Partnership for Quality Measurement
Powered by Battelle

WHAT GOOD LOOKS LIKE – PROCESS MEASURE EXAMPLE

Note: *The information provided in this form is intended to aid the committee and other interested parties in understanding to what degree the items in the measure submission form addresses each of the five PQM Measure Evaluation Rubric domains.*

This document is based on a submission provided by Centers for Medicare & Medicaid Services (measure steward) and Yale/YNHH Center for Outcomes Research and Evaluation (CORE) (measure developer).

Intent to Submit

Endorsement and Maintenance (E&M) Cycle*

Select the intended measure review cycle for endorsement consideration.

Spring 2024	**Fall 2024**	**Spring 2025**
ITS deadline: Monday, April 1, 2024 Full Submission deadline: Wednesday, May 1, 2024	ITS deadline: Tuesday, October 1, 2024 Full Submission deadline: Friday, November 1, 2024	ITS deadline: Tuesday, April 1, 2025 Full Submission deadline: Thursday, May 1, 2025
☒ Spring 2024	☐ Fall 2024	☐ Spring 2025

Measure Information

1.1 New or Maintenance*

Select whether this is a new measure or maintenance measure. If this is a maintenance measure, provide the consensus-based entity (CBE) ID number as "0123" or "0123e" for an eCQM. Measures seeking initial endorsement will be assigned a CBE ID after ITS.

☐ New ☒ Maintenance

[If a maintenance measure] **1.1a Provide CBE ID***

Start by typing CBE ID or measure title and select an autocomplete option.

3455

1.2 Measure Title*

The measure title should include the type of score (e.g., rate, count, composite), the measure focus, and the target population. Title example: The rate [type of score] of 30-day all-cause mortality [measure focus] among patients discharged from an acute inpatient

Reminder

If the measure has a short name or abbreviation often included in the title (e.g., at the end in parentheses), please include in the submission.

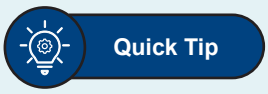
facility with a diagnosis of acute myocardial infarction [target population].

Timely Follow-Up After Acute Exacerbations of Chronic Conditions

1.3 Measure Description*

Briefly describe the type of score, measure focus, target population, and timeframe. ***Note:*** *There are separate fields below for the numerator and denominator.*

This is a measure of follow-up clinical visits for adult patients with chronic conditions who have experienced an acute exacerbation of one of six conditions (eight categories) of interest (coronary artery disease [CAD] {high or low acuity}, hypertension {high or medium acuity}, heart failure [HF], diabetes, asthma, and chronic obstructive pulmonary disease [COPD]).



Include the measure population in the description.

1.4 Project*

Choose the project that you expect to review the measure. To see the project descriptions and examples of project-related measures, please refer to the E&M projects page on the PQM website. Note: Battelle may reassign the measure to a different project following internal review. Choose one.

- ☐ Advanced Illness and Post-Acute Care
- ☐ Cost and Efficiency
- ☐ Initial Recognition and Management
- ☒ Management of Acute Events, Chronic Disease, Surgery, and Behavioral Health
- ☐ Primary Prevention

1.5 Measure Type*

Choose one. If "Other," please specify.

- ☐ Cost/Resource use
- ☐ Efficiency
- ☐ Intermediate Outcome
- ☐ Outcome
- ☐ Population Health
- ☒ Process
- ☐ Patient-reported Outcome Performance Measure (PRO-PM)
- ☐ Structure
- ☐ Other (**1.5a** *Please specify**)

1.6 Composite Measure*

Is this a composite measure?

☒ No ☐ Yes

1.7 Electronic Clinical Quality Measure (eCQM)*

Is this measure an eCQM (i.e., based on the Quality Improvement Core [QI-Core], the Quality Data Model [QDM], Clinical Quality Language [CQL], and specified using value sets)? Includes hybrid measures.

☒ No ☐ Yes

Reminder

A hybrid measure is a quality measure that uses more than one source of data for measure calculation. Current hybrid measures use claims data and electronic clinical data from electronic health records to calculate measure results.

1.8 Level of Analysis*

Select the level(s) of analysis for which the measure is specified and tested. Choose all that apply. If "Population of Geographic Area" or "Other," please specify.

☒ Accountable Care Organization
☐ Clinician: Group/Practice
☐ Clinician: Individual
☐ Facility
☐ Health Plan
☐ Population or Geographic Area (**1.8a** *Specify Population or Geographic Area Level of Analysis**)

Reminder

Measures with multiple levels of analysis have the same CBE ID. The level(s) of analysis should be consistent across the specifications and testing items within the application.

1.9 Care Setting*

Select the care setting(s) for which the measure is specified and tested. Choose all that apply. If "No Applicable Care Setting" or "Other Care Setting," please explain.

☐ Ambulatory Care: Clinic
☐ Ambulatory Care: Clinician Office
☐ Ambulatory Care: Office
☐ Ambulatory Surgery Center
☐ Behavioral Health: Inpatient (e.g., Inpatient Psychiatric Facility)
☐ Behavioral Health: Outpatient
☐ Birthing Center
☒ Clinician Office/Clinic
☒ Emergency Department
☐ Emergency Medical Services/Ambulance
☒ Home Health
☐ Hospice
☐ Hospital: Acute Care Facility
☒ Hospital: Critical Access
☒ Hospital: Inpatient
☒ Hospital: Outpatient
☐ Imaging Facility
☐ Inpatient Rehabilitation Facility

☐ Long-Term Acute Care Facility
☐ Nursing Home/Skilled Nursing Facility
☐ Outpatient Rehabilitation
☐ Pharmacy
☐ Urgent Care: Ambulatory
☐ No Applicable Care Setting (**1.9a** *Please explain**)

☒ Other Care Setting (**1.9b** *Please specify**)

Hospital: Rural Emergency

*[**Note:** Responses to items 1.10-1.13 and other measure specification details are to be provided in the Full Measure Submission.]*

1.14 Numerator*

Provide the numerator (i.e., the measure focus). Do not include the measure rationale.

The numerator is the sum of acute exacerbations for which follow-up care was received within the timeframe recommended by clinical practice guidelines, as detailed below:

- Hypertension: Follow up within 14 days of the date of discharge for high-acuity patients or within 30 days for medium-acuity patients
- Asthma: Follow up within 14 days of the date of discharge
- Heart Failure: Follow up within 14 days of the date of discharge
- Coronary Artery Disease: Follow up within 7 days of the date of discharge for high-acuity patients or within 6 weeks for low-acuity patients
- Chronic Obstructive Pulmonary Disease: Follow up within 30 days of the date of discharge
- Diabetes: Follow up within 14 days of the date of discharge for high-acuity patient

Quick Tip

Clearly state the measure focus and relevant timeframes. This measure focus is follow-up care after acute exacerbations and relevant timeframes are 7, 14, or 30 days following the date of discharge.

1.15 Denominator*

Provide the denominator (i.e., the target population).

The denominator is the sum of all acute exacerbations among the target population during the performance period. An acute exacerbation is defined as an ED visit, observation stay, or inpatient stay, for any one of six conditions (hypertension, asthma, heart failure, coronary artery disease, chronic obstructive pulmonary disease, or diabetes) for an ACO-attributed patient.

Quick Tip

Provide definitions and explain terms. Here, the developer clearly defines “acute exacerbation.”

1.15d Age Group*

Select the age group(s) that are reflected in your measure’s target population (choose all that apply). Choose an age group only if the entire range is included in your measure’s target population. If only part of one or more listed age ranges applies, select “Other” and enter the correct age range (e.g., 14-50).

☐ Children (0-17 years)
☒ Adults (18-64 years)
☒ Older Adults (65 years and older)
☐ Other (1.15e *Provide age range in years**)

Quick Tip

Remember to select all age ranges that apply to the measure population. Here, the developer selected both Adults (18-64 years) and Older Adults (65 years and older) as the measure population is all adults 18 years and older.

6.1 Use

6.1.1. Current Status*
Is this new or maintenance measure currently in use?

☐ No ☒ Yes

Reminder

Maintenance measures must be currently in use in at least one accountability application or have a short-term plan (i.e., within 1 year) for such use.

6.1.3 *[If maintenance review]* **Current Use(s)***
Choose all that apply.

☒ Public Reporting
☐ Public Health/Disease Surveillance
☒ Payment Program
☐ Regulatory and Accreditation Programs
☐ Professional Certification or Recognition Program
☒ Quality Improvement with Benchmarking (external benchmarking to multiple organizations)
☐ Quality Improvement (Internal to the specific organization)
☐ Other

6.1.3a Please specify other use *

6.1.4 *[If Current Status = Yes (6.1.1)]* **Program Details***
Please provide the following information describing the program(s) in which the measure is currently used:

Name of the program and sponsor

Centers for Medicare & Medicaid Services (CMS) Accountable Care Organization Realizing Equity Access, and Community Health (ACO REACH) Model

URL of the program

https://www.cms.gov/priorities/innovation/innovation-models/aco-reach

Purpose of the program

The ACO Realizing Equity, Access, and Community Health (ACO REACH) Model provides novel tools and resources for health care providers to work together in an accountable care organization (ACO) to improve the quality of care for people with Traditional Medicare in underserved communities and make measurable changes to address health disparities. Additionally, the model uses an innovative payment

approach to better support care delivery and coordination for people in underserved communities.

Geographic area and percentage of accountable entities and patients included

The ACO REACH model for 2023 consisted of 132 ACOs, including 131,772 providers and 2.6 million patients, across the United States (click here for map of currently participating ACOs). The TFU measure is calculated for all eligible ACOs in the ACO REACH model.

Applicable level of analysis and care setting

Level of Analysis: Accountable Care Organization

Care Settings: Hospital: Outpatient, Clinician Office/Clinic, Home Health, Hospital: Critical Access, Emergency Department, Hospital: Inpatient, Rural Emergency Hospital.

Attestations: Preparing for Full Measure Submission for Endorsement Consideration

Check the boxes to attest this information will be available and submitted to Battelle by the Full Measure Submission (FMS) deadline of the intended review cycle. The measure may be insufficient for endorsement review if this information is not available by the FMS deadline. Please review the PQM E&M Rubric [Endorsement and Maintenance (E&M) Guidebook] for full measure submission evaluation criteria.

Reminder

If there are questions about what is required for your measure for endorsement review, please reach out to PQMSupport@battelle.org prior to the Full Measure Submission deadline.

☒ **A.1 Detailed Measure Specifications***
I will provide detailed measure specifications, including how to calculate the measure, data dictionaries, and code sets.

☒ **A.2 Logic Model***
I will provide a logic model and evidence that support the link between structures/processes/intermediate outcomes and the desired outcome.

☒ **A.3 Impact and Gap***

- For initial endorsement, I will provide a description of the measure's anticipated impact on important outcomes supported by the scientific literature and other sources (e.g., functional improvement, disease prevented, or adverse events or costs avoided).
- For maintenance endorsement, I will supply evidence of a continued performance or measurement gap by providing performance scores on the measure as specified (current and over time) at the specified level of analysis.

☒ **A.4 Feasibility assessment methodology and results** *
I will provide feasibility assessment methodology and results. I will show how the assessment considered the people, tools, tasks, and technologies necessary to implement the measure, and if submitting an eCQM, I will provide the completed feasibility scorecard.

A.5 Measure Testing (reliability and validity)
Check the boxes to attest to which testing (person/encounter-level or accountable entity-level) for reliability and validity will be available and submitted for each level of analysis by the FMS deadline of the intended review cycle. ***Note:*** *For initial endorsement, you must provide a rationale if empirical person or encounter-level will not be presented in the FMS. For maintenance endorsement, you must provide a rationale if measured/accountable entity testing will not be presented in the FMS.*

A.5a Empirical person- or encounter-level[1] *
Will empirical person- or encounter-level evidence, testing, methodology, and results be presented for this endorsement?

☒ No ☐ Yes

A.5b Empirical accountable entity-level *
Will empirical accountable entity-level evidence, testing, methodology, and results be presented for this endorsement?

☐ No ☒ Yes

Quick Tip

For initial endorsement, person- or encounter-level empirical testing is required, or existing evidence (e.g., prior research, literature) must be presented to support testing of all critical data elements (numerator, denominator, exclusions).

Because this is a maintenance measure, accountable entity-level empirical testing is required and the developer selects "yes" in question A.5b below.

☒ **A.6 Address health equity (optional)**
I will describe how this measure contributes to efforts to address inequities in health care. This is an optional criterion for FMS.

Reminder

Equity will be a required domain beginning with the Spring 2025 cycle.

☒ **A.7 Measure's use or intended use** *
I will provide the measure's use or intended use and actions measured entities must take to improve performance on this measure. For a maintenance measure, I will provide a summary of any progress improvement.

A.8 Risk-adjustment or stratification *
Choose the correct option to attest to whether the measure is risk-adjusted and/or stratified, and to attest that each component of the respective information will be available and submitted by the FMS deadline of the intended review cycle, as applicable.

☐ No, neither risk-adjusted nor stratified

[1] For patient- or encounter-level testing, prior evidence of reliability and validity of data elements for the data type specified in the measure (e.g., hospital claims) can be used as evidence for those data elements. Prior evidence could include published or unpublished testing that: includes the same data elements, uses the same data type (e.g., claims, chart abstraction), and is conducted on a sample as described above (i.e., representative, adequate numbers, and randomly selected, if possible).

☐ Yes, risk-adjusted only

☐ **Conceptual model for risk adjustment**

I will present the conceptual model for risk adjustment, including supporting evidence from literature, internal analyses, and/or expert panels, AND

☐ **Risk adjustment approach**

I will present the risk adjustment approach, including the methodology, specifications, results, and interpretation of results

☒ Yes, stratified only

☒ **All information required to stratify the measure results**

I will present all information required to stratify the measure results, including the stratification variables, definitions, specific data collection items/responses, and code/value sets

☐ Yes, both risk-adjusted and stratified

☐ **Conceptual model for risk adjustment**

I will present the conceptual model for risk adjustment, including supporting evidence from literature, internal analyses, and/or expert panels, AND

☐ **Risk adjustment approach**

I will present the risk adjustment approach, including the methodology, specifications, results and interpretation of results, AND

☐ **All information required to stratify the measure results**

I will present all information required to stratify the measure results, including the stratification variables, definitions, specific data collection items/responses, and code/value sets, and the risk-model covariates and coefficients for the adjusted version of the measure

A.9 Quality Measure Developer and Steward Agreement (QMDSA) Form *

The QMDSA and Additional and Maintenance Measures Forms are contractual agreements that must be signed by Battelle Memorial Institute (Battelle) and any measure steward that is submitting one or more measures to be evaluated for endorsement via the consensus endorsement process. If the measure is not owned by a government entity, the measure steward will also complete and submit a QMDSA Form. For more information about QMDSA requirements, please see the QMDSA Submission Instructions. Choose one.

