



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 #: 0228

Corresponding Measures:

De.2. Measure Title: 3-Item Care Transition Measure (CTM-3)

Co.1.1. Measure Steward: University of Colorado Denver Anschutz Medical Campus

De.3. Brief Description of Measure: The CTM-3 is a hospital level measure of performance that reports the average patient reported quality of preparation for self-care response among adult patients discharged from general acute care hospitals within the past 30 days.

1b.1. Developer Rationale: Discharge from the acute care hospital is increasingly recognized as a time of heightened vulnerability for lapses in safety and quality. (1-3) The combination of higher clinical acuity and shorter lengths of stay has contributed to an increased complexity of hospital discharge instructions and higher expectations for patients to perform challenging self-care activities. Many factors may contribute to patients' lack of understanding or execution of their discharge instructions. The sheer volume of information conveyed in the relatively brief period allotted for hospital discharge education presents a significant challenge. This is likely compounded by the influence of acute illness, sleep deprivation, and medication side effects commonly experienced by hospitalized patients. As a result, many patients return home from the hospital with only a limited understanding of their discharge instructions. Multiple studies have shown that patients often are unable to recall their discharge diagnoses or treatment plan (4-6) or to articulate how they are to take their prescribed medications. (3,7-9) Such lack of understanding may have serious consequences, leading to preventable decline in health and functional status, suboptimal chronic illness management, and harm related to adverse effects from medications. Poorly executed transitions contribute to hospital readmissions with annual Medicare costs estimated at \$17 billion. (10)

1. Coleman EA, Berenson R. Lost in transition: challenges and opportunities for improving the quality of transitional care. *Ann Intern Med.* 2004;141:533-536.
2. Coleman EA. Falling through the cracks: challenges and opportunities for improving transitional care for persons with continuous complex care needs. *J Am Geriatr Soc.* 2003;51:549-555.
3. Institute of Medicine. *Crossing the Quality Chasm: A New Health System for the 21st Century.* Washington, DC: National Academies Press; 2001.
4. Makaryus A, Friedman E. Patients' understanding of their treatment plans and diagnosis at discharge. *Mayo Clin Proc.* 2005;80:991-994.
5. Parkin D, Henney C, Quirk J, Crooks J. Deviation from prescribed drug treatment after discharge from hospital. *Br Med J.* 1976;2:686-688.
6. Kravitz R, Reuben D, Davis J, et al. Geriatric home assessment after hospital discharge. *J Am Geriatr Soc.* 1994;42: 1229-1234.
7. Beers M, Sliwowski J, Brooks J. Compliance with medication orders among the elderly after hospital discharge. *Hosp Formul.* 1992;27:720-724.
8. Dudas V, Bookwalter T, Kerr K, Pantilat S. The impact of follow-up telephone calls to patients after hospitalization. *Am J Med.* 2001;111(9B):26S-30S.
9. Agency for Healthcare Research and Quality. *MedicalErrors: The Scope of the Problem (Fact Sheet, Publication No. AHRQ 00-P037).* Rockville, MD: Agency for Healthcare Research and Quality; 2000.
10. Jencks SF, Williams MV, Coleman EA. Rehospitalizations among patients in the Medicare Fee-for-Service program. *New England Journal of Medicine.* 2009;360(14):1418-1428. PMID: 19339721. doi: 10.1056/NEJMsa0803563

S.4. Numerator Statement: The numerator is the hospital level sum of CTM-3 scores for all eligible sampled patients.

S.6. Denominator Statement: The denominator includes the number of eligible sampled adult patients discharged from a general

acute care hospital. S.8. Denominator Exclusions: N/A
De.1. Measure Type: Outcome: PRO-PM S.17. Data Source: Instrument-Based Data S.20. Level of Analysis: Facility
IF Endorsement Maintenance – Original Endorsement Date: May 05, 2010 Most Recent Endorsement Date: Jan 07, 2015
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?

