and is comprised of experts in epidemiology, internal medicine, quality outcomes measurement, and measure development. CORE convened surgical and statistical consultants with expertise relevant to outpatient surgery and quality measurement to provide input on key methodological decisions.

CORE Measure Development Team:

Mayur M. Desai, PhD, MPH – Project Lead

Kasia J. Lipska, MD, MHS – Project Lead

Faseeha K. Altaf, MPH – Project Manager

Demetri Goutos, MBA – Research Associate/Project Coordinator

Craig S. Parzynski, MS – Supervising Analyst

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Jeph Herrin, PhD+ – Statistical Consultant

Megan LoDolce, MA – Contract Manager

Elizabeth E. Drye, MD, SM* – Project Director

+Flying Buttress Associates

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CORE convened a TEP comprised of 20 members, including clinicians, patients, and experts in quality improvement to provide input on key methodological decisions.

TEP members:

1. Mary Barton, MD, MPP; Vice President, Performance Measurement; National Committee for Quality Assurance; Washington, D.C.

2. Larry Becker, BS; Director, Strategic Partnerships, Alliances and Analytics (Retired); Xerox; Rochester, NY

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3. Jacob Berman, MD, MPH; Medical Director; General Internal Medicine Center, University of Washington; Seattle, WA
 4. Jane Brock, MD, MSPH; Clinical Director; Quality Innovation Network – Quality Improvement Organization National Coordinating Center, Telligen; Greenwood Village, CO
 5. Brenda Cook, MSN, RN, NEA-BC; Nursing Director; Southcentral Foundation; Anchorage, AK
 6. Namirah Jamshed, MBBS; Associate Professor, Division of Geriatric Medicine; University of Texas Southwestern Medical Center; Dallas, TX
 7. Lorie Joseph; Patient
 8. David Kraus, MD; Advanced Heart Failure and Cardiac Transplant Specialist; Stern Cardiovascular Center; Memphis, TN
 9. Rozalina McCoy, MD, MS; Assistant Professor of Medicine; Mayo Clinic; Rochester, MN
 10. J. Michael McWilliams, MD, PHD; Associate Professor, Health Care Policy; Harvard Medical School; Cambridge, MA
 11. Amy Mullins, MD, CPE, FAFAP; Medical Director, Quality Improvement; American Academy of Family Physicians; Leawood, KS
 12. Diane Padden, PhD, CRNP, FAANP; Vice President, Professional Practice & Partnerships; American Association of Nurse Practitioners; Austin, TX
 13. Robert Roca, MD, MPH, MBA; Vice President/Medical Director; Sheppard Pratt Health System/American Psychiatric Association; Baltimore, MD
 14. Jason Sico, MD, MHS, FAHA, FACP; Assistant Professor of Neurology and Internal Medicine; Yale School of Medicine; New Haven, CT
 15. Mary Smith, DNP, FNP-BC, ONP-C, RNFA; Nurse Practitioner; Starkville Orthopedic Clinic; Starkville, MS
 16. Barbara Spivak, MD; President; Mount Auburn Cambridge Independent Practice Association; Brighton, MA
 17. Jennefer Watson, Patient Caregiver; Jacksonville, FL
 Daniel Weiner, MD, MS; Associate Professor of Medicine; Tufts University School of Medicine; Boston, MA
 18. Roger Wells, PA-C; Family Practice and Emergency Medicine Physician Assistant; Howard County Medical Center; St. Paul, NE
 19. Stephanie Wolf-Rosenblum, MD, MMM, FACP, FCCP; Physician Administrator and Vice President of Development and External Affairs; Southern New Hampshire Health System; Nashua, NH
 Patient; Participation was confidential

Measure Developer/Steward Updates and Ongoing Maintenance

Ad.2 Year the measure was first released:

Ad.3 Month and Year of most recent revision:

Ad.4 What is your frequency for review/update of this measure? N/A

Ad.5 When is the next scheduled review/update for this measure?

Ad.6 Copyright statement: N/A

Ad.7 Disclaimers: N/A

Ad.8 Additional Information/Comments: N/A