☐ I already submitted a QMDSA Form to Battelle.

Provide the date submitted

☐ I would like to submit the QMDSA Form now.
Attach form; One file only; 256 MB limit; Allowed types: PDF.
☒ The measure is owned by a government entity; therefore, the QMSDA Form is not applicable at this time.

Quick Tip

As the measure steward is the Centers for Medicare & Medicaid Services (a government entity), a QMDSA Form is not applicable.

A.10 Additional and Maintenance Measures Form*
Choose one. Note: Measure stewards with current measures endorsed by Battelle who wish to add additional measures to their current QMDSA will need to complete this form.
☐ I have submitted or will submit an Additional and Maintenance Measures Form
☒ The Additional and Maintenance Measures Form is not applicable at this time.

☒ **A.11 508 Compliance***
I will ensure that the measure information that will be submitted at FMS, including all attachments, will be prepared in accordance with Section 508 of the Rehabilitation Act of 1973 (29 U.S.C. 794d), as amended by the Workforce Investment Act of 1998 and the Architectural and Transportation Barriers Compliance Board Electronic and Information (EIT) Accessibility Standards (36 CFR part 1194).

Reminder

Appendix E in the E&M Guidebook includes guidance for making submissions 508 compliant.

Measure Points of Contact Information

The user account completing this form is the Measure Developer Point of Contact (POC)

Reminder

At any point when a point of contact changes, please inform Battelle by contacting PQMsupport@battelle.org so our team can update this information in the system.

☒ Do you have a secondary **measure developer** point of contact?
Secondary POC email: sampleuser@domain.com
Secondary POC phone number: 555-123-4567
Country: United States
First Name: Jane
Last Name: Doe
Organization: Battelle
Street Address: 505 King Avenue
City, State, ZIP: Columbus, Ohio 43201

☒ The measure developer is NOT the same as **measure steward**
Steward organization URL: https://www.cms.gov/
Steward POC email: sampleuser@domain.com
Steward POC phone number: 555-123-4567
Steward organization: Centers for Medicare & Medicaid Services
Country: United States
First Name: Jane
Last Name: Doe
Street Address: 7500 Security Boulevard
City, State, ZIP Windsor Mill, Maryland 21244
Steward Organization Copyright: Not Applicable

Partnership for Quality Measurement
Powered by Battelle

Full Measure Submission

Section 1. Measure Specifications

[NOTE: Items 1.1-1.9, 1.14, and 1.15 were entered in the ITS, and can be edited in the FMS]

1.10 Measure Rationale *

Provide a rationale for why measured entities should report this measure, including how the measure will improve the quality of care for patients and/or any associated health care costs, and what are the benefits or improvements in quality envisioned by use of this measure.

The Timely Follow-Up After Acute Exacerbations of Chronic Conditions Measure (hereafter, "TFU measure") captures follow-up clinical visits for patients with chronic conditions who have experienced an acute exacerbation of one of six conditions (with eight categories) of interest (coronary artery disease [CAD] {high or low acuity}, hypertension {high or medium acuity}, heart failure [HF], diabetes, asthma, and chronic obstructive pulmonary disease [COPD]) and are among adult Medicare Fee-for-Service (FFS) beneficiaries who are attributed to entities participating in the CMMI Accountable Care Organization (ACO) Realizing Equity, Access, and Community Health (REACH) model. The goal of this measure is to encourage model participants to deliver clinically appropriate follow-up care for the specified conditions, improve care coordination, and produce long-term savings for a given health care system. Because the measure is stratified by social risk factor variables, this measure also helps to promote health equity in underserved communities.

Rationale: Patients hospitalized or seen acutely in the emergency department (ED) for exacerbations of chronic conditions are at high risk of readmission and poorly coordinated care, which may increase health care spending, worsen health care outcomes, and result in poor quality of life.

The intent of the Timely Follow-Up After Acute Exacerbations of Chronic Conditions (TFU) measure is to encourage appropriate follow-up care and improve care coordination at discharge. Better coordination of care and time spent with providers can lead to improved quality of care and quality of life and reduced health care costs.

The TFU measure is a pay-for-performance quality measure for the Realizing Equity, Access, and Community Health (ACO REACH) model, which aims to reduce administrative burden by simplifying billing code practices—freeing time and resources to focus on

advanced primary care and care coordination for patients with complex, chronic conditions. The measure is claims based and low burden to align with this intent of the ACO REACH model.

Evidence has shown that delivering clinically appropriate follow-up care and improving care coordination can improve health care outcomes, reduce readmissions, and reduce health care costs. Outpatient follow-up rates vary significantly, and there are disparities for patients with social risk, indicating potential for improving care for the target population. Early outpatient follow-up can prevent ED visits and readmissions, and their associated costs, clinical sequelae, and impact on patient experience. (See question 2.2 Evidence for further detail on evidence and supporting literature.)

Quick Tip

The rationale should explain the benefits or improvements in quality envisioned by the measure, including any associated health care costs or savings.

The envisioned benefits of the TFU measure include improved patient healthcare outcomes, reduced readmissions, and lower healthcare costs. The focus on reducing disparities in outpatient follow-up rates also indicates an improvement in equity in healthcare delivery, targeting improvements especially for patients with social risks. Implementing the TFU measure can also reduce healthcare costs by preventing unnecessary readmissions and ED visits, and it is designed to be low burden and cost effective.

1.11 Measure Webpage *

Provide a URL to a webpage, specific for this measure, containing current detailed specifications, including code lists, risk model details, and supplemental materials. Do not enter a URL to a home page or to general information. The webpage must be publicly accessible. If no URL is available, copy and paste this example: http://example.com.

http://example.com

1.13 Attach Data Dictionary

Attach a data dictionary, code table, and/or value sets (include variables in the final risk model or stratification plan, if applicable). Attachment should include variables used in the final risk model and/or stratification, if applicable.

One file only; 256 MB limit; Allowed file type: .xls; .xlsx; .csv (please clearly label sheets).

Attachment A_Value Set_Timely Follow-Up Measure CBE #3455_ Update 05012024_final.xlsx (136.61 KB)

Quick Tip

The provided data dictionary includes clearly defined data elements, consistent terminology that aligns with industry standards (ICD-10, HCPCS), versions of various coding systems used, and contextual information to guide users in applying the data appropriately. Additionally, codes are organized by data element (numerator, denominator, inclusions, exclusions).

1.14a Numerator Details *

Provide details needed to calculate the numerator. All information required to identify and calculate the cases from the target population (denominator) with the target process, condition, event, or outcome such as definitions, time period for data collection, specific data collection items/responses, code/value sets. If your list of codes with descriptors is greater than will fit in this text box, you must attach an Excel or csv file in the previous question. If the numerator includes a list (or lists) of individual codes with descriptors that exceeds one page, please provide this information in an xls; .xlsx; .csv file as part of the data dictionary attachment.

The final measure score (the ACO-level Timely Follow-Up rate) is the total number of qualifying follow-up visits after an acute exacerbation (the numerator) over the total sum of all qualifying acute exacerbations

of any of the six conditions (hypertension, asthma, HF, COPD, CAD, and diabetes) (the denominator), aggregated on an ACO level. The score is expressed as a percentage.

Qualifying follow-up visits that contribute to the numerator are those for which follow-up care was received within the timeframe recommended by clinical practice guidelines, as detailed below:

-Hypertension: Follow up within 14 days of the date of discharge for high-acuity patients or within 30 days for medium-acuity patients

-Asthma: Follow up within 14 days of the date of discharge

-Heart Failure: Follow up within 14 days of the date of discharge

-Coronary Artery Disease: Follow up within 7 days of the date of discharge for high-acuity patients or within 6 weeks for low-acuity patients

-Chronic Obstructive Pulmonary Disease: Follow up within 30 days of the date of discharge

-Diabetes: Follow up within 14 days of the date of discharge for high-acuity patients

Numerator events (timely follow-up) are identified by matching claims (at the patient level) that indicate an acute exacerbation (ED visit, observation stay, inpatient admission), for the conditions listed above, to the follow-up visit. To qualify as a numerator event, the follow-up visit must occur within the condition-specific timeframe noted above. Follow-up visits are identified in claims as non-emergency outpatient visits after the discharge date of the initial exacerbation, using CPT or HCPCS code indicating appropriate follow-up as defined by clinical guidelines and clinical coding experts. The follow-up visit may be a general office visit or telehealth visit and can also take place in certain chronic care or transitional care management settings. For a list of individual codes for timely follow-up, please refer to the 'Final Condition Codes' tab in the Value Set (i.e., Data Dictionary) and their rules as described in the denominator details section of this document.

For two conditions, CAD and hypertension, the cohort is subdivided based on the acuity of the exacerbation; and the code set for each portion of the cohort has its own follow-up window. The follow-up visit timeframes are based on the most recent, evidence-based clinical guidelines.

Quick Tip

The numerator is the primary focus of the measure. Clearly describe details that are needed in order to calculate the numerator.

In this submission, the developer defines and outlines specific follow-up times for each of the six conditions (hypertension, asthma, heart failure, COPD, coronary artery disease, and diabetes) based on the acuity of the patient and clinical guidelines. Additionally, the developer specifies the follow-up visit can be a general office visit or a telehealth visit and may also take place in certain chronic care or transitional care management settings.

Quick Tip

Explain how the numerator events are identified and the data collection items/responses.

This submission explains that the numerator events (timely follow-up visits) are identified by matching claims at the patient level that indicate an acute exacerbation to the follow-up visit. This involves using specific CPT or HCPCS codes that indicate an appropriate follow-up as defined by clinical guidelines.

1.15a Denominator Details *

Provide details needed to calculate the denominator. 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. If the list(s) of individual codes with descriptors exceeds one page, please provide this information in an Excel or .csv file as part of the data dictionary attachment.

The denominator is the count of all acute exacerbation events for six clinical conditions attributed to an ACO during the performance period. Of note, if a patient has multiple qualifying acute exacerbation events during the performance period, these would all be included in the measure outcome calculation. Exacerbations are defined as an acute-care visit (i.e., ED visit, observation stay, or inpatient hospitalization) for any of the six conditions of interest (with eight category cohorts): coronary artery disease (CAD) [high or low acuity], hypertension [high or medium acuity], heart failure (HF), diabetes, asthma, and chronic obstructive pulmonary disease (COPD). The cohorts for hypertension, CAD, and diabetes were divided based on acuity of condition because clinical guidelines reflected heterogeneity in follow-up timeline recommendations for exacerbations of different acuities; therefore, because CAD and HTN were subdivided into high- and lower-acuity categories, the measure structure reflects eight condition cohorts for the six conditions of interest.

Please refer to the codes in the 'Inpat, Obs, ED, Discharge' tab of "Attachment A - Value Set" for codes that are used to identify the denominator (exacerbations or acute-care visits). Inpatient admissions are identified using codes listed in the "Inpatient" tab in the value set. ED visits and observation stays are identified using codes listed in the 'Emergency Department' and 'Observation Stay' tabs of the Value Set professional claims (i.e., carrier claims). Billing/Claim type codes used to identify outpatient claims are listed on the 'TOB-Outpatient' tab of the value set.

Quick Tip

The denominator represents the target population for the measure. It is important to clearly define the denominator, specifying the criteria that must be met in order for an event to be included in the measure calculation.

The denominator of the TFU measure is patients with chronic conditions who had an acute exacerbation, defined as an acute-care visit (ED visit, observation stay, or inpatient hospitalization) for any of the six conditions of interest (hypertension, asthma, heart failure, COPD, coronary artery disease, and diabetes). The denominator includes all qualifying acute exacerbation events during the performance period. Multiple events for a single patient are counted separately. The conditions are further divided into eight cohorts based on the acuity of the condition, reflecting different follow-up needs.

Quick Tip

In narrative text, refer to attachment files as necessary by clearly referring to the name of the file and where in the file the information can be found.

Assigning Condition Categories

The value set contains both sufficient codes, which are unambiguously linked to the associated condition, and related codes, which are codes that often occur in conjunction with the condition. This system of code assignment was created by the team that initially developed the measure and was retained by our team during respecification efforts. Additionally, our team of clinical experts reviewed each code that had been included in the value set and, through a consensus process, determined whether the preexisting code assignments were appropriate.

Distinctions are also made between principal and secondary diagnoses when assigning a visit to a specific clinical condition cohort. The first diagnosis code in the header for each claim is used as the principal diagnosis code. All other diagnosis codes in the header are referred to as secondary diagnosis codes. Using the sufficient and related ICD codes listed on the 'Final Condition Codes' tab in the Value Set, claims are assigned to one of the eight condition cohorts listed above.

For all six conditions, an acute encounter is assigned to [condition] if the principal diagnosis is a sufficient code for [condition].

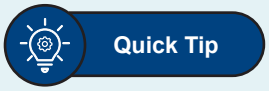
OR

If the principal diagnosis is a related code for [condition] AND at least one additional diagnosis is a sufficient code for [condition].

For conditions with different levels of acuity (e.g., high-acuity hypertension and medium-acuity CAD), the encounter is then assigned to the highest-acuity condition for which a code is present. The value set includes codes for low-acuity hypertension and diabetes conditions to appropriately classify events; however, low-acuity hypertension and diabetes cohorts are not included in this measure given that these conditions do not generally require outpatient follow-up as urgently as the other chronic conditions of interest.

In cases where the encounter has a related code applicable to two or more conditions that qualify as primary diagnoses and a sufficient code in an additional diagnosis position, the encounter is assigned to the condition with a higher follow-up priority in the following order: high-acuity coronary artery disease (CAD), high-acuity diabetes, heart failure (HF), asthma, high-acuity hypertension, medium-acuity hypertension, chronic obstructive pulmonary disease (COPD), and low-acuity CAD.

The following explains how the rules about sufficient and related codes and principal and secondary diagnoses can be applied.



The developer defined the codes/value sets used to identify acute exacerbation events, then provided insight to the relationship between the codes and how they are used in the process of assigning condition categories.

Specific codes used to identify acute exacerbation events are listed in the "Inpat, Obs, ED, Discharge" tab of the Value Set. These include codes for inpatient admissions, ED visits, and observation stays. The 'Final Condition Codes' tab in the Value Set details sufficient and related ICD codes used to assign claims to the appropriate condition cohort. Claims are assigned to one of the eight condition cohorts based on the principal diagnosis and secondary diagnoses codes.

Asthma, COPD, and HF do not have acuity levels. For these conditions, the following must be satisfied: (1) a sufficient code as a primary diagnosis or (2) a related code as a primary diagnosis and a sufficient code as a secondary diagnosis.

CAD, diabetes, and hypertension all have low- to high-acuity levels. However, each of these conditions has a different satisfaction criterion outlined below.

For the CAD condition, the following must be satisfied: (1) a high- or low-acuity sufficient code as a primary diagnosis or (2) a high- or low-acuity related code as a primary diagnosis and a high- or low-acuity sufficient code as a secondary diagnosis.