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. <i>Measures must be judged to meet all sub criteria to pass this criterion and be evaluated against the remaining criteria.</i>
<p>1a. Evidence to Support the Measure Focus – See attached Evidence Submission Form NQF_0228_CTM_3_Measure_Evidence-636609463330131880.docx, nqf_evidence_CTM_0228_attachment_7.1-636609463330131880.pdf</p> <p>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. No</p>
<p>1b. Performance Gap Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating:</p> <ul style="list-style-type: none"> considerable variation, or overall less-than-optimal performance, in the quality of care across providers; and/or Disparities in care across population groups. <p>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) <i>If a COMPOSITE (e.g., combination of component measure scores, all-or-none, any-or-none), SKIP this question and answer the composite questions.</i></p> <p>Discharge from the acute care hospital is increasingly recognized as a time of heightened vulnerability for lapses in safety and quality. (1-3) The combination of higher clinical acuity and shorter lengths of stay has contributed to an increased complexity of hospital discharge instructions and higher expectations for patients to perform challenging self-care activities. Many factors may contribute to patients' lack of understanding or execution of their discharge instructions. The sheer volume of information conveyed in the relatively brief period allotted for hospital discharge education presents a significant challenge. This is likely compounded by the influence of acute illness, sleep deprivation, and medication side effects commonly experienced by hospitalized patients. As a result, many patients return home from the hospital with only a limited understanding of their discharge instructions. Multiple studies have shown that patients often are unable to recall their discharge diagnoses or treatment plan (4-6) or to articulate how they are to take their prescribed medications. (3,7-9) Such lack of understanding may have serious consequences, leading to preventable decline in health and functional status, suboptimal chronic illness management, and harm related to adverse effects from medications. Poorly executed transitions contribute to hospital readmissions with annual Medicare costs estimated at \$17 billion. (10)</p> <p>1. Coleman EA, Berenson R. Lost in transition: challenges and opportunities for improving the quality of transitional care. <i>Ann Intern Med.</i> 2004;141:533-536. 2. Coleman EA. Falling through the cracks: challenges and opportunities for improving transitional care for persons with continuous complex care needs. <i>J Am Geriatr Soc.</i> 2003;51:549-555.</p>

3. Institute of Medicine. Crossing the Quality Chasm: A New Health System for the 21st Century. Washington, DC: National Academies Press; 2001.
4. Makaryus A, Friedman E. Patients' understanding of their treatment plans and diagnosis at discharge. Mayo Clin Proc. 2005;80:991-994.
5. Parkin D, Henney C, Quirk J, Crooks J. Deviation from prescribed drug treatment after discharge from hospital. Br Med J. 1976;2:686-688.
6. Kravitz R, Reuben D, Davis J, et al. Geriatric home assessment after hospital discharge. J Am Geriatr Soc. 1994;42: 1229-1234.
7. Beers M, Sliwowski J, Brooks J. Compliance with medication orders among the elderly after hospital discharge. Hosp Formul. 1992;27:720-724.
8. Dudas V, Bookwalter T, Kerr K, Pantilat S. The impact of follow-up telephone calls to patients after hospitalization. Am J Med. 2001;111(9B):265-305.
9. Agency for Healthcare Research and Quality. MedicalErrors: The Scope of the Problem (Fact Sheet, Publication No. AHRQ 00-P037). Rockville, MD: Agency for Healthcare Research and Quality; 2000.
10. Jencks SF, Williams MV, Coleman EA. Rehospitalizations among patients in the Medicare Fee-for-Service program. New England Journal of Medicine. 2009;360(14):1418-1428. PMID: 19339721. doi: 10.1056/NEJMsa0803563

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.

Please refer to the data provided below as well as provided in the appendix executive summaries of current measure performance scores:

- Executive Summary—State of Maine Department of Health/ Maine Health Data Organization(July 2013-July 2014)
- Executive Summary - Community-based Care Transition Program (CCTP) – August 2013-April 2014
- Executive Summary – HCAHPS Experience using CTM-3 (Q1 – Q3 2013)

#1: Maine Quality Forum recommended and Maine Health Data Organization promulgated rules mandating all 38 Maine hospitals survey and publicly report 3-Item Care Transition Measure (CTM) scores. This effort preceded the incorporation of CTM into HCAHPS (discussed further below).

Maine Health Management Coalition began reporting CTM data on GetBetterMaine.org website in April 2012. The next scheduled public reporting for CTM data will occur in July 2014 (when a full four quarters of data will be available).

For 2013, the statewide mean CTM score for all 38 general acute care hospitals was 87.95. The number of respondents per hospital ranged from 49 to 1504. The hospital level means ranged from 83.61 to 94.51. The hospital level LCLMs ranged from 80.48 to 92.26. The hospital level UCLMs ranged from 85.96 to 96.76.

Mean and SD by CTM Question:

Mean Q1 = 86.25 and SD Q1 = 20.91

Mean Q2= 87.94 and SD Q2 = 19.60

Mean Q3= 88.53 and SD Q3 = 19.63

Care Transition Measure Results for Maine Health Data Organization Website Updated 01/01/13 Reflects data from April 1, 2011 - March 31, 2012

Hosp. Code	# of Resps.	Hosp. Mean	Hosp. LCLM	Hosp. LCLM	State Mean
AA	347	85.75	83.86	87.65	87.95
AB	273	90.81	88.32	93.31	87.95
AC	295	85.42	83.05	87.79	87.95
AD	176	88.89	85.51	92.27	87.95
AE	410	88.69	86.34	91.03	87.95
AF	323	83.72	81.47	85.96	87.95
AG	240	83.61	80.82	86.40	87.95

AH	163	87.56	84.30	90.82	87.95
AI	307	92.58	90.74	94.41	87.95
AJ	76	92.22	88.39	96.06	87.95
AK	1099	93.23	92.16	94.29	87.95
AL	308	87.60	85.48	89.71	87.95
AM	246	92.61	90.36	94.86	87.95
AN	432	88.24	86.47	90.01	87.95
AO	171	83.93	80.48	87.38	87.95
AP	307	87.70	85.33	90.08	87.95
AQ	286	93.54	91.59	95.50	87.95
AR	154	90.66	87.49	93.83	87.95
AS	1504	85.74	84.64	86.84	87.95
AT	234	83.89	80.88	86.91	87.95
AU	303	92.75	90.66	94.84	87.95
AV	261	90.71	88.24	93.17	87.95
AW	394	89.62	87.47	91.76	87.95
AX	869	89.55	88.26	90.83	87.95
AY	298	86.61	84.42	88.80	87.95
AZ	238	88.29	85.42	91.16	87.95
BA	260	91.03	88.64	93.42	87.95
BB	219	91.22	88.51	93.93	87.95
BC	563	85.63	83.94	87.33	87.95
BD	351	87.84	85.85	89.82	87.95
BE	49	90.16	85.65	94.67	87.95
BF	550	87.52	85.91	89.14	87.95
BG	460	86.32	84.33	88.31	87.95
BH	206	94.51	92.26	96.76	87.95
BI	241	86.79	83.63	89.94	87.95
BJ	419	88.37	86.03	90.72	87.95

#2: Use of CTM-3 by the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS)

The intent of the HCAHPS initiative is to provide a standardized survey instrument and data collection methodology for measuring patients' perspectives on hospital care. The HCAHPS survey encompasses nine key topics: communication with doctors, communication with nurses, responsiveness of hospital staff, pain management, communication about medicines, discharge information, cleanliness of the hospital environment, quietness of the hospital environment, and transitions of care.