High acuity can only be satisfied with (1) a high-acuity sufficient code as a primary diagnosis or (2) a high- or low-acuity-related code as a primary diagnosis and a high-acuity sufficient code as a secondary diagnosis or (3) a high-acuity-related code as a primary diagnosis and a high- or low-acuity sufficient code as a secondary diagnosis.

If criteria for a high-acuity CAD condition is not satisfied, then low acuity is met.

For the diabetes condition, the following must be satisfied: (1) a high, medium, or low sufficient code as a primary diagnosis or (2) a high- or medium-acuity-related code as a primary diagnosis and a high-, medium-, or low-acuity sufficient code as a secondary diagnosis.

High acuity can only be satisfied with (1) a high-acuity sufficient code as a primary diagnosis or (2) a high- or medium-acuity-related code as a primary diagnosis and a high-acuity sufficient code as a secondary diagnosis or (3) a high-acuity-related code as a primary diagnosis and a high-, medium-, or low-acuity sufficient code as a secondary diagnosis.

Note that only high-acuity diabetes conditions are eligible for this measure.

For the hypertension condition, the following must be satisfied: (1) a high-acuity or low-acuity sufficient code as a primary diagnosis or (2) a high-, medium-, or low-acuity-related code as a primary diagnosis and a high- or low-acuity sufficient code as a secondary diagnosis.

High acuity can only be satisfied with (1) a high-acuity sufficient code as a primary diagnosis or (2) a high-, medium-, or low-acuity related code as a primary diagnosis and a high-acuity sufficient code as a secondary diagnosis or (3) a high-acuity-related code as a primary diagnosis and a high- or low-acuity sufficient code as a secondary diagnosis.

If the criteria for the high-acuity condition is not satisfied, then the medium-acuity condition is satisfied with the following: a medium-acuity-related code as a primary diagnosis and a high- or low-acuity sufficient code as a secondary diagnosis.

Note that only high- and medium-acuity hypertension conditions are eligible for this measure.

Each unique claim—based upon the from and through dates as well as the claim type (i.e., inpatient, outpatient, carrier)—is assigned to a condition/severity group. If a claim meets the criteria for more than one condition/severity group, the condition/severity group with the shortest follow-up period is assigned, as this represents the more urgent clinical situation. If a beneficiary has a unique claim that begins on the same or the following day of another unique claim, the claims are considered part of one continuous

acute event. In this case, the discharge date of the last claim is the beginning of the follow-up interval. And, if the unique claims that make up an acute event are assigned to different condition/severity groups, the acute event is assigned to the condition/severity group that occurs last chronologically. Following this methodology, only one condition is recorded in the denominator per acute encounter.

1.15b Denominator Exclusions *

Briefly describe exclusions from the denominator cases, if any. Enter "None" if the measure does not have denominator exclusions.

The measure excludes events with:

Subsequent acute events that occur two days after the prior discharge, but still during the follow-up interval of the prior event for the same reason. To prevent double counting, only the first acute event will be included in the denominator.

Acute events after which the patient does not have continuous enrollment for two months for all the condition groups, except the low-acuity CAD group, which requires continuous enrollment of three months.

Acute events where the discharge status of the last claim is not "to community" (e.g., "left against medical advice" is not a discharge to community). For a list of the appropriate codes, please refer to the "Discharge to Community" codes on the 'Inpat, Obs, ED, Discharge' tab in the Value Set.

Acute events for which the calendar year ends before the follow-up window ends (e.g., Acute asthma events occurring fewer than 14 days before December 31 will not be included.).

Acute events where the patient enters a skilled nursing facility (SNF), non-acute care, or hospice care within the follow-up interval. For a list of the appropriate codes to identify non-acute care, please refer to the "NonAcute" tab in the Value Set.

Quick Tip

The denominator exclusions are clearly outlined and reference where the user can find more detail in the value sets.

1.15c Denominator Exclusions Details *

Provide details needed to calculate denominator exclusions. Enter "None" if the measure does not have denominator exclusions. 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. If the list(s) of codes with descriptors exceeds one page, please provide this information in an Excel or .csv file as part of the data dictionary attachment.

Please see above question **1.15b Denominator Exclusions** for detail on how to calculate denominator exclusions.

1.16 Type of Score *

Select the most relevant type of score.

☐ Categorical, e.g., yes/no
☐ Continuous variable, e.g., average
☐ Count
☒ Rate/proportion
☐ Composite scale
☐ Other scoring method

1.16a Describe other scoring method *

1.17 [If Measure Type (1.5) IS NOT "Cost/Resource Use"] **Measure Score Interpretation** *

Select the appropriate interpretation of the measure score

☒ Better quality = Higher score
☐ Better quality = Lower score
☐ Better quality = Score within a defined interval
☐ Passing score defines better quality
☐ Other

1.17a Describe Other measure score interpretation *

1.18 Calculation of Measure Score *

Diagram or describe the calculation of the measure score as an ordered sequence of steps. Identify the denominator, denominator exclusions (if any), numerator, time period of data collection, risk adjustment and/or stratification, and any other calculations.

Denominator events (acute exacerbations) for the six conditions of interest are identified in claims using codes that indicate an inpatient admission, observation stay, or ED visit, using the appropriate codes listed in the Value Set.

Exclusions are applied to the population to produce the eligible patient population for the measure (i.e., the count of all qualifying events).

For each qualifying event, numerator events (timely follow-up) are identified by matching patient-level claims that satisfy the follow-up requirement for that particular qualifying event (e.g., a diabetes acute event receiving follow-up within the appropriate timeframe for diabetes from a provider). Each event for which the follow-up requirement was satisfied is counted as 'one' in the numerator. Each event for which the follow-up requirement was not satisfied is counted as a 'zero' in the numerator.

Quick Tip

This submission clearly describes how to identify denominator events and apply exclusions, how the numerator is identified from each qualifying event in the denominator, and how the measure score is calculated (the numerator divided by the denominator multiplied by 100).

When possible, including a diagram to illustrate the measure score calculation (especially for measures with complex logic) is especially helpful.

The percentage score is calculated as the numerator divided by the denominator multiplied by 100.

1.19 Measure Stratification Details*

Provide all information required to stratify the measure results, if necessary. Include the stratification variables, definitions, code/value sets, and, if appropriate, the risk-model covariates and coefficients for the clinically adjusted version of the measure. If the list(s) of codes with descriptors exceeds one page, please provide this information in an Excel or .csv file as part of the data dictionary attachment. If the measure is not stratified, please state, "The measure is not stratified." If the information is included within the data dictionary attachment, please state, "See data dictionary attachment."

To promote improvements in disparities in care for patients with social risk factors, REACH ACO measure scores are stratified by three social risk factors: (1) dual eligibility (DE); (2) low socioeconomic status (SES) as defined by the Area Deprivation Index (ADI); and (3) race/ethnicity other than white (i.e., non-white). As of the 2022 model performance year (Calendar Year 2022), CMS provides the stratified results to ACOs quarterly, in Quarterly Quality Reports (QQRs), and annually, in Annual Quality Reports (AQRs). The stratified results are provided to ACOs confidentially.

The three social risk factors used in stratified reporting are defined as:

-Dual eligibility: Full-benefit dually eligible status for at least 1 month during the performance period.

-Living in a low-SES neighborhood: Defined as a neighborhood with an ADI percentile value of 81 or higher. We continue to use the 2019 version of ADI data due to differences between 2010 and 2020 Census boundaries and the limited prevalence of the 2020 boundaries among addresses within claims data. For beneficiaries with addresses that have no ADI match, we impute a county-level average ADI. More information about the ADI is available here.

-Non-white: Race/ethnicity other than white based on RTI_RACE_CD variable from the IDR.

The stratified results are calculated through the following steps:

-The finder file, which is the first file created and used for building analytic files for each quality measure, creates the health equity indicator variables that are used for stratified reporting.

-Once the finder file is created, the health equity indicator variables are used to calculate the Timely Follow-Up measure for the ACOs included in the ACO REACH model as well as the benchmark population, which

Quick Tip

If applicable, indicate if stratified results are reported to the accountable entity.

Quick Tip

If a measure is stratified, the approach used to conduct stratification should be clearly outlined in addition to describing the variables used for stratification.

The developer clearly states and defines the three social risk factors used for stratification: dual eligibility (DE), low socioeconomic status (SES) as defined by the Area Deprivation Index (ADI), and race/ethnicity other than white (non-white). The stratification process is then outlined through a series of succinct steps.

are non-ACO REACH provider groups.

-Summary statistics for each of the stratified populations are provided to ACOs in the QQRs. Values are not reported if the denominator volume (acute events) is less than 20.

1.20 Testing Data Sources*

Select the data sources for which you have tested and specified the measure. Choose all that apply.

☒ Administrative Data
☒ Claims Data
☐ Electronic Health Records
☐ Paper Patient Medical Records
☐ Registries
☐ Standardized Patient Assessments
☐ Patient-Reported Data and/or Survey Data *[Answer questions 1.21-1.24]*
☐ Non-Medical Data
☒ Other Data Source

1.20a Specify other data source*

2019 Area Deprivation Index

Quick Tip

Include data sources that are used for risk adjustment and/or stratification. If the data source is not a listed category, include under "Other Data Source" and describe in "1.25 Data Sources" below.

1.25 Data Sources*

Identify the specific data source(s) other than or in addition to any patient-reported data and/or survey data collection instrument(s) indicated for the measure. For example, provide the name of the database, clinical registry, etc. and describe how the data are collected. Please discuss any data feasibility, reliability, and/or validity challenges and how they have been mitigated.

To calculate the measure score, CMS uses final-action claims for Medicare FFS Part A and B, administrative (enrollment data) from the Medicare Beneficiary Summary File. Measure scores are calculated for REACH ACOs and their aligned beneficiaries, as well as non-REACH ACO provider groups (TINs and CCNs that bill Medicare FFS Parts A and B) and beneficiaries aligned using the same ACO REACH Model alignment criteria. Non-REACH ACO provider groups must have at least 1,000 aligned and eligible beneficiaries to be included in the benchmarking population.

This is a claims-based measure, and the measure score is calculated automatically from 100% final-action claims; claims data are routinely generated during the delivery of care, making it feasible for use outside of the ACO REACH program. We did not encounter any difficulties with respect to data feasibility, reliability, or validity.

As described in Section 1.19, we also use the 2019 Area Deprivation Index data and the RTI_RACE_CD variable from the Integrated Data

Quick Tip

The submission identifies three data sources that align with the selections in question 1.20 (Testing Data Sources): Claims data, Administrative Data (MBSF enrollment data) and Other (2019 ADI).

The developer explains the specific data sources and the name of the database where data are collected: Medicare FFS Part A and B, Medicare Beneficiary Summary File, 2019 Area Deprivation Index data, and RTI_RACE_CD Variable from the Integrated Data Repository.

Repository for race/ethnicity stratification. The ADI is a validated tool with demonstrated predictive-criterion validity, reliable in measuring neighborhood disadvantage through multiple domains, and feasible for use in quality measurement.

1.26 Minimum Sample Size*

Indicate whether the measure has a minimum sample size to calculate the performance score and provide any instructions needed for obtaining the sample and guidance on minimal sample size.

The measure does not include a minimum sample size to calculate the measure.

Section 2. Importance

2.1 Attach Logic Model *

Attach a logic model depicting the relationship between structures and processes and the desired outcome. Briefly describe the steps between the health care structures and processes (e.g., interventions, or services) and the desired health outcome(s). Identify the relationships among the inputs and resources available to create and deliver an intervention, the activities the intervention offers, and the expected results (i.e., desired outcome). The relationships in the diagram should be easily understood by general, non-technical audiences. Indicate the structure, process, or outcome being measured.

One file only; 256 MB limit; Allowed file types: .pdf; .doc; .docx.

Please see Figure 1: Logic Model. This logic model depicts the process by which the TFU measure incentivizes appropriate follow-up care for patients with the six chronic conditions of interest after being treated for an acute exacerbation. Ideally, this measure will encourage creative local problem solving at the ACO level to ensure that each patient receives appropriate condition-specific care, in addition to encouraging cost savings to the health system overall.

Quick Tip

This logic model illustrates the inputs (resources), activities, and outputs of follow-up care, as well as short-term, intermediate-term, and long-term outcomes resulting from timely follow-up. The logic model also shows the broader impact of the measure, as well as feedback mechanisms, assumptions, and external factors that may influence results.

Figure 1: Logic Model for the Timely Follow-Up Measure

Inputs (resources)	Activities (what the program does)	Outputs (direct results of the activities)	Outcomes	Impact (broad, systemic changes influenced by the quality program)
Emergency department personnel ACO coordinators Primary care providers Patient management systems	Provide necessary care for patients presenting with acute exacerbations of chronic conditions. Patient is discharged to the community. ACOs facilitate follow-up visit/care through coordination between providers, reminders to patients, providing reports and continuing education to providers.	Patient receives follow-up visit based on evidence-based guidelines.	Short-term Increased adherence to follow-up visits based on evidence-based guidelines. Intermediate term Improved management of chronic conditions and reduced frequency of exacerbations. Long-term Enhanced patient health outcomes and quality of life.	Health system costs are reduced by preventing avoidable chronic disease-related complications.

Feedback Mechanisms

Performance data, including the TFU rates, is shared with ACOs. The results are provided annually for both the overall population and for populations stratified by social risk factors.

ACO performance is compared to a benchmark population (All Entities), which includes ACOs and non-ACO REACH provider groups.

Assumptions (underlying beliefs about the quality program and context)

Effective Communication: Seamless coordination and communication between hospitals, ACOs, and primary care providers.

Patient Compliance: Patients adhere to follow-up care plans and attend scheduled visits.

Adherence to Latest Guidelines: Health care providers follow the latest evidence-based guidelines in treating chronic conditions.

External Factors (conditions outside the quality program's control)

Regulations: Changes in regulations, compliance requirements, and government policies.

Technological Advancement: Emerging technologies can both create new opportunities to streamline processes and pose challenges.

Social Determinants of Health: Patients' socioeconomic status and access to care can affect patient outcomes and the perceived impact of the measure.

2.2 Evidence of Measure Importance*

Summarize evidence of the measure's importance from the literature, linking the structure/process/intermediate outcome to the desired health outcome. Please provide references for supporting evidence.

Overall, the literature has found that better follow-up leads to better health outcomes for patients by improving the management of chronic conditions, particularly for those with more than two such conditions. Early outpatient follow-up, within 14 days of discharge (Jackson et al., 2015), reduces hospital readmission rates for high-risk patients, such as those with heart failure or non-ST-elevation myocardial infarction (NSTEMI) (Tung et al., 2017). Additionally, follow-up enhances patient self-efficacy, especially for conditions like COPD (Jarab et al., 2018), leading to better health outcomes and decreased health care utilization over time. Timely follow-up, when paired with other types of discharge support, contributes positively to health outcomes and is a key component of high-quality health care, helping improve long-term patient outcomes and quality of life.