The January 2014 publicly-reported scores on Hospital Compare are based on more than 3.1 million completed surveys from patients at 3,936 hospitals. Results from the newly-incorporated CTM-3 will be publicly reported on Hospital Compare in October 2014.

CTM- 3 has been established as reliable and valid by HCAHPS:

- Reliability Cronbach's alpha (internal consistency) = 0.80
- Spearman-Brown hospital-level reliability at 300 completes = 0.84
- Validity using Pearson correlations (linear scoring) with 10 existing HCAHPS measures
- Range 0.30 to 0.51
- Highest: Recommend Hospital (0.51), Nurse Communication (0.50), Communication About Medicines (0.49), Overall Hospital Rating (0.48)
- PMA and Mode Effect patterns similar to other HCAHPS measures
- No evidence of a ceiling effect; substantial room for quality improvement
- Strong links with Nurse Communication and Communication About Medicines
- Lack of redundancy with HCAHPS measures
- Q1-Q3 2013 National Means for Care Transition Measure Top Box ("Strongly Agree") = 51%

#3: Use of CTM-3 by the CMS/CMMI Community-based Care Transition Program (CCTP)

The Community-based Care Transition Program (CCTP), sponsored by CMS, is testing a new payment approach designed to reduce hospital readmission rates in the Medicare Program. The CCTP uses the Care Transition Measure (CTM-3) as part of the first administration of the patient experience survey, given to patients within four days of hospital discharge. The target population of the CCTP is Medicare beneficiaries who are at high risk for hospital readmission. To date, there are over 102 CCTP sites (including over 400 hospitals) in 40 states across the country providing 700,000 Medicare beneficiaries with evidence-based care transitions services.

The patient experience survey data are intended to inform the community-based organizations (CBOs) about their effectiveness in providing care transition services. Each CBO is given a quarterly monitoring report (QMR), which includes the average CTM score for their patients, as well as complete distributions (frequencies) for the three CTM items. CBOs share their QMR with their hospital partners.

Following are the descriptive statistics for the CTM scores (0-100):

N = 37836
 Mean = 71.5
 SD= 17.0
 Min= 0.0
 10th Pctl= 55.6
 Lower Quart= 66.7
 Median 66.7
 Upper Quart= 77.8
 90th Pctl= 100.0
 Max= 100.0

The following tables report statistics by quarter during which the survey was administered.

Aug-Oct 2013

Mean	71.57703	Std Deviation	17.70979
Median	66.70000	Variance	313.63683
Mode	66.70000	Range	100.00000
	Interquartile Range	16.60000	

Quantile	Estimate
100% Max	100.0
99%	100.0
95%	100.0
90%	100.0
75% Q3	83.3
50% Median	66.7
25% Q1	66.7
10%	55.6
5%	44.4
1%	22.2
0% Min	0.0

Nov 13-Jan 14

Mean	71.53644	Std Deviation	16.86250
Median	66.70000	Variance	284.34381
Mode	66.70000	Range	100.00000
	Interquartile Range	11.10000	

Quantile	Estimate
100% Max	100.0
99%	100.0
95%	100.0
90%	100.0
75% Q3	77.8
50% Median	66.7
25% Q1	66.7
10%	55.6
5%	44.4
1%	33.3
0% Min	0.0

Feb-Apr 2014

Mean	71.23812	Std Deviation	16.52985
Median	66.70000	Variance	273.23604
Mode	66.70000	Range	100.00000
	Interquartile Range	11.10000	

Quantile	Estimate
100% Max	100.0
99%	100.0
95%	100.0
90%	100.0
75% Q3	77.8
50% Median	66.7
25% Q1	66.7
10%	55.6
5%	44.4
1%	33.3
0% Min	0.0

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.

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.*

No data on disparities are available.

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

The authors used a census-generated list to select individuals identified as African American or Hispanic or living in a rural area to explore the application of the Care Transitions Measure (CTM). Eligibility criteria included being age 18 – 90, having been hospitalized within the last 12 months, and not residing in a long-term care facility. Final sample size consisted of 225 survey respondents from across the United States. One-third of the sample was African American, one-third was Hispanic American, and one-third was rural-dwelling. Confirmatory factor analysis supported the CTM factor structure in more diverse population (Comparative Fit Index= 0.954).. Differential item function analysis did not reveal any differential item difficulty by age, gender, education, self-rated health, or group (African American, Hispanic American, and rural-dwelling).

Parry, C, Mahoney E, Chalmers SA, Coleman EA. Assessing the quality of transitional care: further applications of the Care Transitions Measure. Medical Care. 2008;46(3):317-322.

The authors performed in-depth case studies at eight minority-serving hospitals, selected to reflect a range of geographies and sizes. They found that these hospitals place a high priority on reducing readmissions, largely spurred by federal readmissions policy. Respondents reported that race and socioeconomic status were key factors in readmissions reduction. The hospitals' strategies to reduce readmissions included creating customized approaches to transitional care, and focusing on building community supports and resources. Barriers to reducing readmission rates included scarce resources, the variety of patient needs, and a misalignment of financial incentives.

Joynt KE, Sarma N, Epstein AM, Jha AK, Weissman JS. Minority-Serving Hospitals Struggle to Reduce Readmissions: Lessons From Hospital Leadership and Front-Line Personnel. The Joint Commission Journal on Quality and Patient Safety September 2014 (In Press).

The authors explored Medicare Provider Analysis Review files of more than 3.1 million Medicare fee-for-service recipients who were discharged from US hospitals in 2006-2008. They found that overall, black patients had higher readmission rates than white patients and patients from minority-serving hospitals had higher readmission rates than those from non-minority-serving hospitals. Among patients with acute MI and using white patients from non-minority-serving hospitals as the reference group (readmission rate 20.9%), black patients from minority-serving hospitals had the highest readmission rate, while white patients from minority-serving hospitals had a 24.6% readmission rate and black patients from non-minority-serving hospitals had a 23.3% readmission rate. Joynt KE, Orav EJ, Jha AK. Thirty-Day Readmission Rates for Medicare Beneficiaries by Race and Site of Care. JAMA. 2011;305(7):675-681

The authors studied 39,384 Medicare beneficiaries ≥65 years discharged with acute ischemic stroke 1998–2000 who received care from 422 hospitals, southern and eastern United States. 20% of patients experienced at least one complicated transition; 16% of those experienced more than one complicated transition. After adjustment using logistic regression, factors predicting any complicated transition included older age, African-American race, Medicaid enrollment, prior hospitalization, gastrostomy tube, chronic disease, length of stay and discharge site. When compared to patients with only one complicated transition, patients with multiple complicated transitions were more likely to be African-American, be male, have prior diagnosis of fluid and electrolyte disorder, have a prior hospitalization and be initially discharged to skilled-nursing facility/long-term care.

Kind AJH, Smith MA, Frytak JR, Finch MD. Bouncing-Back: Patterns and Predictors of Complicated Transitions Thirty Days after Hospitalization for Acute Ischemic Stroke. J Am Geriatr Soc. Mar 2007; 55(3): 365–373.

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):

Care Coordination, Care Coordination : Readmissions

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

Elderly, Populations at Risk : Dual eligible beneficiaries, Populations at Risk : Individuals with multiple chronic conditions

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.)

<http://www.caretransitions.org/documents/CTM3Specs0807.pdf>

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)

No data dictionary Attachment:

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.

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.

Patient

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.

No changes

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 numerator is the hospital level sum of CTM-3 scores for all eligible sampled patients.

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).

The numerator consists of the sum of individual patient-reported scores on the 3-item CTM.

The 3-item CTM is comprised of the following questions:

Q1 During this hospital stay, staff took my preferences and those of my family or caregiver into account in deciding what my healthcare needs would be when I left.