Clinical Recommendations:

Evidence has shown that delivering clinically appropriate follow-up care and improving care coordination can improve health care outcomes (Jackson et al., 2015), reduce readmissions, and reduce health care costs.

Outpatient follow-up rates can differ substantially among older patients, suggesting there is potential for improving care for the elderly population. Data from 27 countries in the European Union demonstrates that patients with more than two chronic conditions benefit the most from strong primary care systems that allow for adequate outpatient follow-up (Hansen et al., 2015). Moreover, while relatively healthy patients may not demonstrate significant benefit from rapid follow-up after an acute care visit, a study conducted on a sample of nearly 45,000 Medicaid recipients demonstrated a 19.1% reduction in readmission among the highest risk patients who had follow-up within 14 days after discharge (Jackson et al., 2015).

Additionally, the benefit of early outpatient follow-up after hospital discharge may vary according to a patient's specific disease process. For example, follow-up consistently increased patient self-efficacy while decreasing health care utilization over a three-month period among individuals with COPD (Jarab et al., 2018). Heart failure patients appear to derive significant benefit from rapid follow-up after receiving acute care for an exacerbation. Among hospitals with higher rates of early follow-up, the risk of 30-day readmission was lower for patients initially admitted for heart failure (McAlister et al., 2016). Another study found that the composite outcome of death or emergency department visit or hospitalization within 30 days of first discharge from a hospital or emergency department during which heart failure was thought to be the primary diagnosis has been shown to be statistically significantly better among patient who have outpatient follow-up within 14 days of discharge (McAlister et al., 2016). Finally, for both non-ST-elevation myocardial infarction (NSTEMI) and heart failure, an outpatient visit with a physician within 7 days of discharge has been associated with a lower risk of 30-day readmission (Tung et al., 2017).

Although some variation in follow-up may be due to condition or disease severity, there is evidence that some variation may also be due to quality of care for elderly patients, rather than patient-level differences. For example, researchers have found that a decreased health-related quality of life (as assessed by the Assessment of Quality of Life [AQoL] instrument) was predictive of emergency department visits over a 3-year period (Hutchinson et al., 2015). As stated above, although the long-term outcomes that can be attributed to timely follow-up as a standalone intervention remain unclear, a systematic review has demonstrated that, when coupled with other types of discharge support, timely follow-up does positively contribute to health outcomes and is a key component of high-quality health care (Jayakody et al., 2016).

Summary of Literature Review:

Below, we summarize the results of the literature review completed in 2020 at the time of measure respecification.

The literature review aimed to reassess the timing of follow-up visits for chronic conditions included in the TFU measure, which assesses follow-up after acute exacerbations resulting in emergency department visits or hospitalizations. Using a systematic search strategy, including database searches and manual screening of articles, the review identified clinical guidelines and relevant publications to inform the measure's outcome definition.

The literature review supports the current measure specifications for all conditions. Recommendations for follow-up timelines vary across conditions, with some aligning closely with the original IMPAQ measure's recommendations, such as heart failure and asthma, while others, like coronary artery disease and hypertension, benefited from subdivision into clinically discrete diagnoses or exclusion of certain severity levels. The changes that the CORE measure team made during respecification underscores the need for continued refinement and consideration of updated clinical guidelines to ensure appropriate follow-up intervals as clinical science evolves.

The following are recommendations from the most recent review listed by health condition:

Heart Failure: The recommendation for a 14-day follow-up aligns with the 2019 ACC Expert Consensus, emphasizing a phone call within 3 days of discharge and a clinical visit within 14 days (Hollenberg et al., 2019). While shorter timelines were suggested, evidence supports the efficacy of a 14-day interval, with literature indicating no significant reduction in readmissions within a 7-day span (Ezekowitz et al., 2017; McAlister et al., 2016; Quality Improvement for Institutions (report, retrieved 2020); Chang et al., 2018). Figure 12 in Ezekowitz et al., 2017 shows higher risk patients as those with a recent heart failure hospitalization (especially in the past month) with follow-up recommended every 1-4 weeks or as clinically indicated. McAlister et al., 2016 highlights the importance of early and continuous follow-up care after heart failure exacerbation, with key findings indicating that patients who had a follow-up within 14 days experienced better outcomes and lower risk of death or hospitalization. Chang et al., 2018 found that patients who had follow-up visits within 1-2 weeks showed slightly better medication adherence than those with visits within the first week (though differences were not substantial).

Chronic Obstructive Pulmonary Disease (COPD): Retaining the original measure's 30-day recommendation is supported by the 2nd National COPD Readmissions Summit and Beyond (Willard et al., 2016). While various sources suggest longer timelines, the

Quick Tip

Provide a thorough literature review. Be sure to cite relevant studies related to the need for the measure and benefits in the context of the measure.

This submission's literature review focuses on the six chronic conditions that are included in the TFU measure. The recommendations pulled from cited sources for each of the six chronic conditions focus on the effect of timely follow-up, therefore providing insight to the importance of the intended outcome of this measure.

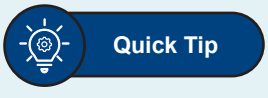
Quick Tip

The submission highlights evidence from the literature and clinical practice guidelines supporting the selected follow-up timeframe for each chronic condition.

heterogeneity of clinical exacerbations supports continued use of the 30-day timeline (Wedizchia et al., 2016; Global Initiative for Chronic Obstructive Lung Disease, 2019 and 2020 reports; University of Michigan, 2020 report; Fidahussein et al., 2014), especially for patients initiating oxygen therapy (Kaiser Permanente, 2020 report). The 2020 Global Strategy for the Diagnosis, Management, and Prevention of Chronic Obstructive Pulmonary Disease Report noted that early follow-up (within one month) following discharge should be undertaken when possible and has been related to less exacerbation-related readmissions. Fidahussein et al., 2014 suggested that while follow-up visits within the first 30 days after hospital discharge for COPD may significantly reduce mortality among COPD patients, they do not appear to impact the rates of readmission or ED visits.

Coronary Artery Disease (CAD): Due to the lack of guidelines for CAD as a broad category, subdivision into high-risk/acute myocardial infarction (AMI) and low-risk groups with different timeframes is recommended. Specific recommendations for conditions like angina and NSTEMI guide this measure's follow-up intervals (Batten et al., 2018; Wiviott et al., 2004). Batten et al., 2018 focused on enhancing follow-up care for patients discharged after an acute myocardial infarction and reports findings from implementing the American College of Cardiology's "See You in 7 Challenge," which resulted in an increase in the percentage of patients scheduled for cardiac rehabilitation within 7 days. Wiviotti et al., 2004 describes standardizing the assessment and treatment of patients with Unstable Angina (UA) and Non-ST-Segment Elevation Myocardial Infarction (NSTEMI). They note that "at the time of hospital discharge, patients should have a clear plan for follow-up with a physician to assess recovery and symptoms and to reinforce secondary preventive measures. Low-risk medically treated patients and revascularized patients usually should be seen within two to six weeks, whereas higher-risk patients should be seen within one to two weeks."

Hypertension: Recognizing the variability in patient risk, recommendations range from <1 month for high-risk individuals to 2-6 months for low-risk patients (Whelton et al., 2017; Chobanian et al., 2003; Atzema et al., 2018). The original measure's 7-day timeline may have been inappropriately stringent, with guidelines suggesting the appropriateness of longer follow-up intervals, even for patients with poorly controlled hypertension. Whelton et al, 2017 notes clinical practice guidelines from the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines with the following recommendation: "Adults initiating a new or adjusted drug regimen for hypertension should have a follow-up evaluation of adherence and response to treatment at monthly intervals until control is achieved." Strength of Recommendation: Class 1 (strong benefit > risk, is recommended, is indicated/useful/effective/beneficial, should be performed/administered) and Quality of Evidence: Level B-R (moderate-quality evidence from 1 or more randomized controlled trials [RCT], meta-analyses of moderate-quality RCTs). Atzema et al., 2018 examined the effect of follow-up care timing on long term adherence to antihypertensive medications after patients are discharged from the emergency department with hypertension. Patients who had follow-up visits within 1-7 days were more than twice as likely to adhere to their medication regimen a year later compared to those without follow-up within 30 days. Patients with follow-up visits within 8-30 days also showed improved adherence.



When including clinical practice guidelines as evidence, include the strength of the recommendation, quality of evidence, and any associated definitions for the grading scale.

Asthma: A 14-day follow-up recommendation is supported for patients with poorly controlled asthma exacerbations. Consequently, our inclusion of relevant ICD-10 codes considered both asthma severity and control levels (Schatz et al., 2009; National Institutes of Health, 2013; Kaiser Permanente, 2019). National Asthma Education and Prevention Program guidelines recommend: "Emphasize the need for continual, regular care in an outpatient setting, and refer the patient for a follow-up asthma care appointment (either primary care provider (PCP) or asthma specialist) within 1–4 weeks (Evidence B: RCTs, limited body of data). If appropriate, consider referral to an asthma self-management education program (Evidence B: RCTs, limited body of data)." Follow-Up After Acute Asthma Episodes: What Improves Future Outcomes? is a systematic review highlighting strategies such as educational interventions and specialist care that enhance follow-up effectiveness (Schatz et al., 2009). The findings underscore the value of comprehensive approaches addressing medical, educational and psychosocial needs, with specialist follow-up showing potential for better long-term asthma management.

Diabetes: Despite variations in severity, the recommendation is to follow the ADA's guideline of a 14-day follow-up for patients with recent medication changes. Given the heterogeneity of diabetes, this recommendation aims to ensure timely care while excluding patients who do not meet the specified criteria (Joslin Diabetes Center, 2020; Jackson et al., 2015; Gregory et al., 2018). Jackson et al., 2015 analyzed Medicaid claims data to determine the optimal timing for outpatient follow-up to reduce hospital readmissions and found that early follow-up is most beneficial for high-risk patients. Follow-up within 14 days reduced readmissions by 1.5% for low-risk patients and 19.1% for high-risk patients. Gregory et al., 2018 explored effective strategies to prevent hospital readmissions in high-risk diabetes patients through a comprehensive interdisciplinary approach involving inpatient diabetes survival skills education, medication reconciliation and timely follow-up care.

References:

Atzema, C. L., Yu, B., Schull, M. J., Jackevicius, C. A., Ivers, N. M., Lee, D. S., Rochon, P., & Austin, P. C. (2018). Physician follow-up and long-term use of evidence-based medication for patients with hypertension who were discharged from an emergency department: a prospective cohort study. CMAJ Open, 6(2), E151–E161. https://doi.org/10.9778/cmajo.20170119

Chobanian AV, et al. Seventh report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. Hypertension 2003;42:1206-52.

Batten, A., Jaeger, C., Griffen, D., Harwood, P., & Baur, K. (2018). See You in 7: improving acute myocardial infarction follow-up care. BMJ open quality, 7(2), e000296. https://doi.org/10.1136/bmjoq-2017-000296

Chang, L. L., Xu, H., DeVore, A. D., Matsouaka, R. A., Yancy, C. W., Fonarow, G. C., Allen, L. A., & Hernandez, A. F. (2018). Timing of Postdischarge Follow-Up and Medication Adherence Among Patients With Heart Failure. Journal of the American Heart Association, 7(7), e007998. https://doi.org/10.1161/JAHA.117.007998

Chobanian AV, et al. Seventh report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. Hypertension 2003;42:1206-52.

Diabetes Care in the Hospital: Standards of Medical Care in Diabetes—2019. (2018). Diabetes Care, 42(Supplement 1). doi:10.2337/dc19-s015

Ezekowitz, J. A., O'Meara, E., McDonald, M. A., Abrams, H., Chan, M., Ducharme, A., Giannetti, N.,

Grzeslo, A., Hamilton, P. G., Heckman, G. A., Howlett, J. G., Koshman, S. L., Lepage, S., McKelvie, R. S., Moe, G. W., Rajda, M., Swiggum, E., Virani, S. A., Zieroth, S., … Sussex, B. (2017). 2017 Comprehensive Update of the Canadian Cardiovascular Society Guidelines for the Management of Heart Failure. Canadian Journal of Cardiology, 33(11), 1342–1433. https://doi.org/10.1016/j.cjca.2017.08.022

Fidahussein, S. S., Croghan, I. T., Cha, S. S., & Klocke, D. L. (2014). Posthospital follow-up visits and 30-day readmission rates in chronic obstructive pulmonary disease. Risk management and healthcare policy, 7, 105–112. https://doi.org/10.2147/RMHP.S62815

Global Initiative For Chronic Obstructive Lung Disease. Global Strategy for the Diagnosis, Management, and Prevention of Chronic Obstructive Pulmonary Disease: 2020 Report.

Gregory, N.S., Seley, J.J., Dargar, S.K. et al. Strategies to Prevent Readmission in High-Risk Patients with Diabetes: the Importance of an Interdisciplinary Approach. Curr Diab Rep 18, 54 (2018). https://doi.org/10.1007/s11892-018-1027-z

Hansen J, Groenewegen PP, Boerma WGW, Kringos DS (2015). Living In A Country With A Strong Primary Care System Is Beneficial To People With Chronic Conditions. Health Affairs. 2015/09/01 2015;34(9):1531-1537. doi:10.1377/hlthaff.2015.0582

Hollenberg, S. M., Warner Stevenson, L., Ahmad, T., Amin, V. J., Bozkurt, B., Butler, J., Davis, L. L., Drazner, M. H., Kirkpatrick, J. N., Peterson, P. N., Reed, B. N., Roy, C. L., & Storrow, A. B. (2019). 2019 ACC Expert Consensus Decision Pathway on Risk Assessment, Management, and Clinical Trajectory of Patients Hospitalized With Heart Failure. Journal of the American College of Cardiology, 74(15), 1966–2011. https://doi.org/10.1016/j.jacc.2019.08.001

Hospital to Home. Quality Improvement for Institutions. Retrieved September 08, 2020, from https://cvquality.acc.org/initiatives/hospital-to-home

Hutchinson AF, Graco M, Rasekaba TM, Parikh S, Berlowitz DJ, Lim WK (2015). Relationship between health-related quality of life, comorbidities and acute health care utilisation, in adults with chronic conditions. Health and Quality of Life Outcomes. 2015/05/29 2015;13(1):69. doi:10.1186/s12955-015-0260-2.

Jackson C, Shahsahebi M, Wedlake T, DuBard CA (2015). Timeliness of Outpatient Follow-up: An Evidence-Based Approach for Planning After Hospital Discharge. The Annals of Family Medicine. 2015;13(2):115. doi:10.1370/afm.1753.

Jarab A, Alefishat E, Mukattash T, Alzoubi K, Pinto S (2018). Patients' perspective of the impact of COPD on quality of life: a focus group study for patients with COPD. International Journal of Clinical Pharmacy. 2018/06/01 2018;40(3):573-579. doi:10.1007/s11096-018-0614-z

Jayakody A, Bryant J, Carey M, Hobden B, Dodd N, Sanson-Fisher R (2016). Effectiveness of interventions utilising telephone follow up in reducing hospital readmission within 30 days for individuals with chronic disease: a systematic review. BMC Health Services Research. 2016/08/18 2016;16(1):403. doi:10.1186/s12913-016-1650-9

Joslin Diabetes Center's Clinical Guidelines for Management of Adults with Diabetes. Adult Diabetes and Clinical Research Sections, Joslin Diabetes Center. February 13th, 2020. Accessed at https://joslin-prod.s3.amazonaws.com/www.joslin.org/assets/2020-08/clinicalguidelinesformanagementofadultswithdiabetes.pdf

Kaiser Permanente. Asthma Diagnosis and Treatment Guideline. Interim Update March 2019. Accessed at https://wa.kaiserpermanente.org/static/pdf/public/guidelines/asthma.pdf

Kaiser Permanente. Chronic Obstructive Pulmonary Disease (COPD) Diagnosis and Treatment Guideline. Last Updated February 2020. Accessed at https://wa.kaiserpermanente.org/static/pdf/public/guidelines/copd.pdf.

McAlister Finlay A, Youngson E, Kaul P, Ezekowitz Justin A (2016). Early Follow-Up After a Heart Failure Exacerbation. Circulation: Heart Failure. 2016/09/01 2016;9(9):e003194. doi:10.1161/CIRCHEARTFAILURE.116.003194

National Institutes of Health. Asthma Care Quick Reference. Guidelines from the National Asthma Education and Prevention Program; Expert Panel Report 3. September 2012. Accessed at https://www.nhlbi.nih.gov/sites/default/files/media/docs/12-5075.pdf.

Schatz, M., Rachelefsky, G., & Krishnan, J. A. (2009). Follow-Up After Acute Asthma Episodes: What Improves Future Outcomes? The Journal of Emergency Medicine, 37(2). doi:10.1016/j.jemermed.2009.06.109

Tung Y-C, Chang G-M, Chang H-Y, Yu T-H (2017). Relationship between Early Physician Follow-Up and 30-Day Readmission after Acute Myocardial Infarction and Heart Failure. PLOS ONE. 2017;12(1):e0170061. doi:10.1371/journal.pone.0170061

University of Michigan. Guidelines for Clinical Care. Ambulatory; Chronic Obstructive Pulmonary Disease. July 2020. Accessed at http://www.med.umich.edu/1info/FHP/practiceguides/copd/copd.pdf

Wedzicha, J. A., (ERS co-ch, Miravitlles, M., Hurst, J. R., Calverley, P. M. A., Albert, R. K., Anzueto, A., Criner, G. J., Papi, A., Rabe, K. F., Rigau, D., Sliwinski, P., Tonia, T., Vestbo, J., Wilson, K. C., & Krishnan, J. A., (ATS co-ch. (2017). Management of COPD exacerbations: a European Respiratory Society/American Thoracic Society guideline. European Respiratory Journal, 49(3), 1600791. https://doi.org/10.1183/13993003.00791-2016

Whelton PK, Carey RM, Aronow WS, Casey DE Jr, Collins KJ, Dennison Himmelfarb C, DePalma SM, Gidding S, Jamerson KA, Jones DW, MacLaughlin EJ, Muntner P, Ovbiagele B, Smith SC Jr, Spencer CC, Stafford RS, Taler SJ, Thomas RJ, Williams KA Sr, Williamson JD, Wright JT Jr. 2017 ACC/AHA/AAPA/ABC/ACPM/AGS/APhA/ASH/ASPC/NMA/PCNA guideline for the prevention, detection, evaluation, and management of high blood pressure in adults: a report of the American College of Cardiology/American Heart Association Task Force on Clinical Practice Guidelines. Hypertension. 2018;71:e13–e115. DOI: 10.1161/HYP.0000000000000065

Willard, K. S., Sullivan, J. B., Thomashow, B. M., Jones, C. S., Fromer, L., Yawn, B. P., Amin, A., Rommes, J. M., & Rotert, R. (2016). The 2nd National COPD Readmissions Summit and Beyond: From Theory to Implementation. Chronic Obstructive Pulmonary Diseases: Journal of the COPD Foundation, 3(4), 778–790. https://doi.org/10.15326/jcopdf.3.4.2016.0162

Wiviott, S. D., & Braunwald, E. (2004). Unstable angina and non-ST-segment elevation myocardial infarction: part II. Coronary revascularization, hospital discharge, and post-hospital care. American family physician, 70(3), 535–538.

2.4 Performance Gap

If available, provide evidence of performance gap or measurement gap by providing performance scores on the measure as specified at the specified level(s) of analysis. Please include mean, minimum, maximum, and scores by deciles by using the table below or upload an attachment. In the text field here, describe the data source, including number of measured entities, number of patients, dates of data. If a sample was used, provide characteristics of the entities included. If performance scores are unavailable for the measure, please explain.

We analyzed performance on the TFU measure using the CY 2021 data sets (See: **Section 4.1.1 Data Used for Testing** for a description) across 475 ACOs that submitted data to the Medicare Shared Savings Program. (See Attachment B for Table 1: Performance Scores by Decile).

The measure score ranged from 36.4% to 91.0%, showing a wide range in performance. Mean performance on the Timely Follow-Up measure was 77.4% (4.5%); the median was 77%. These results show that the worst-performing ACO (36.4%) has a measure score that is 111% (or 1.11 times) worse than the median, and the highest-performing ACO (91.0%) has a measure score that is 18% better than the median. As ACOs serve large patient populations, low performance of just a few ACOs can affect many patients. For example, the 238 ACOs with measure scores below the median represent 351,597 patients (or 48.5% of patients).

The measure may additionally be useful in elucidating disparities for patients with social risk factors. ACO-level results indicate there are disparities in ACO-level performance for dual, non-white, and patients of low socioeconomic status; please see Section 5: Equity for further detail.

Quick Tip

The developer demonstrated a performance gap by detailing the range and distribution of performance scores among a significant number of ACOs and by highlighting the impact on patient populations.

Table 1. Performance Scores by Decile

Enter the overall mean, minimum, maximum, and mean scores by decile. Enter the number of measured entities and persons/ encounters/episodes overall and within each decile.

Quick Tip

Including a table to illustrate performance scores by decile among the measured entities provides a helpful visual element.

Description	Overall	Min	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Decile 10	Max
Mean Performance Score	77%	36.4%	69%	73%	75%	76%	77%	78%	79%	80%	82%	85%	91%
N of Entities	475	1	47	48	47	48	47	48	48	48	47	47	1
N of Persons/ Encounters/ Episodes	72	118	45,521	56,570	63,608	76,199	108,852	83,224	107,682	63.664	76,643	43,115	1,204

2.6 Meaningfulness to Target Population*

Provide evidence the target population (e.g., patients) values the measured outcome, process, or structure, and finds it meaningful. Please describe how and from whom you obtained input.

As described in Section 2.2 Evidence of Measure Importance, lack of timely follow-up care after an acute exacerbation can lead to poor post-discharge outcomes, including further exacerbation of chronic conditions and post-discharge acute care utilization including readmission to the hospital. Patients and caregivers were interviewed for a technical expert panel (TEP) related to readmissions; patients and caregivers shared their stories of frustration, confusion, and suffering, as they or their loved ones faced unexpected returns to the hospital after discharge. In our interviews they cited experiences such as return to the hospital following exacerbation of a condition caused by changes in medication after discharge, returns to the hospital due to infection after an inpatient procedure, and other signs of poor coordination of care including insufficient communication from providers. In addition, prior qualitative work performed by a team member for a different project has found that patients expect their providers to follow clinical guidelines and therefore would expect to receive timely follow-up care in concordance with the clinical guidelines cited in Section 2.2.

Reference:

Summary of Technical Expert Panel (TEP) Meetings, Excess Days in Acute Care (EDAC). April 2024. Prepared by Yale New Haven Health Services Corporation – Center for Outcomes Research and Evaluation under contracts to the Centers for Medicare and Medicaid Services. https://mmshub.cms.gov/sites/default/files/EDAC-TEP-Summary-Report.pdf

Quick Tip

Draw attention to the importance of the measure's outcome specific to your target population.

This submission highlights the negative consequences of inadequate follow-up care and includes examples such as worsening chronic conditions and increased hospital readmissions.

Quick Tip

Draw attention to the importance of the measure's outcome specific to your target population.

This submission highlights the negative consequences of inadequate follow-up care and includes examples such as worsening chronic conditions and increased hospital readmissions.

Quick Tip

Identify any differences in the data used for testing. Here, the developer notes that Hospital 13 only participated in alpha (feasibility) testing.

Section 3. Feasibility

3.1 Feasibility Assessment*

Describe the feasibility assessment conducted, showing you considered the people, tools, tasks, and technologies necessary to implement this measure. For maintenance measures, describe whether feasibility issues due to implementation might have arisen and the near-term (i.e., within one year) mitigation approaches.

The feasibility assessment should address:

- *Whether all required data elements are routinely generated and used during care delivery*
- *The extent of any missing data, measure susceptibility to inaccuracies, and the ability to audit data to detect problems*
- *Estimates of the costs or burden of data collection, data entry, and analysis, including the impact on clinician workflow, diagnostic thought processes, and patient-physician interaction*
- *Barriers encountered or that could be encountered in implementing the measure specifications, data abstraction, measure calculation, or performance reporting*
- *Ability to collect information without violation of patient confidentiality, including circumstances in which measures based on patient surveys or the small number of patients may compromise confidentiality*
- *Identification of unintended consequences*

Quick Tip

Describe whether data generation is produced routinely and whether the data are used during the delivery of care. Additionally, provide information regarding missing data, if applicable.

The developer of this submission explains that the measure uses routinely generated claims data, ensuring all required data elements are available without additional collection efforts. Additionally, no analysis of missing data was performed as the measure uses a 100% sample of final-action claims, suggesting minimal missing data issues.

Quick Tip

Describe the costs and burden of data collection as well as any barriers to implementation.

This submission describes that there is no additional burden on clinicians or disruption to workflow because the data are automatically collected from claims. No significant barriers have been reported, and the feedback from the public and measured entities did not indicate concern regarding the burden of implementation.

Quick Tip

Describe concerns or circumstances that may put patient confidentiality at risk.

This submission states there are no confidentiality concerns as the data are sourced from CMS claims under strict privacy regulations.

Quick Tip

Include a description of any unintended consequences in regards to feasibility of implementation.

The developer of this measure submission identified no unintended consequences.

This is a claims-based measure, and the measure score is calculated automatically from claims data that are routinely generated during the delivery of care. No data are collected by ACOs; therefore, this measure imposes no burden on measured entities and no implementation effort. CMS monitors feedback from the public and measured entities, and there have been no concerns about burden related to implementation of this measure. There are no concerns about patient confidentiality because the measure is based on CMS claims data.

We did not perform an analysis of missing data for the measure because it is based on a 100% sample of paid, final action claims submitted by facilities for payment. To ensure complete claims, we allow at least 3 months of time between accessing the data and the end of the performance period.

We identified no unintended consequences.

3.3 Feasibility-Informed Final Measure*

Describe how the feasibility assessment informed the final measure specifications, indicating any decisions made to adjust the measure in response to feasibility assessment.

No changes were made to the measure based on feasibility; this is a claims-based measure, and there is no burden on the ACO; rates are automatically calculated by CMS based on claims data generated during the course of clinical care for Medicare beneficiaries.

3.4 Proprietary Information*

Indicate whether your measure or any of its components are proprietary, with or without fees (choose one).

☐ Proprietary measure or components (e.g., risk model, codes), without fees
☐ Proprietary measure or components with fees
☒ Not a proprietary measure and no proprietary components

Section 4. Scientific Acceptability

4.1 Data and Samples

4.1.1 Data Used for Testing*

Describe the data used for testing (include dates, sources).

For measure respecification and testing (feasibility, reliability, validity), we used data from Medicare Fee-for-Service (FFS) accountable care organizations (ACOs) as follows:

Medicare FFS administrative claims data (Parts A and B), Calendar Year (CY) 2018 claims.

Medicare beneficiary summary file (MBSF) data, which includes beneficiary enrollment information.

As part of measure reevaluation efforts, and in preparation for CBE measure maintenance review, we performed additional testing (feasibility, reliability, validity) with the following data:

Medicare FFS administrative claims data (Parts A and B), CY 2021 claims.

MBSF data, which includes beneficiary enrollment information.

Unless otherwise noted, this submission references these more recent analyses using the 2021 data sources. Because this is a claims-based measure where data elements are generated during the course of clinical care, we found no data feasibility, reliability, and/or validity challenges during measure respecification. For further detail on feasibility, see Section 3.1 Feasibility. We note that data used for testing the respecified measure includes all ACOs with attributed beneficiaries.

For any implementation-focused analyses, CMS, and their implementation contractor, used Medicare FFS administrative claims data for CY 2022 and CY 2023 to identify acute events and their follow-up for TFU and enrollment data from the Integrated Data Repository (IDR). For further detail on these analyses, please see responses included in Section 6: Usability. We note that any analyses that use data from the ACO model itself (e.g., improvement) includes only ACOs that participate in the ACO Reach Model.

Quick Tip

The developer identifies the year(s) and data sources used for initial testing and re-specification. Data used for re-specification are recent (i.e., within the past 5 years).

4.1.2 Differences in Data*

If there are differences in the data or sample used for different aspects of testing (e.g., reliability, validity, exclusions, risk adjustment), clearly identify which data source/sample is used for each aspect of testing, including the years of data used in each. If there are no differences to report, enter "None."

For measure reevaluation and updated analyses, the study team used CY 2021 Medicare FFS administrative claims data and CY 2021 MBSF data for each aspect of testing. This data included claims information from 475 ACOs, including 698,370 acute encounters.

Quick Tip

In order to delineate the differences in data, this submission highlights the data sources and samples used for the different aspects of testing, as well as the year(s) data was pulled from for measure reevaluation and updated analyses.

For equity analyses, the study team used CY 2018 Medicare FFS claims data, and CY 2018 MBSF data for each aspect of testing (e.g. reliability, validity, etc.) This data included claims information from 610 ACOs, including 2,980,296 acute encounters. In addition, CMS and their implementation contractor used Medicare FFS administrative claims data for CY 2022 and CY 2023 for any implementation-focused analyses.

4.1.3 Characteristics of Measured Entities*

Describe characteristics of measured entities included in the analysis (e.g., number, size, location, type). If you used a sample, describe how you selected measured entities for inclusion in the sample and the representativeness of the sample.

For analyses related to measure respecification and testing (reliability, validity) we used claims data from CY 2021 to approximate the accountable care organization (ACO) population for which this measure is being specified. This data included claims information from 475 ACOs, including 698,370 acute encounters.

For analyses related to improvement, the implementation contractor used Medicare FFS administrative claims data for CY 2022 and CY 2023. Ninety-one ACOs were included in the ACO REACH Model in Performance Year (PY) 2022 and 118 were included in PY 2023 Standard and New Entrant ACOs only. This includes 120,199 acute encounters for PY 2022 from the PY 2022 Q4 Quarterly Quality Report (QQR) and 142,363 encounters for PY 2023 from the PY 2023 Q4 QQR. Please note each model performance year aligns with the calendar year.

Quick Tip

The submission describes characteristics of measured entities included in the analysis, the specific years of data used, and the specific models or performance years associated with each dataset.

4.1.4 Characteristics of Units of the Eligible Population*

Describe characteristics of the patients, encounters, episodes, etc., including numbers and percentages by factors such as age, sex, race, or diagnosis. Provide descriptive statistics separately by each specified level of analysis and data source. If you used a sample, describe how you selected the patients for inclusion in the sample and the representativeness of the sample. If there is a minimum case count used for testing, you must reflect that minimum in the specifications in Minimum Sample Size in Section 1.

Please see Attachment B for Table 2: Characteristics of Patients Included in Timely Follow-Up Development Database. This table displays the demographic characteristics of patients included in the development database used for testing the Timely Follow-Up. As demonstrated in the table, the average age of the patients is 74.61 years old. Females had a higher frequency at 50.84%, in comparison to males at 49.16%. Among different races, white patients had the highest frequency at 84.35%. Congestive Heart Failure (CHF) was the condition with the highest encounter frequency at 29.66% with Chronic Obstructive Pulmonary Disease (COPD) being the second highest at 17.13%.

4.2 Reliability

4.2.1 Level(s) of Reliability Testing Conducted*
Choose all that apply.

☐ Patient or Encounter Level (e.g., inter-abstractor reliability)
☒ Accountable Entity Level (e.g., signal-to-noise analysis)
☐ Not applicable/reliability testing not conducted

4.2.2 *[If reliability testing was conducted]* **Method(s) of Reliability Testing***

For each level of reliability testing conducted, describe the method(s) of reliability testing and explain what each tests. Describe the steps; do not just name a method. What type of error does it test? Provide the type of statistical analysis used. Describe proportion of missing data, how missing data were analyzed and/or excluded, and any sensitivity analysis conducted.

Note: Testing at the patient or encounter level requires that all critical data elements be tested (not just agreement of one final overall computation for all patients). At a minimum, the numerator, denominator, and exclusions must be assessed and reported separately. Prior evidence of reliability of data elements for the data type specified in the measure (e.g., hospital claims) can be used as evidence for those data elements. Prior evidence could include published or unpublished testing that includes the same data elements, uses the same data type (e.g., claims, chart abstraction), and is conducted on a sample as described above (i.e., representative, adequate numbers, and randomly selected, if possible).

Quick Tip

Explain why the selected reliability method was chosen and why it's appropriate for the measure.

Since the TFU measure is a process measure, there is no risk adjustment at the patient-level and instead the provider's performance is measured as the proportion of acute exacerbations that were followed timely at the provider. The timely follow-up is modeled then as a hierarchical logistic regression model with only the random effects that account for variation at the ACO level. To estimate the overall signal and noise, we will use the estimated covariance from a hierarchical generalized linear model (HGLM) as the between-entity variance τ2 and π2/3 as within-entity variance σ2. We then calculate the intraclass correlation ρ = τ2 /(τ2 + σ2) and use the Spearman-Brown equation: Rj = njρ/(1+(nj-1)ρ) to calculate the reliability of each ACO; we report the reliability as the mean Rj over all ACOs.

Reference:
Adams, JL, Mehrotra A, Thomas JW, et al (2010). Physician Cost Profiling—Reliability and Risk of Misclassification. NEJM. 2010;362:1014-1021.

4.2.3 *[If reliability testing was conducted]* **Reliability Testing Results***

Provide the statistical results from reliability testing for each level and type of reliability testing conducted. Where applicable, include results from accountable entity-level reliability testing (e.g., signal-to-noise testing) in the table below.

Across the 475 measured ACOs, the minimum signal-to-noise reliability is 0.658, which meets the CBE minimum reliability threshold of 0.6. Mean reliability is 0.933, with a standard deviation of 0.043; median reliability is 0.940. Please see Attachment B for Table 3: Timely Follow-Up Accountable Entity-Level Reliability Testing Results.

Quick Tip

Reliability testing results at the entity-level (not the mean or median across all entities) is used to determine if results meet the minimum reliability threshold of 0.6.

4.2.3a *[If reliability testing was conducted]* **Attach Additional Reliability Testing Results**

If needed, you may attach additional reliability testing results here. Please ensure all attachments are 508 compliant and that all tables and figures are labeled with alternative text, as appropriate. Please clearly refer to any results within your attachment within the relevant text fields of this measure submission form.

One file only; 256 MB limit; allowed types: .zip, .pdf, .docx, .xls, .xlsx

Table 2. *[If accountable entity-level testing was conducted, i.e., if 4.2.1 includes "Accountable Entity-Level")]* **Accountable Entity-Level Reliability Testing Results**

Enter the overall reliability, minimum, maximum, and mean reliability by decile. Enter the number of measured entities and persons/encounters/episodes overall and within each decile. If a sample, provide characteristics of the entities included.

Description	Overall	Min	Decile 1	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Decile 10	Max
Mean STNR (Reliability)	0.933	0.658	0.844	0.891	0.908	0.921	0.933	0.944	0.955	0.967	0.978	0.987	0.996
Mean Performance Score	77.4%	36.4%	77.1%	77.7%	76.5%	78.7%	76.7%	78.0%	76.9%	76.8%	77.0%	78.5%	77.1%
Entities	475	1	47	48	47	48	47	48	48	48	47	47	1
Total Admissions	725,078	118	16,264	24,760	27,745	34,567	40,530	49,674	63,482	84,367	130,944	252,745	14,763

4.2.4 *[If reliability testing was conducted]* **Interpretation of Reliability Results***

Provide your interpretation of the results in terms of demonstrating reliability for each level and type of reliability testing conducted. How do the results support an inference of reliability for the measure?

The minimum signal-to-noise reliability score was 0.658, which meets Battelle's minimum signal-to-noise reliability threshold of 0.6. Therefore, this measure meets the CBE requirements for reliability. This means that 65.8% of the variation in the measure scores among the 475 ACOs is due to true differences in performance.

Reference:

Partnership for Quality Measurement. Endorsement and Maintenance (E&M) Guidebook. October 2023. https://p4qm.org/sites/default/files/2023-12/Del-3-6-Endorsement-and-Maintenance-Guidebook-Final_0_0.pdf

The interpretation should explain what the reliability results mean in the context of the measure.

4.3 Validity

4.3.1 Level(s) of Validity Testing Conducted*

Choose all that apply.

☐ Patient or Encounter Level (e.g., sensitivity and specificity)
☒ Accountable Entity Level (e.g., criterion validity)
☐ Not applicable/validity testing not conducted

4.3.2 Type of Accountable Entity Level Validity Testing Conducted*

Choose all that apply.

☒ Empirical validity testing at the accountable entity-level (e.g., criterion validity, construct validity, known groups analysis)
☐ Systematic assessment of face validity of the measure's performance score as an indicator of quality or resource use (i.e., the score is an accurate reflection of the effect of performance on quality or resource use and can distinguish good from poor performance)
☐ Not applicable/accountable entity-level validity testing not conducted

4.3.2a *[If a maintenance measure]* **Provide a rationale for why accountable entity-level validity testing was not conducted.**

4.3.3 *[If validity testing was conducted]* **Method(s) of Validity Testing***

For each level of testing conducted, describe the method(s) of validity testing and what each tests. Describe the steps (do not just name a method) and explain what was tested (e.g., accuracy of data elements compared with authoritative source, relationship to another measure as expected). What statistical analysis did you use? Describe proportion of missing data, how missing data were analyzed and/or excluded, and any sensitivity analysis conducted.

Note: Testing at the patient or encounter level requires that all critical data elements be tested (not just agreement of one final overall computation for all patients). At a minimum, the numerator, denominator, and exclusions must be assessed and reported separately. For patient- or encounter-level testing, prior evidence of validity of data elements for the data type specified in the measure (e.g., hospital claims) can be used as evidence for those data elements. Prior evidence could include published or unpublished

testing that: includes the same data elements, uses the same data type (e.g., claims, chart abstraction), and is conducted on a sample as described above (i.e., representative, adequate numbers, and randomly selected, if possible).

For empirical accountable entity-level testing, the following should be included:

- *Narrative describing the hypothesized relationships*
- *Narrative describing why examining these relationships (e.g., correlating measures) would validate the measure*
- *Expected direction of the association*
- *Expected strength of the association*

CY 2021 Medicare FFS and MBSF data sources (see: Section 4.1.1 Data Used for Testing) were used to conduct validity testing. To empirically evaluate the measure's validity, we correlated performance on the TFU measure among 475 SSP ACOs in CY 2021 to performance on three quality measures in use by the SSP program in the same period. We identified the candidate measures as those that might capture quality related to similar constructs of care coordination and follow-up care for the conditions included in the measure. We were interested in the correlation with the following measures using CY 2021 data sources:

-ACO-MCC1, All-Cause Unplanned Admissions for Patients with Multiple Chronic Conditions, CBE #2888
We expected negative correlations with the unplanned admissions measure because we would expect providers who were providing good care coordination to reduce their unplanned admissions (unplanned admissions is a lower-is-better measure, and Timely Follow-Up is a higher-is-better measure). As noted in section 2.2, evidence shows that early follow-up after discharge reduces hospital readmission rates.

-ACO-27, Diabetes Mellitus: Hemoglobin A1c Poor Control, CBE #0059
-ACO-28, Hypertension (HTN): Controlling High Blood Pressure, CBE #0018
We expected a correlation with the two measures that indicated good control of chronic disease, demonstrated by a negative correlation with the Diabetes Mellitus: Hemoglobin A1c Poor Control measure (higher is worse) and a positive correlation with the Hypertension (HTN): Controlling High Blood Pressure measure (higher is better).

Quick Tip

The developer selects measures that have shared mechanisms (care coordination and follow-up care) to the follow-up measure, which support inference of validity when evaluating correlation.

Quick Tip

If available, provide supporting literature/evidence to support hypothesized relationships.

4.3.4 *[If validity testing was conducted]* **Validity Testing Results***

Provide the statistical results from validity testing for each level and type of validity testing conducted.

Table 4 (see Attachment B) shows our validity testing results using the 2021 data sources. The correlation coefficients for each association, and their p-values, are also shown below:

-All-Cause Unplanned Admissions for Patients with Multiple Chronic Conditions [CBE #2888] (n=475): r=-0.136, p=0.003

-Diabetes Mellitus: Hemoglobin A1c Poor Control [CBE#0059] (n=465): r=-0.027, p<.0001

-Hypertension (HTN): Controlling High Blood Pressure [CBE#0018] (n=465): r=0.305, p<.0001

Quick Tip

Provide the validity testing results. Including a table of validity results showing the correlation coefficients for each association and their p-values provides a helpful visual element.

4.3.5 *[If validity testing was conducted]* **Interpretation of Validity Results***

Provide your interpretation of the results in terms of demonstrating validity for each level and type of validity testing conducted. How do the results support an inference of validity for the measure? For accountable entity-level testing, discuss how the results relate to the hypothesis. If the results are not what were expected, why?

Our testing results support the validity of the TFU measure. The selected comparator measures, all in the same causal pathway as the TRU measure, show significant associations in the expected strength and direction. We further discuss our findings below.

We expected weak negative correlations with the unplanned admissions measure because we would expect providers who were providing good care coordination to somewhat reduce their unplanned admissions. For All-Cause Unplanned Admissions for Patients with Multiple Chronic Conditions, a statistically significant but small negative correlation was shown.

For Diabetes Mellitus: Hemoglobin A1c Poor Control, a statistically significant but very small negative correlation was found. This is expected as we would expect that ACOs with appropriate follow-up would also have better diabetes control. For Hypertension (HTN): Controlling High Blood Pressure, a statistically significant positive correlation was found. This direction and strength of the association is also expected, as ACOs with appropriate follow-up would also be expected to do well with hypertension control. Of note, exacerbations of diabetes represent a much more heterogenous cohort of conditions when compared to exacerbations of HTN; therefore, we would anticipate the relative difference in strength of correlation described above.

Quick Tip

Provide an interpretation of result in relation to the hypothesis.

In this submission, the developer outlines the associations found between the TFU measure and the selected comparator measures, which are in the same causal pathway, and confirms that these associations are in the expected strength and direction. The explanation of the results aligns with the hypothesized relationships, thereby supporting the validity of the TFU measure.

4.4 Risk Adjustment

4.4.1 Methods Used to Address Risk Factors*

What methods or approaches were used to explore the effects of risk factors on this measure? (Note: If you tested for the effects of risk factors and ultimately determined that risk adjustment or stratification was not warranted, please select the method(s) used and provide details of the testing and your rationale in 4.4.2 through 4.4.6; the measure's ultimate status will be reported in 4.4.7).

Choose all that apply.

☐ Statistical risk-adjustment model with risk factors
☒ Stratification by risk factor category
☐ Other

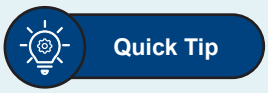
4.4.1a Describe other method(s) used

4.4.2. *[If risk factors are addressed by any method (4.4.1)]*
Conceptual Model Rationale*

Explain the rationale for the risk approach, including reasons for risk adjustment and/or stratification. Describe the sources that inform the conceptual model, e.g., scientific literature, unpublished findings, TEP. Consider age, gender, race, ethnicity, urbanicity/rurality, Medicare/Medicaid dual eligibility status, indices of social vulnerability (e.g., Centers for Disease Control and Prevention Social Vulnerability Index), and markers of functional status-related risk (e.g., cognitive or physical function) in the conceptual model, using evidence to support the model, with references. If risk factors (e.g., social, functional status-related, clinical) are included in the conceptual model but data are not available for all factors, describe any potential bias as a result of not including the risk factor(s) in the final risk-adjustment model or stratification. Address the validity of the measure in light of this bias.

Rationale and Conceptual Model for Stratification

Studies have shown that there are disparities in both rates of follow-up, as well as rates of readmission, in patients with social risk factors, including disparities by income and race/ethnicity (Miskey et al., 2010; DeLia et al., 2014; Anderson et al., 2022). For example, a 2014 study found that Black or Hispanic Medicare beneficiaries over age 65 were less likely than white beneficiaries to experience post-discharge follow-up care within 30 days after discharge from an inpatient hospitalization (DeLia et al., 2014). Study authors also found that Black patients were more likely to have a post-discharge readmission or an ED visit rather than a post-discharge follow-up visit as the first health care utilization event following hospital discharge (DeLia et al., 2014). A 2022 study confirming these disparities found that rates of follow-up were lower for Medicare beneficiaries who were non-Hispanic Black (34.1%) or



Provide a comprehensive rationale for the risk-adjustment and/or stratification approach.

This submission refers to studies and sources that inform and support the model used in the TFU measure. In addition, potential barriers and their impact were identified. The developer highlights the alignment of goals between the approach and the ACO REACH model which is to reduce disparities and support quality improvement efforts.

Hispanic (40.0%), compared with non-Hispanic white beneficiaries (45.3%) (Anderson et al., 2022). This study also describes disparities between beneficiaries with dual eligibility vs. non-dual beneficiaries (follow-up rates of 38.3% vs. 45.7%, respectively), and disparities associated with higher vs. lower area-level deprivation (lowest quartile, 47.1%, highest quartile, 38.8%) (Anderson et al., 2022). Finally, there is evidence that disparities in timely follow-up are associated with disparities in outcomes. For example, the same 2022 study cited previously found that post-discharge follow-up (within 7 days) was associated with hospital readmission, with higher follow-up rates associated with lower readmission rates. Furthermore, study authors found that a substantial proportion of the variation in readmission rates for patients with social risk factors was mediated by 7-day follow up: about 20% for dual eligibility and 50% for area deprivation. For Black patients hospitalized for pneumonia, the timely follow-up rate mediated almost all (97.5%) of the risk of readmission (Anderson et al., 2022).

These studies demonstrate that social risk factors are associated with the intermediate outcome (improved management of chronic conditions and reduced frequency of exacerbations) incentivized by the TFU measure and that the intermediate outcome is associated with broader outcomes such as readmission. Conceptually, these social risk factors could be related to barriers to receiving care, which could be modified or mitigated by measured entities (ACOs). Potential barriers include access to providers during the post-discharge period (both in terms of provider availability, transportation, or other access barriers), the quality of outpatient providers, low health literacy, or housing insecurity (Wolfe et al., 2020; ASPE, 2020; Virapongse, et al., 2018; Levy et al., 2016). Please see Section 6.2.1 for literature that supports actions that ACOs can implement to improve performance and patient outcomes for the TFU measure.

The TFU empiric results, taken together with information from published studies, the conceptual pathway, and the goals of the ACO REACH model to reduce disparities, have informed the rationale to report stratified TFU measure results (stratified by dual eligibility, race, and Area Deprivation Index) to ACOs to support their quality improvement efforts and reduce disparities.

References:

Anderson, A., Mills, C. W., Willits, J., Lisk, C., Maksut, J. L., Khau, M. T., & Scholle, S. H. (2022). Follow-up Post-discharge and Readmission Disparities Among Medicare Fee-for-Service Beneficiaries, 2018. Journal of general internal medicine, 37(12), 3020–3028. https://doi.org/10.1007/s11606-022-07488-3

Quick Tip

Identification of stratification variables and even risk-adjustment variables can be informed from a multitude of sources and should be disclosed. These include literature reviews, internal empirical analyses, focus groups or technical expert panels (TEPs), etc. In this example, the developer did not list a TEP or focus group as part of their information gathering for stratification variables. However, if using a focus group or TEPs for identifying risk factors or face validity testing, please provide a listing of how many people were convened, their stakeholder perspective, and how consensus was reached, at a minimum.

DeLia, D., Tong, J., Gaboda, D., & Casalino, L. P. (2014). Post-discharge follow-up visits and hospital utilization by Medicare patients, 2007-2010. Medicare & medicaid research review, 4(2), mmrr.004.02.a01. https://doi.org/10.5600/mmrr.004.02.a01

Levy, H., & Janke, A. (2016). Health Literacy and Access to Care. Journal of health communication, 21 Suppl 1(Suppl), 43–50. https://doi.org/10.1080/10810730.2015.1131776

Misky, G. J., Wald, H. L., & Coleman, E. A. (2010). Post-hospitalization transitions: Examining the effects of timing of primary care provider follow-up. Journal of hospital medicine, 5(7), 392–397. https://doi.org/10.1002/jhm.666

Office of the Assistant Secretary for Planning and Evaluation (ASPE), U.S. Department of Health & Human Services. Second Report to Congress on Social Risk Factors and Performance in Medicare's Value-Based Purchasing Program. 2020. https://aspe.hhs.gov/social-risk-factors-and-medicares-value-basedpurchasing-programs

Virapongse A, Misky GJ. Self-identified social determinants of health during transitions of care in the medically underserved: a narrative review. J Gen Intern Med. 2018;33(11):1959–1967. doi: 10.1007/s11606-018-4615-3.

Wolfe, M. K., McDonald, N. C., & Holmes, G. M. (2020). Transportation Barriers to Health Care in the United States: Findings From the National Health Interview Survey, 1997-2017. American journal of public health, 110(6), 815–822. https://doi.org/10.2105/AJPH.2020.305579

4.4.3 *[If risk factors are addressed by any method (4.4.1)]* **Risk Factor Characteristics Across Measured Entities***

Provide descriptive statistics showing how the risk variables identified from the conceptual model are distributed across the measured entities. Indicate which risk factors were tested in the risk-adjustment model and which were tested for stratifying the measure, as applicable.

See Attachment B for Table 5: Risk Factor Characteristics Across Measured Entities. This table shows the distribution of social risk factors identified in the conceptual model for the TFU measure, based on CY 2018 data. Across the TFU cohort, 16.7% of patients are dual eligible, 21.3% are low income (Low AHRQ SES), and 20.8% are non-white. Across ACOs (n=610), the median proportion of patients with social risk factors is: 14.6% dual eligible, 18.6% low income (Low AHRQ SES), and 17.1% non-white (See Attachment B, Table 6: ACO-Level Distribution of Patients with Social Risk Factors).

These variables were tested in the stratification approach; however, the low AHRQ SES variable was replaced with the Area Deprivation Index variable during implementation.

4.4.4 *[If risk factors are addressed by any method (4.4.1)]* **Risk-Adjustment Modeling and/or Stratification Results***

Describe the statistical results of the analyses used to test and select risk factors for inclusion in or exclusion from the risk model and/or stratification, as applicable. Clearly indicate the risk factors included in the final risk model and/or used in the final stratification approach.

See Attachment B for Table 7: Proportion of Beneficiaries with Social Risk within Quartiles of TFU Scores. As discussed in Section 5.1 (Equity) and Tables 8 and 9 in the attachment, measure scores for beneficiaries with social risk factors are lower (worse) at both the patient and ACO level for patients with: dual eligibility (vs. non-dual), low AHRQ SES (vs. non-low AHRQ SES), and non-white (vs. white).

For example, at the ACO level, median TFU measure scores for beneficiaries stratified by social risk factor are: dual eligibility vs. non-dual: 70.5% vs. 76.8%; non-white vs white: 70.9% vs. 77.1%; low SES vs. non-low SES: 73.3% vs. 76.3% (Table 6 in the attachment).

Table 7 (Attachment B) shows the relationship between measure scores and social risk factors, demonstrating that ACOs with the lowest measure scores have the highest proportion of beneficiaries with social risk (in this case, the ADI variable was used as the income variable), most markedly for the DE variable.

4.4.6. *[If risk factors are addressed by any method (4.4.1)]*
Interpretation of Risk Factor Findings*

Provide your interpretation of the results, in terms of demonstrating adequacy of controlling for differences in patient characteristics (i.e., case mix). Clearly describe the rationale for why each risk factor tested WAS or WAS NOT included in the final model. Describe what the results mean, including what is normally expected in relation to the test conducted.

While there is an association between TFU measure scores and the proportion of patients with social risk factors, consistent with the aim of the ACO REACH model to reduce disparities, CMS has chosen a stratification approach because risk adjustment would serve to make these important and potentially modifiable disparities invisible. In addition, the ACO REACH payment calculation accounts for ACOs that treat a high proportion of patients with social risk. As described in Section 5.1 (Equity), the ACO REACH model, for 2024, adjusts payments based on dual-eligibility status and the University of Wisconsin Area Deprivation Index (ADI), which uses 17 variables from the U.S. Census data, including education level, employment status, home values, and income. The 2024 model will adjust ACO benchmarks by $30 per-beneficiary, per-month (PBPM) for beneficiaries with equity scores in the top decile, $20 PBPM for beneficiaries in the second decile, $10 PBPM for the third decile, and $0 PBPM for the next four deciles. For any aligned beneficiary in the bottom 50%, an ACO's benchmark will be reduced by $6 PBPM.

Quick Tip

Typically, process measures do not need risk-adjustment because the measured processes are appropriate for all patients included in the denominator and the measure excludes all the patients for whom the measure is not appropriate. This measure submission provides a rationale as to why risk-adjustment is not recommended.

4.4.7 *[If risk factors are addressed by any method (4.4.1)]* **Final Approach to Address Risk Factors***

After testing, what methods or approaches were ultimately used to control for the effects of risk factors? (Note: The final approach should be supported by the testing and the rationale provided in 4.4.2-4.4.6). Choose all that apply.

☐ Statistical risk-adjustment model with risk factors
☒ Stratification by risk factor category
☐ Other

4.4.1a Describe other method(s) used

☐ No risk adjustment or stratification.

Section 5. Equity

5.1 Contributions Toward Advancing Health Equity *(optional)*.
Describe how this measure contributes to efforts to advance health equity. Provide a description of your methodology and approach to empirical testing of differences in performance scores across multiple socio-contextual variables (e.g., race, ethnicity, urbanicity/rurality, socioeconomic status, gender, gender identity, sexual orientation, age). Provide an interpretation of the results, including interpretation of any identified differences and consideration of negative impact or unintended consequences on subgroups.

Reporting and reducing disparities are a key area of focus for quality measures and payment models. Use of stratified quality measures, that is, calculating and reporting quality measure results separately for persons with and without social risk factors, can illuminate gaps in quality care within and across entities. To this end, during original measure respecification, we assessed disparities in the TFU measure. We analyzed timely follow-up rates at both the patient and ACO level, by condition and social risk factors to provide insight into whether patients receive equitable care.

For these analyses, we used Medicare FFS administrative claims data (Parts A and B) and Medicare beneficiary summary file (MBSF) data from Calendar Year (CY) 2018.

At the patient level, we examined the percent timely follow-up for each condition by patients based on social risk factors and the absolute difference in percent receiving timely follow-up care. At the ACO level, we calculated the percent timely follow-up among its patients with and without the social risk factor and the difference in % timely follow-up between the social risk group and the referent. The variables considered included race (white vs. non-white), sex (male vs. female), dual eligibility (dual vs. non-dual), and neighborhood (low SES vs. non-low SES) based on the AHRQ SES index.

Results:

For the results of patient-level disparities, see Attachment B for Table 8: Patient-level Percent Timely Follow-Up by Condition and Social Disparity.

Quick Tip

Describe how the measure contributes to advancing health equity. Include an explanation of the methodology and approach used in testing.

In this submission, the description covers the use of Medicare FFS administrative claims data and Medicare beneficiary summary file data to analyze timely follow-up rates at both the patient and ACO level, stratified by various social risk factors. The developer notes the measure is adjusted for social risk factors at the level of payment in the program to promote fairness without penalizing entities serving high-risk populations.

Quick Tip

Detail an interpretation of the results, including any unintended consequences or negative impacts.

In this submission, the interpretation of the results highlights significant disparities in timely follow-up rates among patients with different social risk factors. The submission addresses potential unintended consequences on subgroups, particularly how risk adjustment at the quality measure level might obscure important disparities.

Across all the condition-specific cohorts, timely follow-up percent is consistently lower for dual-eligible patients than non-dual eligible patients (abs. difference range was -9.53% to -3.28%), higher (except CHF) for female than male patients (abs. difference range was from -0.56% to 2.88%), lower for non-white patients than white patients (abs. difference range was -10.25% to -2.00%), and lower for persons living in low SES neighborhoods (defined as lowest quartile of AHRQ-SES of patient's ZIP code) than persons living in non-low SES (abs. difference ranged from -7.02% to -1.28%).

Overall, dual patients had 70.14% timely follow-up while non-dual patients had 76.54% timely follow-up with an absolute difference of 6.40% lower for dual patients. Female patients had 75.90% timely follow-up compared to 74.98% of male patients, with absolute 0.92% higher timely follow-up for female patients. Non-white patients had 69.32% timely follow-up compared to 77.08% for white patients, with non-white patients having absolute 7.76% lower timely follow-up for non-white patients. Low SES patients had 72.50% timely follow-up compared to 76.27% for non-low SES patients, with low SES patients having absolute 3.77% less than non-low SES patients. These results indicate disparities for timely follow-up for dual, non-white race, and low SES patients.

ACO-level analysis:

For the results of ACO-level analysis, see attached Attachment B for Table 9: ACO-level Percent Timely Follow-Up by Social Disparity.

ACOs had on average absolute 6.22% lower TFU for dual patients than non-dual patients; 1.01% higher TFU for female patients than male patients; 5.97% lower TFU for non-white patients than white patients; and 2.94% lower TFU for low SES patients than non-low SES patients. We also see substantial variation in ACO's TFU for social risk disparities. The interquartile range of the difference between its dual and non-dual patients ranges from 2.58% to 9.16% lower TFU; 0.97% lower to 3.04% higher TFU for female patients; 2.97% to 9.28% lower TFU for non-white patients; and 0.36% higher to -5.86% lower TFU for low SES patients. We further show (see Section 4.4.4 and Table 7 in Attachment B) that ACOs stratified by quartiles of TFU measure scores have a higher proportion of patients with DE status.

In conclusion, there are disparities in rates of timely follow-up for dual, non-white race, and low SES patients. ACO-level results indicate there are disparities between dual, non-white, and patients of low socioeconomic status within ACOs.

As described in Section 6.1.4 Program Details, this measure is used in the ACO REACH model, and CMS uses the same approach to social risk factor adjustment for the ACO REACH model as it does in other programs, such as the Hospital Readmission Reduction Program (HRRP) by adjusting for social risk factors at the level of payment in the program, rather than at the quality measure level. This promotes fairness in calculating payments, so as not to penalize measured entities with a high proportion of patients with social risk, but still allows for transparency in terms of outcomes for patients with social risk factors. Specifically, the ACO REACH model, for 2024, adjusts payments based on dual-eligibility status and the University of Wisconsin Area Deprivation Index (ADI), which uses 17 variables from the U.S. Census data, including education level, employment status, home values, and income. The 2024 model will adjust ACO benchmarks by $30 per-beneficiary, per-month (PBPM) for beneficiaries with equity scores in the top decile, $20 PBPM for beneficiaries in the second decile, $10 PBPM for the third decile, and $0 PBPM for the next four deciles. For any aligned beneficiary in the bottom 50%, an ACO's benchmark will be reduced by $6 PBPM.

Section 6. Use & Usability

6.2 Usability

6.2.1 Actions of Measured Entities to Improve Performance*

What are the actions measured entities must take to improve performance on this measure? How difficult are those actions to achieve and how can measured entities overcome those difficulties?

There is clear evidence that there are interventions that can be put in place to improve timely follow-up and therefore improve performance on the measure score. For example, studies have shown that implementing an automated appointment reminder system following discharge from the ED resulted in improvement in post-discharge follow-up visit attendance (Bauer et al., 2020). In addition, ACOs can encourage providers to implement interventions such as the Care Transitions Intervention (CTI), an evidence-based process that includes coaching sessions that encourage timely follow-up care, both after discharge from the inpatient setting as well as the emergency department (Coleman et. al., 2006; Jacobson et al., 2022). Other potential strategies include scheduling follow-up appointments prior to hospital discharge (Merritt et. al., 2020), follow-up text messages (Arora, et al., 2015), and follow-up phone calls, where a higher frequency of completed calls has been shown to be associated with higher follow-up visit rates (Bhandare et al., 2022). Entities may have to adjust staffing to ensure that appointment slots are available for patients within the condition-specific specified timeframes for follow-up. Entities can also improve measure performance with the timely use of telehealth visits for follow-up, when appropriate.

Measured entities must ensure that providers implement evidence-based solutions that support improvement in timely follow-up within the specified timeframe for a given condition. The measure timeframes align with clinical guidelines and best practices for follow-up, so the measure does not ask more than what would be expected for appropriate clinical care.

References:

Arora, S., Burner, E., Terp, S., Nok Lam, C., Nercisian, A., Bhatt, V., & Menchine, M. (2015). Improving attendance at post-emergency department follow-up via automated text message appointment reminders: a randomized controlled trial. Academic emergency medicine: official journal of the Society for Academic Emergency Medicine, 22(1), 31–37. https://doi.org/10.1111/acem.12503

Bauer, K. L., Sogade, O. O., Gage, B. F., Ruoff, B., & Lewis, L. (2021). Improving Follow-up Attendance for Discharged Emergency Care Patients Using Automated Phone System to Self-schedule: A

Quick Tip

This submission includes a breakdown of evidence-based actions that measured entities can take in order to improve performance that focus on appointment reminders, patient follow-up, and the transition of care. The developer also highlighted that the measure aligns with clinical guidelines and best practices for follow-up; therefore, there isn't an additional burden.

Quick Tip

If available, include references to supporting literature.

Randomized Controlled Trial. Academic emergency medicine : official journal of the Society for Academic Emergency Medicine, 28(2), 197–205. https://doi.org/10.1111/acem.14080

Bhandari, N., Epane, J., Reeves, J., Cochran, C., & Shen, J. (2022). Post-Discharge Transitional Care Program and Patient Compliance With Follow-Up Activities. Journal of patient experience, 9, 23743735221086756. https://doi.org/10.1177/23743735221086756

Coleman, E. A., Parry, C., Chalmers, S., & Min, S. J. (2006). The care transitions intervention: results of a randomized controlled trial. Archives of internal medicine, 166(17), 1822–1828. https://doi.org/10.1001/archinte.166.17.1822

Jacobsohn, G. C., Jones, C. M. C., Green, R. K., Cochran, A. L., Caprio, T. V., Cushman, J. T., Kind, A. J. H., Lohmeier, M., Mi, R., & Shah, M. N. (2022). Effectiveness of a care transitions intervention for older adults discharged home from the emergency department: A randomized controlled trial. Academic emergency medicine : official journal of the Society for Academic Emergency Medicine, 29(1), 51–63. https://doi.org/10.1111/acem.14357

Merritt, R. J., Kulie, P., Long, A. W., Choudhri, T., & McCarthy, M. L. (2020). Randomized controlled trial to improve primary care follow-up among emergency department patients. The American journal of emergency medicine, 38(6), 1115–1122. https://doi.org/10.1016/j.ajem.2019.158384

6.2.2 *[If maintenance review OR Current Status = Yes (6.1.1)]*
Feedback on Measure Performance*
Summarize the feedback on measure performance and implementation from the measured entities and others. Describe how you obtained feedback.

Beginning in model Performance Year (PY) 2021 (CY 2021) the measure steward received direct feedback from ACO REACH model participants via the ACO REACH helpdesk (ACOREACH@cms.hhs.gov). In addition, the measure steward facilitated a PY 2024 Quality Kickoff Webinar focused on frequently asked questions (FAQs) to gather additional stakeholder feedback. Please note, each model performance year aligns with the calendar year.

The following is a brief summary of stakeholder feedback from PY 2021 through the first quarter of PY 2024 (or March 2024), obtained from the implementation contractor:

From 2021-2023, feedback was received on the following topics:

Acuity Levels: Stakeholders requested definitions for high, medium, and low acuity for the six conditions included in the TFU measure. Answer: That acuity levels have been predefined by clinical guidelines and expert recommendations, with specific designations available in the Timely Follow-Up measure documentation.

Coding and Claim Type Inclusion Criteria: Stakeholders asked for clarification on whether both professional and institutional claim types

Quick Tip

Provide a detailed summary of the feedback received on the measure performance and the method used to obtain feedback.

This submission has a detailed summary of the measured entities' feedback on measure performance and implementation. The methods used to obtain feedback include direct communication through the ACO REACH helpdesk and a Quality Kickoff Webinar focused on frequently asked questions.

are included in the denominator for the Timely Follow-Up measure. Answer: Clarified that timely follow-up visits are defined by specific claim criteria, including appropriate CPT or HCPCS codes, and directs stakeholders to updated resources in the 4i Knowledge Library for details.

National Average Rates and Methodology: Stakeholders inquired about national average rates and the methodology for determining acuity levels. Answer: Provides insights into acuity definitions and the methodology used, encouraging stakeholders to refer to updated resources in the 4i Knowledge Library.

Overall, stakeholders asked for clarity on various aspects of the TFU measure, including credit attribution, telehealth visits, acuity definitions, coding criteria, and national average rates, with CMS providing guidance and directing stakeholders to available resources for further information.

From 2023-2024, feedback was received on the following topics:

Value Set Inclusions: There were questions about specific codes included in the TFU Value Set, such as the absence of certain codes like G2025 for telehealth services. Answer: G2025 and additional telehealth codes were added to the measure numerator.

Numerator Criteria: Clarifications were sought regarding the criteria for qualifying visits in the numerator, including whether follow-up visits are restricted to certain providers, whether telephonic visits are acceptable, and what elements must be covered during the follow-up.

Denominator Logic: There were discussions on the logic used for identifying denominator events, including the classification of events based on acuity levels and the handling of subsequent acute events within the follow-up interval.

Performance Assessment: Questions arose regarding performance rates, the comparison of performance between different years, and the availability of beneficiary-level data for validation purposes.

Policy Changes: There were inquiries about policy changes affecting telehealth services post the COVID-19 public health emergency and their implications for meeting TFU requirements.

Overall, the stakeholder feedback reflected a thorough examination of the TFU measure's technical aspects, ensuring compliance with guidelines accurately reflects performance while accommodating changes in health care policies and practices.

6.2.3 *[If maintenance review OR Current Status = Yes (6.1.1)]*
Consideration of Measure Feedback*

Describe how you considered the feedback when developing or revising the measure specifications or implementation, including whether you modified the measure and why or why not.

As noted in the measure Intent-to-Submit, this is a respecified measure based on the Timely Follow-Up After Acute Exacerbations of Chronic Conditions Measure, which was originally specified by IMPAQ, CBE #3455. During respecification, changes were made to the measure to reflect the latest clinical guidelines, as well as its intended use in CMMI's Global and Professional Direct Contracting (DC) model (initially launched in 2021), which was later redesigned as the ACO REACH model. This respecification effort has incorporated changes to the timeframe and cohorts for diabetes, coronary artery disease (CAD), and hypertension based on current guidelines and subsequent clinical expert input and analyses. For diabetes, we removed low-acuity exacerbations from the cohort based on clinical guidelines that only recommend follow-up within the 14-day timeline for highly acute exacerbations. For the hypertension and CAD cohorts, CORE utilized expert clinical input to divide the cohort based on acuity and altered the follow-up timeline to differ based on the acuity of exacerbation.

After implementation of the measure in 2021, updates for clarification purposes were added to the Measure Information Form annually in response to stakeholder feedback; but no substantial changes to measure structure or intended outcomes were made. Annual code updates were added to stakeholder materials for the Performance Year (PY) 2022, PY 2023, and PY 2024 value sets, including additions and deletions to available codes or code descriptors as part of routine measure maintenance. This year, we evaluated additional telehealth codes relevant to this measure. Our aim was to capture the expanded use and accessibility of synchronous communications (i.e., video consultation and telephone encounters) in clinical follow-up practices. A comprehensive review of the literature identified 114 new telehealth codes relevant to timely follow-up. In addition, a minor revision was made to the specifications and SAS code to clearly note that the TFU measure applies to an adult (age 18 years+) cohort. Our updated testing and analyses reflect these changes, which will also be added to the future PY 2025 stakeholder materials, except for 13 telehealth codes which were already added to the current PY 2024 value set in response to stakeholder feedback.

References:

Brotman, J., Kotloff, R (2021). Providing Outpatient Telehealth Services in the United States: Before and During Coronavirus Disease 2019 (2020). Chest, Volume 159, Issue 4, 2021, Pages 1548-1558, ISSN 0012-3692. https://doi.org/10.1016/j.chest.2020.11.020.

Quick Tip

Provide an explanation of how the received feedback was considered and incorporated into the development and revision of the measure.

This developer includes insight as to how feedback was considered and the changes that were made during development and revision of the Timely Follow-Up After Acute Exacerbations of Chronic Conditions Measure. It details the process of respecification, which involved updating the measure to align with the latest clinical guidelines and the intended use in the redesigned ACO REACH model.

Remote Communication Technology Codes: An Analysis of State Medicaid Coverage (2020). A report of the Public Health Institute / Center for Connected Health Policy. https://cdn.cchpca.org/files/2020-04/Remote%20Communication%20Technology%20Codesfinal.pdf

6.2.4 *[If maintenance review OR Current Status = Yes (6.1.1)]*
Progress on Improvement*

Discuss any progress on improvement (trends in performance results, including performance across sub-populations if available, number and percentage of people receiving high-quality health care, geographic area, number and percentage of accountable entities and patients included). If use of the measure demonstrated no improvement, provide an explanation.

This response includes analyses performed for CMS by their implementation contractor, RTI International. The below analyses show small improvements over time in the measure scores for ACO REACH participants. ACO REACH participants demonstrated improvements above and beyond non-participants, which is an expected result of the implementation of this program. There have not, however, been improvements for patients with dual eligibility over time. Please note that each model performance year (PY) aligns with the calendar year.

See Attachment B for Table 10: Non-Stratified Populations Quarterly Results. This table includes quarterly results for all patients (see Table 11 for results stratified by social risk factors). Between PY 2022 Q4 and PY 2023 Q4, the average Timely Follow-Up rate for ACOs increased from 68.31% to 70.65%, a 2.34 percentage point increase. The average Timely Follow-Up rate in PY 2023 Q4 for ACOs was 1.49 percentage points higher than the benchmark population ('All Entities'). The 'All Entities' population includes the ACOs in the ACO REACH Model as well as non-ACO REACH provider groups. CMS uses all available Medicare FFS data aggregated to individual TINs or CCNs to identify non-ACO REACH provider groups, like physicians, group practices, or hospitals. The 'Non-ACOs' population includes only these non-ACO REACH provider groups. Starting in PY 2023 Q3, claims for services provided during the 12-month reporting period were pulled one-month after the end of the period, as opposed to the three-month runout utilized in previous reports. This one-month claims runout allows for more timely provision of the Quarterly Quality Reports (QQRs) to participants. Therefore, when interpreting results from PY 2023 Q3 and beyond, it is important to note that the shift from a three-month runout to a one-month runout may impact measure scores. While this is the case, PY 2023 Q3 and Q4 measure scores for ACOs increased at rates similar to before the shift in runout and, therefore, CMS estimates the impact is minimal to none.

Quick Tip

Detail any improvements in trends, numbers/percentages, etc., that have occurred over time. Discuss how the improvements apply to subpopulations if applicable.

In this submission, the data provided show small improvements over time in the measure scores for ACO REACH participants compared to non-participants, which aligns with the expectations of the program's impact. The submission notes that there have not been improvements for patients with dual eligibility over time.

Additionally, data on performance across three defined social risk factors is provided: living in a low socioeconomic status (SES) neighborhood, having dual eligibility, and identifying with a race/ethnicity other than white.

In addition to providing measure results for the overall population, measure scores are shown for three social risk factors: (1) living in a low socioeconomic status (SES) neighborhood as defined by the Area Deprivation Index (ADI) (2) having dual eligibility; and (3) identifying with a race/ethnicity other than white (i.e., non-white).

The three social risk factors are defined as:

-Living in a low-SES neighborhood: Neighborhoods with an area deprivation index (ADI) percentile value of 81 or higher
-Dual eligibility: Full-benefit dually eligible status for at least 1 month during the performance period
-Non-white: Identify as a race/ethnicity other than white

The average Timely Follow-Up rates for these stratified populations are provided to ACOs for (but not linked to performance). For each stratified population, the average Timely Follow-Up rates slightly increased from PY 2022 Q4 to PY 2023 Q4. Between PY 2022 Q4 and PY 2023 Q4, for High-ADI populations, the average Timely Follow-Up rates increased by 0.72 percentage points. For dual eligible populations, the rates increased by 3.42 percentage points. For non-white populations, the rates increased by 2.04 percentage points. The average Timely Follow-Up rates for each stratified population have been consistently lower (poorer) than the non-stratified population, which is consistent with trends seen with other quality measures in the ACO REACH model.

Quick Tip

Because this measure is stratified, provide improvement results across those strata if possible.

6.2.5 *[If maintenance review OR Current Status = Yes (6.1.1)]*
Unexpected Findings*
Explain any unexpected findings (positive or negative) during implementation of this measure, including unintended impacts on patients.

We did not encounter any unintended impacts on patients. However, it was unexpected (see Section 6.2.4 on improvement) that measure scores for patients with social risk factors did not improve over time, while overall, measure scores for the TFU measure did improve.

Section 7. Supplemental Attachment

7.1 Supplemental Attachment
If needed, you may attach additional measure information here. Please ensure that all included files are 508 compliant, including labeling all tables and figures with alternative text, as appropriate. Clearly label all components of the attachment with the field number(s)

their contents refer to, and, likewise, clearly refer to any results in this attachment within the relevant text fields of the FMS.

One file only; 256 MB limit; allowed file types: .zip, .pdf, .docx, .xlsx

Attachment B_Tables and Figures_Timely Follow-Up Measure CBE #3455_Update 05012024_final.pdf (743.79 KB)