Q2 When I left the hospital, I had a good understanding of the things I was responsible for in managing my health.

Q3 When I left the hospital, I clearly understood the purpose for taking each of my medications.

There are 4 response options for Q1 and Q2: Strongly Disagree = 1, Disagree = 2, Agree = 3, Strongly Agree = 4

There are 5 response options for Q3: Strongly Disagree = 1, Disagree = 2, Agree = 3, Strongly Agree = 4, I was not given any medication when I left the hospital = 5.

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

The denominator includes the number of eligible sampled adult patients discharged from a general acute care hospital.

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).

The denominator includes the number of eligible sampled adult patients discharged from a general acute care hospital.

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

N/A

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.)

Population Exclusions:

- Pediatric patients under age 18 years
- Patients who died in the hospital
- Patients who did not stay at least one night in the hospital
- Other patients as required by law or regulation in the state in which the hospital operates

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.)

None or N/A

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

No risk adjustment or risk stratification

If other:

S.12. Type of score:

Continuous variable, e.g. average

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 = Higher 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.)

Target Population: Adults 18 years and older discharged from a general acute care hospital.

Population exclusions:

- Pediatric patients under age 18 years
- Patients who died in the hospital
- Patients who did not stay at least one night in the hospital
- Other patients as required by law or regulation in the state in which the hospital operates

Scoring:

Date timeframe – 30 days from hospital discharge

To calculate the score:

- Step 1 – Calculate the sum of responses across the 3 items (score Strongly Disagree = 1; Disagree = 2; Agree = 3; Strongly Agree = 4)
- Step 2 – Count the number of questions answered

- Step 3 – Calculate the mean response (sum divided by count)
- Step 4 – Use linear transformation to convert to 0 – 100 score
- Step 5 – Calculate the hospital level arithmetic mean score across patients (sum of patient scores divided by the number of eligible patients).

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.

Sampling frame:

- All discharges between the first and last days of the month

Type of sampling:

- Simple random sample of discharges generated on a monthly basis
- After the end of the month or throughout the month

Sample size:

- Minimum of 300 completed CTM-3 survey instruments over a 12-month period (either a target of N=25 completed surveys per month or proportionate sampling)
- Exception for small hospitals not able to reach 300 completed surveys: Hospital should sample as many discharges as possible.
- Calculation of the number of discharges that need to be sampled each month
 - Identify the number of completes needed
 $C = \text{number of completes needed} = 300$
 - Estimate the proportion of sampled patients expected to complete the survey. Let: I = expected proportion of ineligible sampled patients (e.g. patients who died after discharge)
 R = expected survey response rates amount eligible respondents
 P = Proportion of sampled patients expected to complete the survey = $(1-I) \times R$
 - Calculate the number of discharges to sample over the 30-day period of interest

Proxies – No proxies are permitted to respond on behalf of patients. Someone other than the person who received care is permitted to read the questions to the respondent and/or record the responses.

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.

Survey Administration

Survey Instructions: Timing – Survey should be administered between 48 hours and 30 days post discharge, regardless of mode of administration. Data collection shall be closed out no later than 4 weeks following start of data collection for that respondent.

Modes:

- Mail-only – includes CTM-3 only or combined with other hospital-specific questions. With cover letter that may be tailored but must include language indicating the purpose of the survey, explanation that participation is voluntary, and statement that the individual's health benefits will not be affected by participation.
- Telephone-only – Standardized script should be used, interviewers administering the surveys must be trained, and must attempt to contact respondent at least five times unless respondent refuses to complete the survey.
- Mixed mode of mail and telephone – Specifications for mail-only and telephone-only apply, except second mailing is not required and only non-respondents shall be contacted by telephone at least five times as per telephone only mode.

Format – May be administered as a stand-alone instrument or combined with other hospital-specific questions

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

If other, please describe in S.18.

Instrument-Based Data

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.

<http://www.caretransitions.org/documents/CTM3Specs0807.pdf>

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)

Available at measure-specific web page URL identified in S.1

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

Facility

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

Inpatient/Hospital

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.)

2. Validity – See attached Measure Testing Submission Form

[NQF_0228_CTM_3_Measure_Testing-636609463332795829.docx](#), [NQF_0228_nqf_testing_attachment_7.1-636609463332944619.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.

Yes

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.

Other

If other: Surveying patients following hospital discharge is an established practice that is routinely conducted by nearly all general acute care hospitals.

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**.

No data elements are in defined fields in 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).

The CTM-3 is administered over the telephone or via mailed surveys as well as mix mode administration (telephone and mail).

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.

CTM remains a stand-alone measure but it has also been incorporated into HCAHPS. In keeping with this development, we have aligned the CTM with HCAHPS specifications and reporting.

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*).

None

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)
	Public Reporting HCAHPS http://www.hcahponline.org/home.aspx

Maine Health Management Coalition/Maine Health Data Organization
<https://mhdo.maine.gov/>
 HCAHPS
<http://www.hcahpsonline.org/home.aspx>
 Maine Health Management Coalition/Maine Health Data Organization
<https://mhdo.maine.gov/>

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

Name of program and sponsor: Maine Health Management Coalition/Maine Health Data Organization

- Purpose: Public Reporting

- Geographic area and number and percentage of accountable entities and patients included: All general acute care hospitals in Maine (n=38)

Please see attached Executive Summary

Name of program and sponsor: HCAHPS, CMS

- Purpose: Public Reporting. Results from the newly-incorporated CTM-3 will be publicly reported on Hospital Compare in October 2014.

- Geographic area and number and percentage of accountable entities and patients included: All general acute care hospitals that participate in the Medicare program.

Please see attached Executive Summary

Name of program and sponsor: Community-based Care Transitions Program, CMS/CMMI

- Purpose: Quality Improvement with benchmarking

- Geographic area and number and percentage of accountable entities and patients included: To date, there are over 102 CCTP sites (including over 400 hospitals) in 40 states across the country providing 700,000 Medicare beneficiaries with evidence-based care transitions services.

Please see attached Executive Summary

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?)

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.)

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.

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.

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.

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

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

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.

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.

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.

No unintended negative consequences

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

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.

No

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

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

<p>5a. Harmonization of Related Measures The measure specifications are harmonized with related measures; OR The differences in specifications are justified</p> <p>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?</p> <p>5a.2. If the measure specifications are not completely harmonized, identify the differences, rationale, and impact on interpretability and data collection burden.</p>
<p>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.</p> <p>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.)</p>

<p>Appendix</p> <p>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: NQF_CTM_3_Appendix_of_Supplemental_Materials-636609463335132389.docx</p>
<p>Contact Information</p> <p>Co.1 Measure Steward (Intellectual Property Owner): University of Colorado Denver Anschutz Medical Campus Co.2 Point of Contact: Eric, Coleman, eric.coleman@ucdenver.edu, 303-724-2456- Co.3 Measure Developer if different from Measure Steward: University of Colorado Denver Anschutz Medical Campus Co.4 Point of Contact: Eric, Coleman, eric.coleman@ucdenver.edu, 303-724-2456-</p>
<p>Additional Information</p> <p>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.</p> <p>Measure Developer/Steward Updates and Ongoing Maintenance Ad.2 Year the measure was first released: 2004 Ad.3 Month and Year of most recent revision: 05, 2010 Ad.4 What is your frequency for review/update of this measure? Unknown Ad.5 When is the next scheduled review/update for this measure? 05, 2014</p> <p>Ad.6 Copyright statement: The 3-item Care Transitions Measure/CTM is (C) Eric A. Coleman, MD, MPH Ad.7 Disclaimers:</p>

Ad.8 Additional Information/Comments: