Hospital Outpatient Quality Reporting Specifications Manual
Release Notes Version: 18.0

Release Notes Completed: June 10, 2024

Guidelines for Using Release Notes

Release Notes provide modifications to the Hospital Outpatient Quality Reporting (OQR) Specifications Manual. They are provided as a reference tool and are not intended to be used as program abstraction tools. Please refer to the Hospital OQR Specifications Manual for the complete and current technical specifications and abstraction information.

The notes are organized to follow the order of the Table of Contents. Within each topic section, a row represents a change that begins with general changes and is followed by data elements in alphabetical order. The **implementation date is 01/01/2025, unless otherwise specified**. The row headings are described below:

- **Impacts** – Used to identify which portion(s) of the Manual Section is impacted by the changes listed. Examples are Alphabetical Data Element List, Alphabetical Data Dictionary, Measure Information Form (MIF), and Flowchart (Algorithm). If any changes are made to a data element, the measure(s) affected are identified also.

- **Rationale** – Provided for the change being made.

- **Description of Changes** – Used to identify the section within the document where the change occurs. Examples are Definition, Data Collection Question, Allowable Value, and Denominator Data elements.

Data elements that cross multiple measures and contain the same changes are consolidated into one row. If those changes do not apply to all the measures listed in the Impacts row, the Description of Changes row identify the applicable measures.

Program Background

Impacts: Program Background

Rationale: This change is to update language for clarity and remove outdated language.

Description of Change(s): Please refer to the Program Background section of the manual for updated language.

Section 1 – Measure Information Forms

Impacts: Outpatient Imaging Efficiency (OIE) Measures

Rationale: This update is to correct references to object ID's (OID) from the Value Set Authority Center (VSAC) in the Numerator, Denominator, and Denominator Exclusion Codes Table headers. This update impacts OIE measures OP-8: Magnetic Resonance Imaging (MRI) Lumbar Spine for Low Back Pain; OP-10: Abdomen Computed Tomography (CT) - Use of Contrast Material; OP-13: Cardiac Imaging for Preoperative Risk Assessment for Non-Cardiac Low-Risk Surgery; and OP-39: Breast Cancer Screening Recall Rates.

Description of Change(s):

Numerator, Denominator, and Denominator Exclusion Codes Tables

Change from: Organizational ID

To: Object ID

Impacts: OP-29: Appropriate Follow-up Interval for Normal Colonoscopy in Average Risk Patients

Rationale: This change is to update ICD-10-CM® codes in the Measure Information Form to align with current code updates. The update removes code Z83.71 and adds four additional codes Z83.710, Z83.711, Z83.718, and Z83.719, to the Denominator Criteria.

Description of Change(s):

Denominator Criteria (Eligible Cases)

Change from:

Patients aged ≥ 45 and ≤ 75 on date of encounter

and

ICD-10-CM Diagnosis code: Z12.11

and

CPT or HCPCS: 44388, 45378, G0121

without

CPT Category I Modifiers: 52, 53, 73, 74

without

ICD-10-CM Diagnosis codes: Z83.71, Z86.010, Z80.0, Z85.038

To:

Denominator Criteria (Eligible Cases):

Patients aged ≥ 45 and ≤ 75 on date of encounter

and

ICD-10-CM Diagnosis code: Z12.11

and

CPT or HCPCS: 44388, 45378, G0121

without

CPT Category I Modifiers: 52, 53, 73, 74

without

ICD-10-CM Diagnosis codes: Z83.710, Z83.711, Z83.718, Z83.719, Z86.010, Z80.0, Z85.038

Impacts: OP-32: Facility 7-Day Risk-Standardized Hospital Visit Rate after Outpatient Colonoscopy

Rationale: This update is to align language across the Outcome Claims-based Measure Information Forms in response to stakeholder feedback.

Description of Change(s): Please refer to the Measure Information Form for updated language

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Impacts: OP-35: Admissions and Emergency Department Visits for Patients Receiving Outpatient Chemotherapy

Rationale: This update is to align language across the Outcome Claims-based Measure Information Forms in response to stakeholder feedback.

Description of Change(s): Please refer to the Measure Information Form for updated language

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Impacts: OP-36: Hospital Visits after Hospital Outpatient Surgery

Rationale: This update is to align language across the Outcome Claims-based Measure Information Forms in response to stakeholder feedback.

Description of Change(s): Please refer to the Measure Information Form for updated language

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Section 2 - Alphabetical Data Element List and Data Dictionary

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Impacts: Sex

Rationale: This update is to remove the *Sex* data element from the *Alphabetical Data Elements List*. The *Sex* data element was replaced with *Sex Assigned at Birth*, effective with July 1, 2024, encounters.

Description of Change(s):

Remove: *Sex* data element from the *Alphabetical Data Elements List*

Impacts: Time Last Known Well

Rationale: This update is to add clarity to the guidance provided for multiple times documented on a stroke form.

Description of Change(s):

Notes for abstraction - Exception

Change from:

- Multiple specific times on the same or different Code Stroke Forms, use abstraction guidelines for multiple times *Last Known Well*.

To:

- Multiple specific times on the same or different Code Stroke Forms, use abstraction guidelines below that reference multiple times of last known well documented.

Section 5 - Hospital Outpatient Quality Measure Data Transmission

Impacts: Introduction and Guidelines for Submission of Data

Rationale: This update is to include the Sex Assigned at Birth, Gender Identity, and Sexual Orientation data elements to the transmission documentation.

Description of Change(s):

Hospital Outpatient Clinical Data XML File Layout

Add:

4. **sex-birth –** Sub-element of "*patient*" identifying the patient's sex assigned at birth. This is a **required** sub-element of "*patient*" and has no attributes.

5. **gender-identity –** Sub-element of "*patient*" describing the gender-identity of the patient. This is not a required sub-element of "*patient*" and has no attributes.

6. **sexual-orientation –** Sub-element of "*patient*" describing the patient's sexual orientation. This is not a required sub-element of "*patient*" and has no attributes.

Example of nested Hospital Outpatient Clinical XML file elements

Add:

o sex-birth

o gender-identity

o sexual-orientation

Section 6 – Tools and Resources

Impacts: OP-29: Appropriate Follow-up Interval for Normal Colonoscopy in Average Risk Patients

OP-29 Denominator Codes

Rationale: This change is to update ICD-10-CM® codes in the Measure Information Form to align with current code updates. The update removes code Z83.71 and adds four additional codes Z83.710, Z83.711, Z83.718, and Z83.719, to the Denominator Criteria.

Description of Change(s):

OP-29 Denominator Codes

Change from:

• 74: Discontinued Out-Patient Hospital/Ambulatory Surgery Center (ASC) Procedure After Administration of Anesthesia—Due to extenuating circumstances or those that threaten the well-being of the patient

• Z83.71: Family history of colonic polyps

• Z86.010: Personal history of colonic polyps

• Z80.0: Family history of malignant neoplasm of gastrointestinal tract

• Z85.038: Personal history of malignant neoplasm of large intestine

To:

• 74: Discontinued Out-Patient Hospital/Ambulatory Surgery Center (ASC) Procedure After Administration of Anesthesia—Due to extenuating circumstances or those that threaten the well-being of the patient

• Z83.710 Family history of adenomatous and serrated polyps

• Z83.711 Family history of hyperplastic colon polyps

• Z83.718 Other family history of colon polyps

• Z83.719 Family history of colon polyps, unspecified

• Z86.010: Personal history of colonic polyps

• Z80.0: Family history of malignant neoplasm of gastrointestinal tract

• Z85.038: Personal history of malignant neoplasm of large intestine

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Appendices

Impacts: Appendix A

Rationale: This change is to note the 2025 ICD-10-CM® code updates effective October 1, 2024 through September 30, 2025 will be published in the fall of 2024.

Description of Change(s):

Add The CY 2025 ICD-10-CM® code updates effective October 1, 2024 through September 30, 2025 will be published in the fall of 2024

Impacts: Appendix C

Rationale: This change is to remove the fibrinolytic Medication Tables from the manual and replace with Patient-Reported Outcome-Based Performance Measures (PRO-PMs) information.

Description of Change(s):

Remove: Medication Tables

Add: Information for Patient-Reported Outcome-Based Performance Measures (PRO-PMs)

Impacts: Appendix D

Rationale: This change is to remove Preview Section from the manual and replace with Hospital Outpatient Electronic Clinical Quality Measures (eCQMs) information and resources.

Description of Change(s):

Remove: Preview Section

Add: Hospital Outpatient Electronic Clinical Quality Measures (eCQMs) information and resources

Hospital Outpatient Quality Reporting Specifications Manual

Version 18.0

Encounter Dates: 01-01-25 (1Q25) through 12-31-25 (4Q25)

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Acknowledgement

The *Hospital Outpatient Quality Reporting Specifications (HOQR) Manual* was developed by the Centers for Medicare & Medicaid Services (CMS) to provide a uniform set of quality measures to be implemented in hospital outpatient settings. The primary purpose of these measures is to promote high quality care for patients receiving services in hospital outpatient settings.

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The International Classification of Diseases, 11th Revision, Clinical Modification (ICD-10-CM) is published by the United States Government. A comprehensive listing of ICD-10-CM codes may be obtained on the Centers for Disease Control and Prevention (CDC) website. ICD-10-CM is an official Health Insurance Portability and Accountability Act standard.

IMPORTANT SUBMISSION ALERT!

To submit Hospital Outpatient Quality Reporting (HOQR) Program measures to CMS, files must meet the specifications found only in this CMS manual. Otherwise, the files will be rejected for not meeting CMS quality data submission requirements.

Providers who are planning to also submit hospital outpatient measure data to The Joint Commission must refer to the transmission information separately issued by The Joint Commission. CMS can only accept files which meet the CMS transmission manual specifications, and such files cannot contain The Joint Commission additional transmission data elements (e.g., vendor tracking ID, measure category assignment, measurement value).

Program Background

CMS Quality Initiatives

Background

The Medicare Improvements and Extension Act under Division B of Title I of the Tax Relief and Health Care Act (MIEA-TRHCA) of 2006 (Pub. L. 109–432), enacted on December 20, 2006 authorized The Centers for Medicare & Medicaid Services (CMS) to have a program under which hospitals may report data on the quality of outpatient care using standardized measures to receive the full annual payment update (APU) under the Outpatient Prospective Payment System (OPPS). The program established under the Calendar Year (CY) 2009 Hospital Outpatient Prospective Payment and Ambulatory Surgical Center (ASC) Payment Systems Final Rule and supported by this manual is the Hospital Outpatient Quality Reporting (OQR) Program, formerly known as the Hospital Outpatient Quality Data Reporting Program (HOP QDRP).

Quality Reporting

The Hospital OQR Program seeks to collect data and publicly report on quality metrics so that the information is available to support consumer decision-making and provider improvements regarding the quality and efficiency of care in this setting.

Related Activities

Measure Development

Sections 1833(i)(7)(B) and 1833(t)(17)(C)(i) of the Act requires the Secretary to develop measures appropriate for the measurement of the quality of care furnished by hospitals in outpatient settings, and that measures reflect consensus among affected parties. Measures are not required to be endorsed by any national consensus-based entity. Consensus among affected parties can be achieved in other ways, including input from the consensus-based entity's measure review process, measure development process, through broad acceptance and use of the measure(s), and through public comment.

Measures Management System

The Measures Management System (MMS) is a standardized system for developing and maintaining the quality measures used in various CMS initiatives and programs. MMS also supports quality-related activities across the agency. Quality measures are tools that help improve the quality of healthcare through an approach that is consistent and accountable. The primary goals of the MMS are to:

- Provide support and guidance to measure developers to help them produce high caliber healthcare quality measures, and
- Educate and inform interested parties to promote involvement in and awareness of the Measure Lifecycle.

Electronic Clinical Quality Measures (eCQM)

Beginning with Calendar Year (CY) 2023 reporting period, hospitals were provided the opportunity to voluntarily submit data for OP-40: ST-elevation myocardial infarction (STEMI), an electronic clinical quality measure (eCQM), in the Hospital OQR program. Beginning with CY 2024 reporting period, hospitals will be required to report one self-selected calendar quarter of data. For CY 2025 reporting period the requirement increases to two self-selected calendar quarters of data, followed by three required quarters in CY 2026 and all four quarters beginning with CY 2027 reporting period and subsequent years. For more information on the adoption of OP-40 eCQM, please refer to the CY 2022 OPPS/ASC Final Rule, beginning on page 63837, published in the Federal Register.

Refer to the Technical Specifications and Resources for the CMS Quality Reporting Document Architecture (QRDA) Category I Implementation Guide for the applicable reporting period, measure specification information, and program resources to support successful eCQM reporting on the eCQI Resource Center.

Outpatient and Ambulatory Surgery Consumer Assessment (OAS CAHPS)

The OAS CAHPS initiative was developed as a patient-experience-of-care survey for patients who had surgery or a procedure at a hospital outpatient department (HOPD) or an ambulatory surgery center (ASC). Prior to OAS CAHPS, there was no standardized survey instrument to assess patient experience with outpatient surgical care received at HOPDs and ASCs. Hospitals contract with a CMS-approved OAS CAHPS Survey vendor to conduct the survey. A list of approved survey vendors is available at the following link: https://oascahps.org/General-Information/Approved-Survey-Vendors.

Beginning with CY 2023 reporting period, hospitals were provided the opportunity to voluntarily submit data for the OAS CAHPS survey.

Beginning with CY 2024 reporting period, hospitals will be required to report quarterly data by the submission deadlines provided on the OAS CAHPS website.

Paperwork Reduction Act (PRA) Disclosure

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid Office of Management and Business (OMB) control number. The valid OMB control number for this information collection is **0938-1109.** The time required to complete this information collection is estimated to average 15 minutes per response, including the time to review instructions, search existing data resources, gather the data needed, and complete and review the information collection. If you have comments concerning the accuracy of the time estimate(s) or suggestions for improving this form, please write to: CMS, 7500 Security Boulevard, Attn: PRA Reports Clearance Officer, Mail Stop C4-26-05, Baltimore, MD 21244-1650.

Using the Manual

This portion of the manual provides a brief overview of the information contained within each section. It is intended as a quick reference to assist in the implementation of the hospital outpatient measures. The sections of this manual are interrelated and are most useful when considered together.

Section 1 – Measurement Information

This section contains a Measure Information Form (MIF) for each hospital outpatient measure.

MIFs describe the purpose, use, and clinical rationale for specific measures. They also identify populations assessed and improvements demonstrated by the measure.

Detailed analytical algorithms are included with each MIF. The algorithms are used to calculate performance measurement rates for each of the measures. Each algorithm contains detailed steps regarding information used in the rate calculation. They specify the ways exclusion and inclusion criteria are applied for the specified measure.

Section 2 – Data Dictionary

This section describes the patient-level data elements required to capture and calculate individual measurements; it specifies data elements that must be collected for each patient who falls into a selected population and data elements needed for a specific measure.

Section 3 – Missing and Invalid Data

This section addresses the steps to approach missing and invalid data. Missing data refer to data elements, required for calculating a hospital outpatient measure, that have no values present for one or more encounters. Invalid data refer to data element values, required for calculating a hospital outpatient measure, that fall outside of the range of allowable values defined for that data element. Reducing missing and invalid data minimizes the bias to a measure rate because records with missing or invalid data cannot be included in the calculation of the observed measure rate. This section describes preventing missing and invalid data in detail.

Section 4 – Population and Sampling Specifications

This section provides guidance on defining the hospital's outpatient population and the order of data flow. Defining the population is the first step to estimate a hospital's performance. A population is defined as a collection of patients sharing a common set of universally measured characteristics, such as an International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) Principal Diagnosis or Current Procedural Terminology (CPT®) Codes. The outpatient population and diagnosis/CPT® codes meet this description for the hospital outpatient measures. Additional information regarding population and sampling are found in this section.

Section 5 – Hospital Outpatient Department Quality Measure Data Transmission

This section provides guidelines for transmitting hospital outpatient measure data. It highlights the unique data transmission specifications for hospital outpatient measure data for the CMS Clinical Data Warehouse. It is divided into three parts: Guidelines for Submission of Data, Transmission Data Element List, and Transmission Data Processing Flow. This section provides specific information regarding data transmission.

Section 6 – Tools and Resources

This section provides additional resources for abstracting measures and data elements.

Appendix A – ICD-10-CM Diagnosis and CPT® Code Tables

For many of the measures, eligibility for inclusion or exclusion in the outpatient population of interest is defined by the presence of certain ICD-10-CM diagnosis codes and CPT® codes, including Evaluation and Management (E/M) codes within the patient-level record. Appendix A contains the code tables that define the populations for all measures. There is a description of the codes, as defined in the applicable coding manual, and a shortened description that may be used in a data abstraction tool. The Measure Information section also refers to the codes or tables provided in this section. The code tables in this Appendix are evaluated periodically and modified as indicated.

Appendix B – Glossary of Terms

Appendix C – Patient-Reported Outcome-Based Performance Measures (PRO-PMs)

Appendix D – Hospital Outpatient Electronic Clinical Quality Measures (eCQMs)

Outpatient Delivery Settings

ED-Throughput		
Measures	OP-18	Median Time from ED Arrival to ED Departure for Discharged ED Patients
	OP-22	Left Without Being Seen

Stroke		
Measure	OP-23	Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients Who Received Head CT or MRI Scan Interpretation Within 45 Minutes of ED Arrival

Imaging Efficiency		
Measures	OP-8	MRI Lumbar Spine for Low Back Pain
	OP-10	Abdomen CT – Use of Contrast Material
	OP-13	Cardiac Imaging for Preoperative Risk Assessment for Non-Cardiac Low-Risk Surgery
	OP-39	Breast Cancer Screening Recall Rates

Measures Submitted via a Web-Based Tool		
Measures	OP-29	Appropriate Follow-up Interval for Normal Colonoscopy in Average Risk Patients
	OP-31	Cataracts – Improvement in Patient's Visual Function within 90 Days Following Cataract Surgery
	OP-38	COVID-19 Vaccination Coverage Among Health Care Personnel

Outcome		
Measures	OP-32	Facility 7-Day Risk-Standardized Hospital Visit Rate after Outpatient Colonoscopy
	OP-35	Admissions and Emergency Department (ED) Visits for Patients Receiving Outpatient Chemotherapy
	OP-36	Hospital Visits after Hospital Outpatient Surgery

OAS CAHPS		
Measure	OP-37	Outpatient and Ambulatory Surgery Consumer Assessment (OAS CAHPS)
Electronic Clinical Quality Measures (eCQMs)		
Measures	OP-40	ST-elevation myocardial infarction (STEMI)
	ExRad	Excessive Radiation Dose or Inadequate Image Quality for Diagnostic Computed Tomography (CT) in Adults
Patient-Reported Outcome-Based Performance Measure (PRO–PM)		
Measure		Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)

Measure Information Forms

Overview

An algorithm provides the logical steps, data element evaluation, arithmetic calculations, and data manipulation steps that are required to calculate a given measure. The algorithms and data elements needed to calculate each of the measures are identified in the Measure Information Form (MIF). Below is a defined overview of the MIF and Flowchart (Algorithm) formats.

Measure Set – The specific national Hospital Outpatient quality measure set to which an individual measure belongs (e.g., Acute Myocardial Infarction, ED-Throughput).

Set Measure ID # – A unique alphanumeric identifier assigned to a measure. Information associated with a measure is identified by this unique alphanumeric number.

Performance Measure Name – A brief title that uniquely identifies the measure.

Description – A brief explanation of the measure's focus, such as the activity or the area on which the measure centers attention (e.g., median time from ED arrival to ED departure time for discharged ED patients).

Rationale – The reason for performing a specified process to improve the quality-of-care outcome. This may include specific literature references, evidence-based information, expert consensus, etc.

Type of Measure – Indicates what is being evaluated by the measure.

- **Process:** A measure used to assess a goal-directed, interrelated series of actions, events, mechanisms, or steps, such as a measure of performance that describes what is done to, for, or by patients, as in performance of a procedure.
- **Outcome:** A measure that indicates the result of performance (or non-performance) of a function(s) or process(es).

- **Measures Submitted via a Web-Based Tool:** A measure used to assess a goal-directed, interrelated series of actions, events, mechanisms, or steps with data entry achieved through the Hospital Quality Reporting (HQR) system or the National Healthcare Safety Network (NHSN) system.

Improvement Noted As – Describes how improvement would be indicated by the measure.

- An increase in the rate/score/number of occurrences.
- A decrease in the rate/score/number of occurrences.
- Either an increase or a decrease in the rate/score/number of occurrences, depending upon the context of the measure (e.g., utilization).

Numerator Statement – Represents the portion of the denominator that satisfies the conditions of the performance measure.

- **Included Population in Numerator:** Specific information describing the population(s) comprising the numerator, not contained in the numerator statement, or not applicable.
- **Excluded Population in Numerator:** Specific information describing the population(s) that should not be included in the numerator, or none.

- **Data Elements:** Those data elements necessary or required to determine (or establish) the numerator.

Note: If the measure is reported as a rate (proportion or ratio), the Numerator and Denominator Statements are completed. If a performance measure does not have both a numerator and a denominator, then a Continuous Variable Statement is completed.

Denominator Statement – Represents the population evaluated by the performance measure.
- **Included Population in Denominator:** Specific information describing the population(s) comprising the denominator, not contained in the denominator statement, or not applicable.
- **Excluded Population in Denominator:** Specific information describing the population(s) that should not be included in the denominator, or none.
- **Data Elements:** Those data elements required to determine (or establish) the denominator.

Note: If the measure is reported as a rate (proportion or ratio), the Numerator and Denominator Statements are completed. If a performance measure does not have both a numerator and a denominator, then a Continuous Variable Statement is completed.

Continuous Variable Statement – Describes an aggregate data measure in which the value of each measurement can fall anywhere along a continuous scale.
- **Included Population in Continuous Variable:** Specific information describing the population(s) comprising the performance measure, not contained in the Continuous Variable Statement, or not applicable.
- **Excluded Population in Continuous Variable:** Specific information describing the population(s) that should not be included in the performance measure, or none.
- **Data Elements:** Those data elements required to determine (or establish) the measure for a continuous variable.

Note: If a measure is reported as a central tendency, the Continuous Variable Statement is completed. This item is only completed when the performance measure does not have numerator and denominator statements.

Risk Adjustment – Indicates whether a measure is subject to the statistical process for reducing, removing, or clarifying the influences of confounding factors to allow more useful comparisons.

Data Collection Approach – Recommended timing for when data should be collected for a measure. Data collection approaches include retrospective, concurrent, prospective, or Medicare Claims data collection.
- **Retrospective data collection:** Involves collecting data for events that have already occurred.
- **Concurrent data collection:** The process of gathering data on how a process works or is working while a patient is in active treatment.
- **Prospective data collection:** Data collection in anticipation of an event or occurrence.
- **Medicare Claims data collection:** The use of data that is administratively derived from CMS claims and does not require abstraction.

Data Accuracy – Recommendations to reduce identifiable data errors, to the extent possible.

Measure Analysis Suggestions – Recommendations to assist in the process of interpreting data and drawing valid conclusions.

Sampling – Indicates whether a measure can be sampled. Sampling is a process of selecting a

representative part of the population to estimate the hospital's performance without collecting data for its entire population.

Data Reported As – Indicates how data will be reported for a measure.
- Aggregate rate generated from count data reported as a proportion.
- Aggregate rate generated from count data reported as a ratio.
- Aggregate measures of central tendency.
- Claims data reported as condition-specific, hospital-specific, or risk-standardized.

Selected References – Specific literature references that are used to support the importance of the performance measure.

Algorithm Introduction

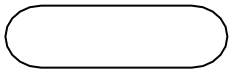
Each measure set's initial patient population and associated measures are described by a unique algorithm. An algorithm is a predefined set of rules that helps to break down complex processes into simple, repetitive steps.

Initial Patient Population algorithms evaluate and identify which episode of care (EOC) records are in the measure set's population and are eligible to be sampled.

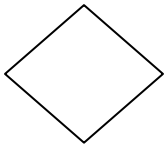
Measure algorithms serve two purposes. First, they evaluate and identify which EOC records contain missing and/or invalid data that will prohibit the ability to properly evaluate the measure. Second, they determine if:
- For rate-based measures, the patient's EOC record belongs in the measure population described by the denominator and if the patient experienced the event described in the numerator.
- For continuous variable measures, the patient's EOC record belongs in the patient population described in the measure's statement and, if so, to define and calculate the measurement value.

This section contains some standard flowcharting conventions used to develop each algorithm:
- **Flow lines:** Used to guide the reader to different parts of the algorithm, with arrows denoting the direction of movement. Generally, movement is from the top to the bottom of the chart.
- **Symbols:** Used in each algorithm are described later in this section under Flowchart Symbols.
- **Temporary variables:** Within algorithms are noted in the variable key at the top of each page.

Flowchart Symbols

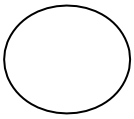


Start/Stop (ovals) denotes the beginning or end of an algorithm.

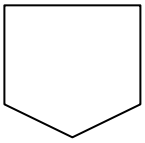


Diamonds represent "If…Then" decision points for logic tests and comparisons. Two or three flow lines exit the decision point to reflect alternative actions based upon an evaluation of the condition(s) stated around the decision point.

Rectangles or process boxes show when computation or manipulation of the data are required, such as a calculation or summarization.

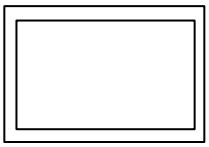


Circle or "On-page" connectors, labeled with a letter, show a link to sections of the algorithm which are continued on the same page.



Five-sided or "Off-page" connectors, labeled with a letter, show a link to sections of the algorithm which are continued on different pages.

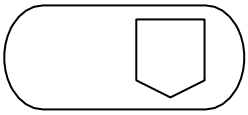
Note: Both circular, "On-page," and five-sided, "Off-page," connectors containing the letters B, D, E, X, or Y lead to measure Outcome Boxes.



Outcome Boxes represent the result of data passed through the algorithm. Connectors extending from outcome boxes lead to the end of the algorithm or to risk adjustment procedures, where applicable. This symbol is also used to identify the strata within a stratified measure.

Symbol to represent comments ("note") that should be considered when programming the flowchart.

The open rectangle symbol is placed alongside the Process box to which they are applicable. Comments are used to expand upon information contained within the process box, such as how to properly calculate age. Comments are never the sole location where processing logic is provided.



Start/Return symbols denote the beginning and end of a sub-routine. Algorithms that use this symbol are called from another algorithm, and the data processing flow returns to the calling algorithm when the "Return" is encountered.

See the Initial Patient Population Algorithms and Transmission Data Processing Flows for an example of the usage of this symbol.

Measure Category Assignments

Measure Category Assignments are calculated measure results for each EOC that is processed through a measure algorithm.

The following are the possible Measure Category Assignments:

B **Not in Measure Population**
- For rate-based and continuous variable measures: Record is not a member of the measure's population.

D **In Measure Population** (used for reporting)
- For rate-based measures: Record is a member of the measure's population, and there has not been an occurrence of the measure.
- For continuous variable measures: Record is a member of the measure's population and has sufficient, accurate, and valid data to compute the measurement.

D(#) **In Measure Population** (used to identify stratified populations of specific measures)
- For rate-based measures: Record is a member of the measure's population, and there has not been an occurrence of the measure.
- For continuous variable measures: Record is a member of the measure's population and has sufficient, accurate, and valid data to compute the measurement.

E **In Numerator Population**
- For rate-based measures: Record is a member of the measure's population, and there has been an occurrence of the measure.
- For continuous variable measures: Does not apply.

X **Data Are Missing**
- For rate-based and continuous variable measures: Data are missing that are required to calculate the measure. The record will be rejected when transmitted.

Y[1] **Unable to Determine (UTD) (**Allowable Value Does Not Allow Calculation of the Measure)
- For rate-based measures: Does not apply.
- For continuous variable measures: Record contains a Date, Time, or Numeric data element with a value of 'UTD.'

Hospital Outpatient Quality Measures
ED-Throughput

Set Measure ID #	Measure Short Name
OP-18	Median Time from ED Arrival to ED Departure for Discharged ED Patients
OP-22	Left Without Being Seen*

*Data entry for OP-22 will be achieved through the *Hospital Quality Reporting (HQR) system* via an online tool available to authorized users. Because the measure uses administrative data and not claims data to determine the measure's denominator population, OP-22 is not included in the ED-Throughput Population.

OP ED-Throughput General Data Element List

General Data Element Name	Collected for:
Arrival Time	All Records
Birthdate	All Records
CMS Certification Number ǂ, ‡	All Records
First Name	All Records
Hispanic Ethnicity	All Records
Last Name	All Records
National Provider Identifier ǂ, ‡	Optional for All Records
Outpatient Encounter Date	All Records
Patient Identifier	All Records
Payment Source	All Records
Physician 1	Optional for All Records
Physician 2	Optional for All Records
Postal Code	All Records
Race	All Records
Sex	All Records

ǂ Transmission Data Element
‡ Defined in the Transmission Data Element List within the Hospital Outpatient Measure Data Transmission section of this manual.

OP ED-Throughput Specific Data Element List

OP ED Data Element Name	Collected for:
Arrival Time	OP-18
Discharge Code	OP-18
E/M Code	OP-18
ED Departure Date	OP-18
ED Departure Time	OP-18
ICD-10-CM Principal Diagnosis Code	OP-18
Outpatient Encounter Date	OP-18

OP-18 Hospital Outpatient Emergency Department Throughput Population

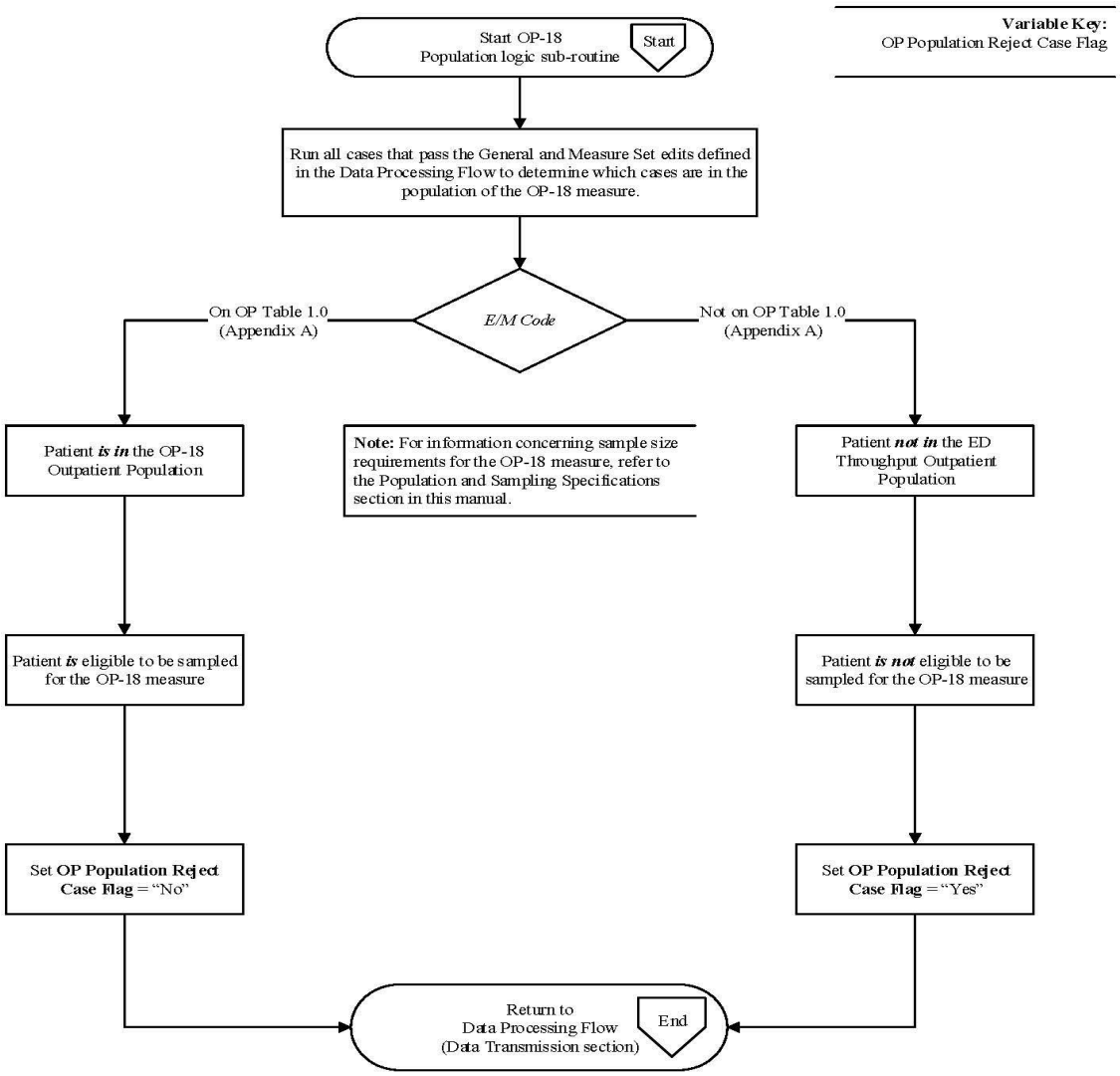
ED-Throughput

The population of the OP-18 measure is identified using 1 data element:

- *E/M Code*

Patients seen in a Hospital Emergency Department (E/M Code in Appendix A OP Table 1.0) are included in the OP-18 Hospital Outpatient Population and are eligible to be sampled if they have an *E/M Code* in Appendix A, OP Table 1.0.

ED Throughput Hospital Outpatient Population Algorithm
OP-18



Algorithm Narrative for OP-18:
ED-Throughput Hospital Outpatient Population

Variable Key: OP Population Reject Case Flag

1. Start ED-Throughput Initial Patient Population logic sub-routine. Process all cases that have successfully reached the point in the Transmission Data Processing Flow: Clinical which calls this Initial Patient Population Algorithm. Do not process cases that have been rejected before this point in the Transmission Data Processing Flow.

2. Check *E/M Code*
   a. If the *E/M Code* is not on OP Table 1.0 (Appendix A), the patient is not in the ED Initial Patient Population and is not eligible to be sampled for the ED-Throughput measure set. Set the Initial Patient Population Reject Case Flag to equal Yes. Return to Transmission Data Processing Flow in the Data Transmission section.
   b. If the *E/M Code* is on OP Table 1.0 (Appendix A), the patient is in the ED Initial Patient Population and is eligible to be sampled for the ED-Throughput measure set. Set Initial Patient Population Reject Case Flag to equal No. Return to Transmission Data Processing Flow in the Data Transmission section.

NQF-Endorsed Voluntary Consensus Standards for Hospital Care
Measure Information Form

Performance Measure Name: Median Time from ED Arrival to ED Departure for Discharged ED Patients

Measure ID #: OP-18

Measure Set: Hospital Outpatient ED-Throughput

Outpatient Setting: Emergency Department

Set Measure ID #	Performance Measure Name
OP-18a	Median Time from ED Arrival to ED Departure for Discharged ED Patients – Overall Rate
OP-18b	Median Time from ED Arrival to ED Departure for Discharged ED Patients – Reporting Measure
OP-18c	Median Time from ED Arrival to ED Departure for Discharged ED Patients – Psychiatric/Mental Health Patients
OP-18d	Median Time from ED Arrival to ED Departure for Discharged ED Patients – Transfer Patients

Description: Median time from emergency department arrival to time of departure from the emergency room for patients discharged from the emergency department.

Rationale: Empirical evidence demonstrates that emergency department (ED) throughput is an indicator of hospital quality of care and shows that shorter lengths of stay in the ED lead to improved clinical outcomes. Significant ED overcrowding has numerous downstream effects, including prolonged patient waiting times, increased suffering for those who wait, rushed and unpleasant treatment environments, and potentially poor patient outcomes (Gardner, 2018). Quality improvement efforts aimed at reducing ED overcrowding and length of stay have been associated with an increase in ED patient volume, decrease in number of patients who leave without being seen, reduction in costs, and increase in patient satisfaction (Bucci, 2016; Chang, 2017; Zocchi, 2015).

Recent peer-reviewed studies also demonstrate the need for dedicated emergency mental health services, supplying evidence that the clinical needs for these patients substantively differ from the non-psychiatric population (ACEP, 2017; Lester, 2018).

Type of Measure: Process

Improvement Noted As: A decrease in the median value.

Continuous Variable Statement: Time (in minutes) from ED arrival to ED departure for patients discharged from the emergency department.

Included Populations:
- Any ED patient from the facility's emergency department

Excluded Populations:
- Patients who expired in the emergency department

Data Elements:
- *Arrival Time*
- *Discharge Code*
- *E/M Code*
- *ED Departure Date*
- *ED Departure Time*
- *ICD-10-CM Principal Diagnosis Code*
- *Outpatient Encounter Date*

Risk Adjustment: No

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical record documents. Some hospitals may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunities for improvement at the point of care/service. However, complete documentation includes the principal or other ICD-10-CM diagnosis and procedure codes, which require retrospective data entry.

Data Accuracy: There may be variation by provider, facility, and documentation protocol for chart-abstracted data elements.

Measure Analysis Suggestions: None

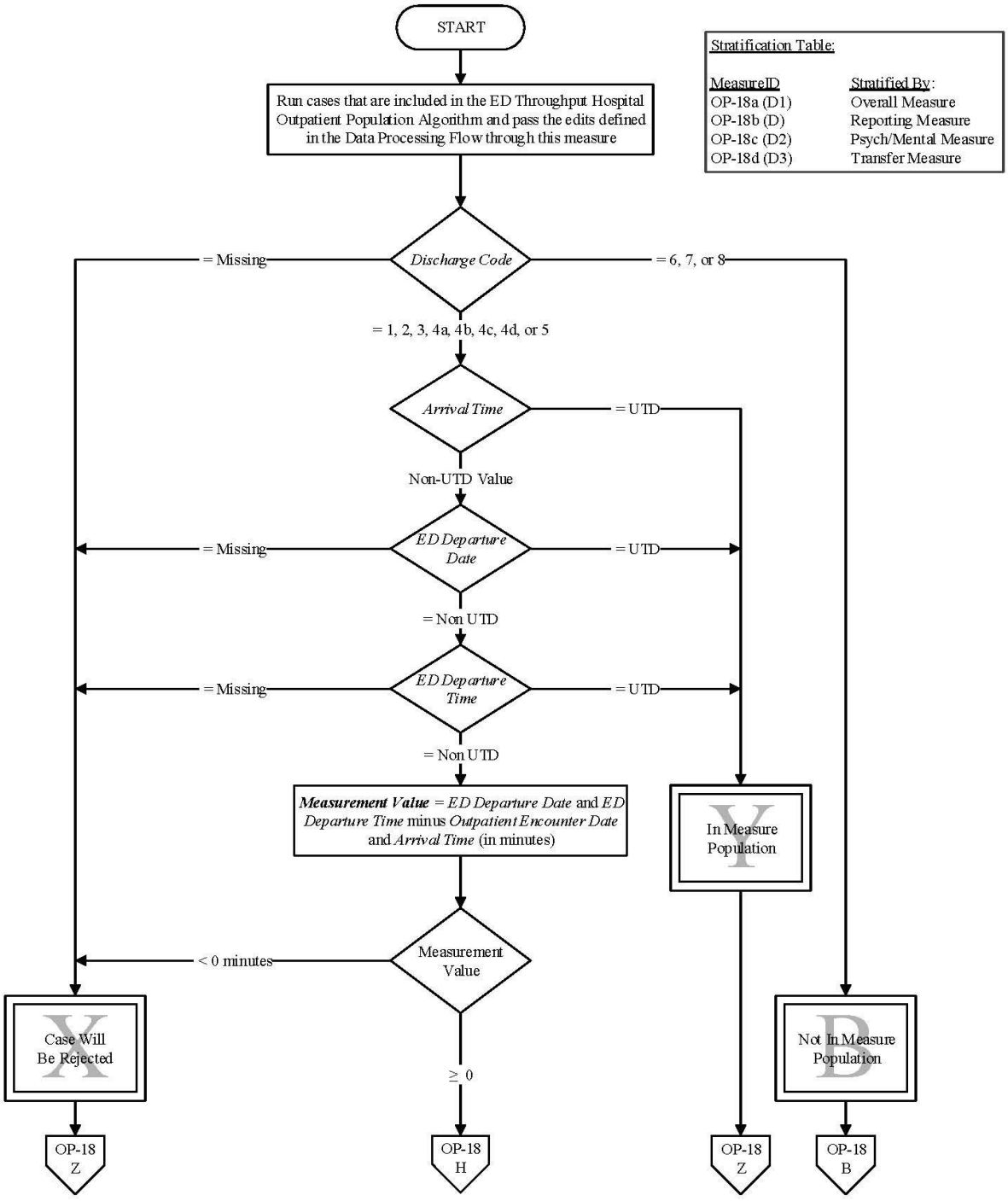
Sampling: Yes; for additional information see the Population and Sampling Specifications section.

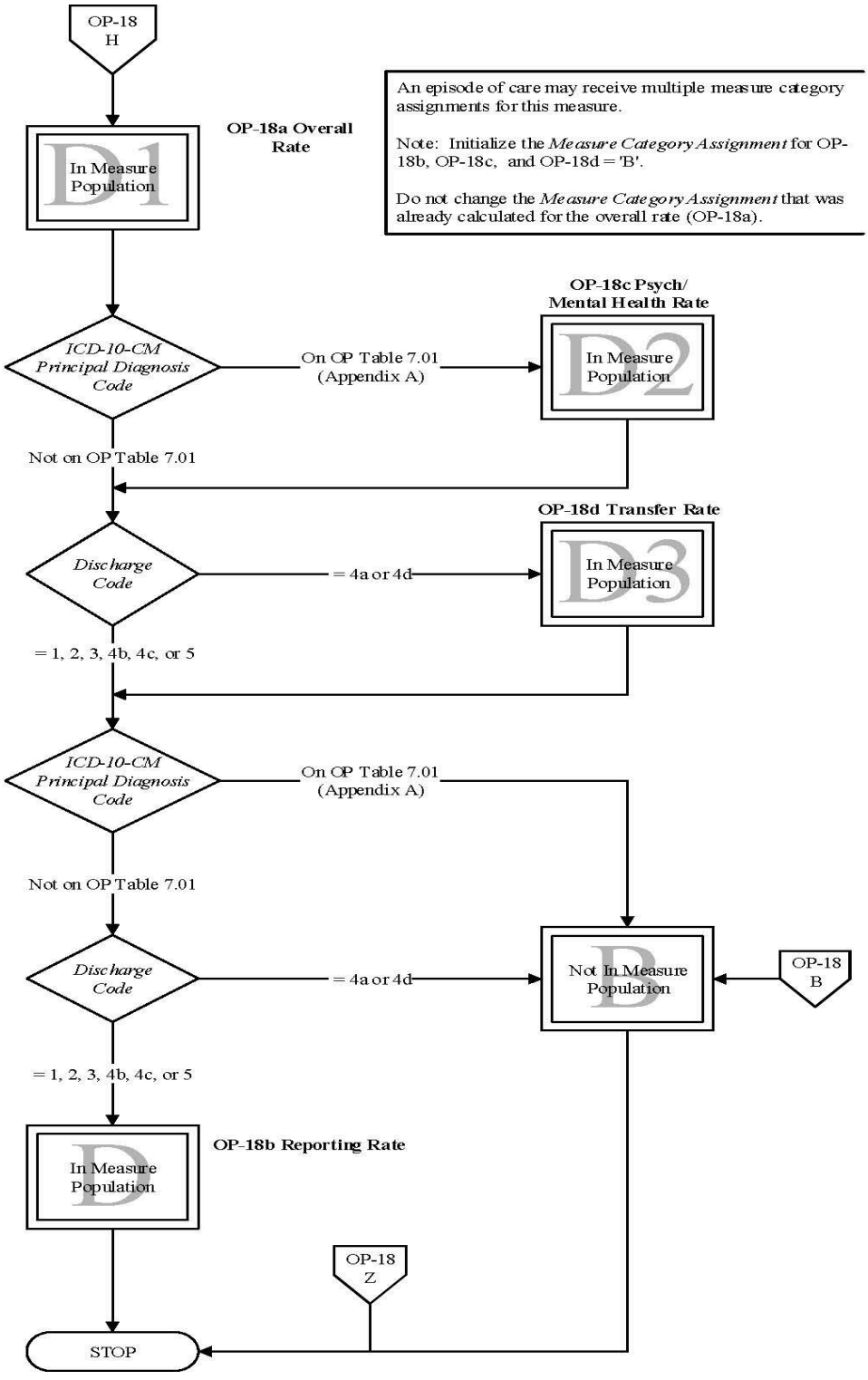
Data Reported As: Aggregate measure of central tendency.

Selected References:

- Bucci, S., A. G. de Belvis, S. Marventano, A. C. De Leva, M. Tanzariello, M. L. Specchia, W. Ricciardi and F. Franceschi. Emergency department crowding and hospital bed shortage: Is Lean a smart answer? A systematic review. Eur Rev Med Pharmacol Sci, 2016, 20(20), 4209-4219.
- Chang, A. M., A. Lin, R. Fu, K. J. McConnell and B. Sun. Associations of Emergency Department Length of Stay With Publicly Reported Quality-of-care Measures. Acad Emerg Med, 2017, 24(2), 246-250.
- Gardner, R. M., N. A. Friedman, M. Carlson, T. S. Bradham and T. W. Barrett. Impact of revised triage to improve throughput in an ED with limited traditional fast track population. Am J Emerg Med., 2017, 36(1), 124-127.
- Lester, N. A., L. R. Thompson, K. Herget, J. A. Stephens, J. V. Campo, E. J. Adkins, T. E. Terndrup and S. Moffatt-Bruce. CALM Interventions: Behavioral Health Crisis Assessment, Linkage, and Management Improve Patient Care. Am J Med Qual., 2017, 33(1), 65-71.
- Zocchi, M. S., M. S. McClelland, and J. M. Pines. Increasing Throughput: Results From A 42-Hospital Collaborative To Improve Emergency Department Flow. The Joint Commission Journal on Quality and Patient Safety, 2015, 41(12):532–542.

OP-18: Median Time from ED Arrival to ED Departure for Discharged ED Patients
Continuous Variable Statement: Time (in minutes) from ED arrival to ED departure for patients discharged from the emergency department.





Algorithm Narrative for OP-18:
Median Time from ED Arrival to ED Departure for Discharged ED Patients

Continuous Variable Statement: Time (in minutes) from ED arrival to ED departure for patients discharged from the emergency department.

1. Start processing. Run all cases that are included in the ED-Throughput Hospital Outpatient Population Algorithm and pass the edits defined in the Data Processing Flow through this measure. Proceed to *ICD-10-CM Principal Diagnosis Code*.

2. Check *Discharge Code*
   a. If *Discharge Code* is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
   b. If *Discharge Code* equals 6, 7, or 8, the case will proceed to a Measure Category Assignment of B. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
   c. If *Discharge Code* equals 1, 2, 3, 4a, 4b, 4c, 4d, or 5, the case will proceed to *Arrival Time*.

3. Check *Arrival Time*
   a. If *Arrival Time* equals UTD, the case will proceed to a Measure Category Assignment of Y. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
   b. If *Arrival Time* equals Non-UTD Value, the case will proceed to *ED Departure Date*.

4. Check *ED Departure Date*
   a. If *ED Departure Date* is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
   b. If *ED Departure Date* equals UTD, the case will proceed to a Measure Category Assignment of Y. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
   c. If *ED Departure Date* equals non-UTD, the case will proceed to *ED Departure Time*.

5. Check *ED Departure Time*
   a. If *ED Departure Time* is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
   b. If *ED Departure Time* equals UTD, the case will proceed to a Measure Category Assignment of Y. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
   c. If *ED Departure Time* equals non-UTD, the case will proceed to Measurement Value.

6. Calculate the Measurement Value
   a. Time in minutes is equal to the *ED Departure Date* and *ED Departure Time* (in minutes) minus the *Outpatient Encounter Date* and *Arrival Time* (in minutes).

7. Check Measurement Value
   a. If Measurement Value is less than 0 minutes, the case will proceed to a Measure Category Assignment of X and will be rejected. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
   b. If Measurement Value is greater than or equal to 0 minutes, the case will proceed to a Measure Category Assignment of D1.

8. Initialize the Measure Category Assignment for all cases in D1

9. Proceed to *ICD-10-CM Principal Diagnosis Code*

10. Check *ICD-10-CM Principal Diagnosis Code*
    a. If *ICD-10-CM Principal Diagnosis Code* is in Appendix A, OP Table 7.01, the case will proceed to a Measure Category Assignment of D2. Proceed to *Discharge Code*.
    b. If *ICD-10-CM Principal Diagnosis Code* is not in Appendix A, OP Table 7.01, the case will proceed to *Discharge Code*.

11. Check *Discharge Code*
    a. If *Discharge Code* equals 4a or 4d, the case will proceed to a Measure Category Assignment of D3. Proceed to *ICD-10-CM Principal Diagnosis Code*.
    b. If *Discharge Code* equals 1, 2, 3, 4b, 4c, or 5, the case will proceed to *ICD-10-CM Principal Diagnosis Code*.

12. Check *ICD-10-CM Principal Diagnosis Code*
    a. If *ICD-10-CM Principal Diagnosis Code* is in Appendix A, OP Table 7.01, the case will proceed to a Measure Category Assignment of B. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
    b. If *ICD-10-CM Principal Diagnosis Cod*e is not in Appendix A, OP Table 7.01, the case will proceed to *Discharge Code*.

13. Check *Discharge Code*
    a. If *Discharge Code* equals 4a or 4d, the case will proceed to a Measure Category Assignment of B. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
    b. If *Discharge Code* equals 1, 2, 3, 4b, 4c, or 5, the case will proceed to a Measure Category Assignment of D. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

Measure Information Form

Performance Measure Name: Left Without Being Seen

Measure ID #: OP-22

Measure Set: Hospital Outpatient ED-Throughput

Outpatient Setting: Emergency Department

Description: Percent of patients who leave the Emergency Department (ED) without being evaluated by a physician/advanced practice nurse/physician's assistant (physician/APN/PA).

Measure ascertains response to the following question(s):
- What was the total number of patients who left without being evaluated by a physician/APN/PA? _____(numerator).
- What was the total number of patients who presented to the ED? _____(denominator).

Annual data submission period: See the timeline posted to QualityNet.CMS.gov for this measure; select Hospitals-Outpatient and then Participation tab. Data will be completed through the *Hospital Quality Reporting (HQR) system* at https://hqr.cms.gov via an online tool available to authorized users.

Definition for patients who presented to the ED:
- Patients who presented to the ED are those that signed in to be evaluated for emergency services.

Definition for Physician/APN/PA:
- Patients who are seen by a resident or intern are to be considered as seen by a physician.
- An institutionally credentialed provider, acting under the direct supervision of a physician for healthcare services in the emergency department (e.g., an obstetric nurse providing assessment of an obstetric patient) are to be considered as seen by a physician.
- Advanced Practice Nurse (APN, APRN) titles may vary between state and clinical specialties. Some common titles that represent the advanced practice nurse role are:
  - Nurse Practitioner (NP)
  - Certified Registered Nurse Anesthetist (CRNA)
  - Clinical Nurse Specialist (CNS)
  - Certified Nurse Midwife (CNM)

Hospital Outpatient Quality Measure
Stroke

Measure ID #	Measure Short Name
OP-23	Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients Who Received Head CT or MRI Scan Interpretation Within 45 minutes of ED Arrival

OP Stroke General Data Element List

General Data Element Name	Collected For:
Arrival Time	All Records
Birthdate	All Records
CMS Certification Number ‡, †	All Records
First Name	All Records
Hispanic Ethnicity	All Records
Last Name	All Records
National Provider Identifier ‡, †	Optional for All Records
Outpatient Encounter Date	All Records
Patient Identifier	All Records
Payment Source	All Records
Physician 1	Optional for All Records
Physician 2	Optional for All Records
Postal Code	All Records
Race	All Records
Sex	All Records

‡Transmission Data Element
†Defined in the Transmission Data Element List within the Hospital Outpatient Measure Data Transmission section of this manual.

OP Stroke Specific Data Element List

OP Stroke Data Element Name	Collected For:
Arrival Time	OP-23
Discharge Code	OP-23
E/M Code	OP-23
Date Last Known Well	OP-23
ICD-10-CM Principal Diagnosis Code	OP-23
Head CT Scan or MRI Order	OP-23
Head CT Scan or MRI Interpretation Date	OP-23
Head CT Scan or MRI Interpretation Time	OP-23
Last Known Well	OP-23
Time Last Known Well	OP-23

OP-23 Hospital Outpatient Emergency Department Stroke Population

Stroke

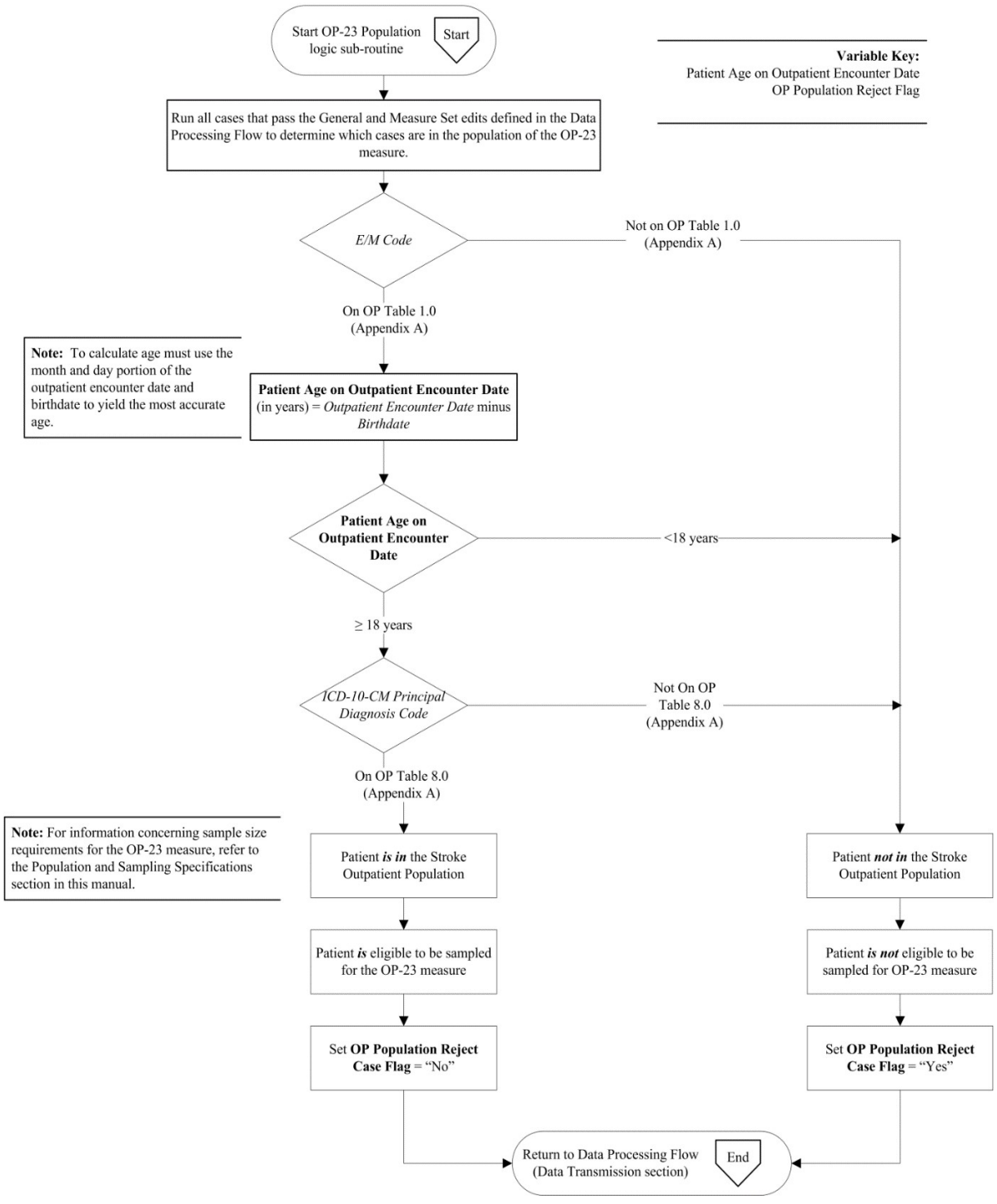
The population of the OP-23 ED Stroke measure is identified using 4 data elements:

- *E/M Code*
- *Outpatient Encounter Date*
- *Birthdate*
- *ICD-10-CM Principal Diagnosis Code*

Patients seen in a Hospital Emergency Department (E/M Code in Appendix A, OP Table 1.0) are included in the OP-23 ED Stroke Hospital Outpatient Population and are eligible to be sampled if they have:

- A patient age on *Outpatient Encounter Date* (*Outpatient Encounter Date – Birthdate*) ≥ 18 years, and
- An *ICD-10-CM Principal Diagnosis Code* for Acute Ischemic or Hemorrhagic Stroke as defined in Appendix A, OP Table 8.0

Stroke Hospital Outpatient Population Algorithm
OP-23



Algorithm Narrative for OP-23:
Stroke Hospital Outpatient Population

1. Start Stroke Initial Patient Population logic sub-routine. Process all cases that have successfully reached the point in the Transmission Data Processing Flow: Clinical which calls this Initial Patient Population Algorithm. Do not process cases that have been rejected before this point in the Transmission Data Processing Flow.

2. Check *E/M Code*
   a. If *E/M Code* is not in Appendix A, OP Table 1.0, patient is not in the Outpatient Stroke Population. Patient is not eligible to be sampled for the OP-23 measure. Set the OP Population Reject Case Flag to Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
   b. If *E/M Code* is in Appendix A, OP Table 1.0, continue processing and proceed to Measurement Value.

3. Calculate Measurement Value. Measurement Value, in years, is equal to the *Outpatient Encounter Date* minus *Birthdate*

4. Check Measurement Value
   a. If the Measurement Value is less than 18 years, patient is not in the Outpatient Stroke Population. Patient is not eligible to be sampled for the OP-23 measure. Set the OP Population Reject Case Flag to Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
   b. If the Measurement Value is greater than or equal to 18 years, continue processing, and the case will proceed to *ICD-10-CM Principal Diagnosis Code*.

5. Check *ICD-10-CM Principal Diagnosis Code*
   a. If the *ICD-10-CM Principal Diagnosis Code* is on Table 8.0, patient is in the Outpatient Stroke Population. Patient is eligible to be sampled for the OP-23 measure. Set the OP Population Reject Case Flag to No. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
   b. If the *ICD-10-CM Principal Diagnosis Code* is not on Table 8.0, patient is not in the Outpatient Stroke Population. Patient is not eligible to be sampled for the OP-23 measure. Set the OP Population Reject Case Flag to Yes. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

NQF-Endorsed Voluntary Consensus Standards for Hospital Care
Measure Information Form

Performance Measure Name: Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation Within 45 Minutes of ED Arrival

Measure ID #: OP-23

Measure Set: Hospital Outpatient Stroke

Outpatient Setting: Emergency Department

Description: Emergency Department Acute Ischemic Stroke or Hemorrhagic Stroke patients who arrive at the ED within 2 hours of the onset of symptoms who have a head CT or MRI scan performed during the stay and having a time from ED arrival to interpretation of the Head CT or MRI scan within 45 minutes of arrival.

Rationale: The Centers for Disease Control and Prevention (CDC) estimates that nearly 800,000 people experience a stroke in the United States each year; approximately 140,000 deaths annually are related to stroke (Yang et al., 2017). The American Heart Association (AHA) and American Stroke Association (ASA) recommend performing emergency imaging of the brain before initiating any specific treatment for acute stroke; for most patients, a non-enhanced brain imaging scan, such as a computed tomography (CT) scan or magnetic resonance imaging (MRI), provides sufficient information to make care decisions (Powers et al., 2018; Jauch et al. 2013). Timely brain imaging is a critical component of ED evaluation for patients with suspected acute stroke because it provides important information about the diagnosis, prognosis, and treatment needs for these patients (Powers et al. 2018). AHA/ASA guidelines recommend that brain imaging be interpreted by a qualified provider within 45 minutes of ED arrival because results from these studies are critical to differentiate ischemic strokes, hemorrhagic strokes, and stroke mimics; imaging findings can be used to identify appropriate candidates for tissue plasminogen activator (tPA), which is the gold standard for treating acute ischemic stroke (Jauch et al. 2013). Because the Food and Drug Administration (FDA) has approved tPA for use within three hours of symptom onset, prompt imaging can accelerate administration of the time-sensitive therapy for eligible patients (Cheng et al. 2015).

Because of the therapeutic window for selecting a stroke treatment, timely completion and interpretation of the CT or MRI scan are imperative; playing a role in evaluating the quality of care a patient receives (Kamal, 2017). Decreasing radiology report turnaround times can improve care team coordination, impact ED length of stay, and reduce the time needed for providers to initiate potentially life-saving interventions for stroke patients (Handel, 2011).

Type of Measure: Process

Improvement Noted As: An increase in the rate.

Numerator Statement: Emergency Department Acute Ischemic Stroke or Hemorrhagic Stroke patients arriving at the ED within 2 hours of the *Time Last Known Well*, with an order for a head CT or MRI scan whose time from ED arrival to interpretation of the Head CT scan is within 45 minutes of arrival.

Included Populations: Not Applicable

Excluded Populations: None

Data Elements:
- *Arrival Time*
- *Head CT or MRI Scan Interpretation Date*
- *Head CT or MRI Scan Interpretation Time*
- *Outpatient Encounter Date*

Denominator Statement: Emergency Department Acute Ischemic Stroke or Hemorrhagic Stroke patients arriving at the ED within 2 hours of the *Time Last Known Well* with an order for a head CT or MRI scan.

Included Populations:
- Patients with an *ICD-10-CM Principal Diagnosis Code* for acute ischemic stroke, or hemorrhagic stroke as defined in Appendix A, OP Table 8.0; and
- Patients who had a *Head CT or MRI Scan Order*; and
- An *E/M Code* for emergency department encounter as defined in Appendix A, OP Table 1.0.

Excluded Populations:
- Patients less than 18 years of age.
- Patients who expired.
- Patients who left the emergency department against medical advice, discontinued care, or for whom *Discharge Code* is not documented or unable to be determined (UTD).

Data Elements:
- *Birthdate*
- *Date Last Known Well*
- *Discharge Code*
- *E/M Code*
- *Head CT or MRI Scan Order*
- *ICD-10-CM Principal Diagnosis Code*
- *Last Known Well*
- *Time Last Known Well*

Risk Adjustment: No

Data Collection Approach: Retrospective data sources for required data elements include administrative data and medical record documents. Some hospitals may prefer to gather data concurrently by identifying patients in the population of interest. This approach provides opportunities for improvement at the point of care/service. However, complete documentation includes the principal or other ICD-10-CM diagnosis and procedure codes, which require retrospective data entry.

Data Accuracy: Variation may exist in the assignment of ICD-10-CM codes; therefore, coding practices may require evaluation to ensure consistency. There may be additional variation by provider, facility, and documentation protocol for chart-abstracted data elements.

Measure Analysis Suggestions: None

Sampling: Yes; for additional information see the Population and Sampling Specifications section.

Data Reported As: Aggregate rate generated from count data reported as a proportion.

Suggested References:

- Cheng NT, Kim AS. Intravenous Thrombolysis for Acute Ischemic Stroke Within 3 Hours Versus Between 3 and 4.5 Hours of Symptom Onset. Demaerschalk BM, ed. The Neurohospitalist, 2015;5(3):101-109.
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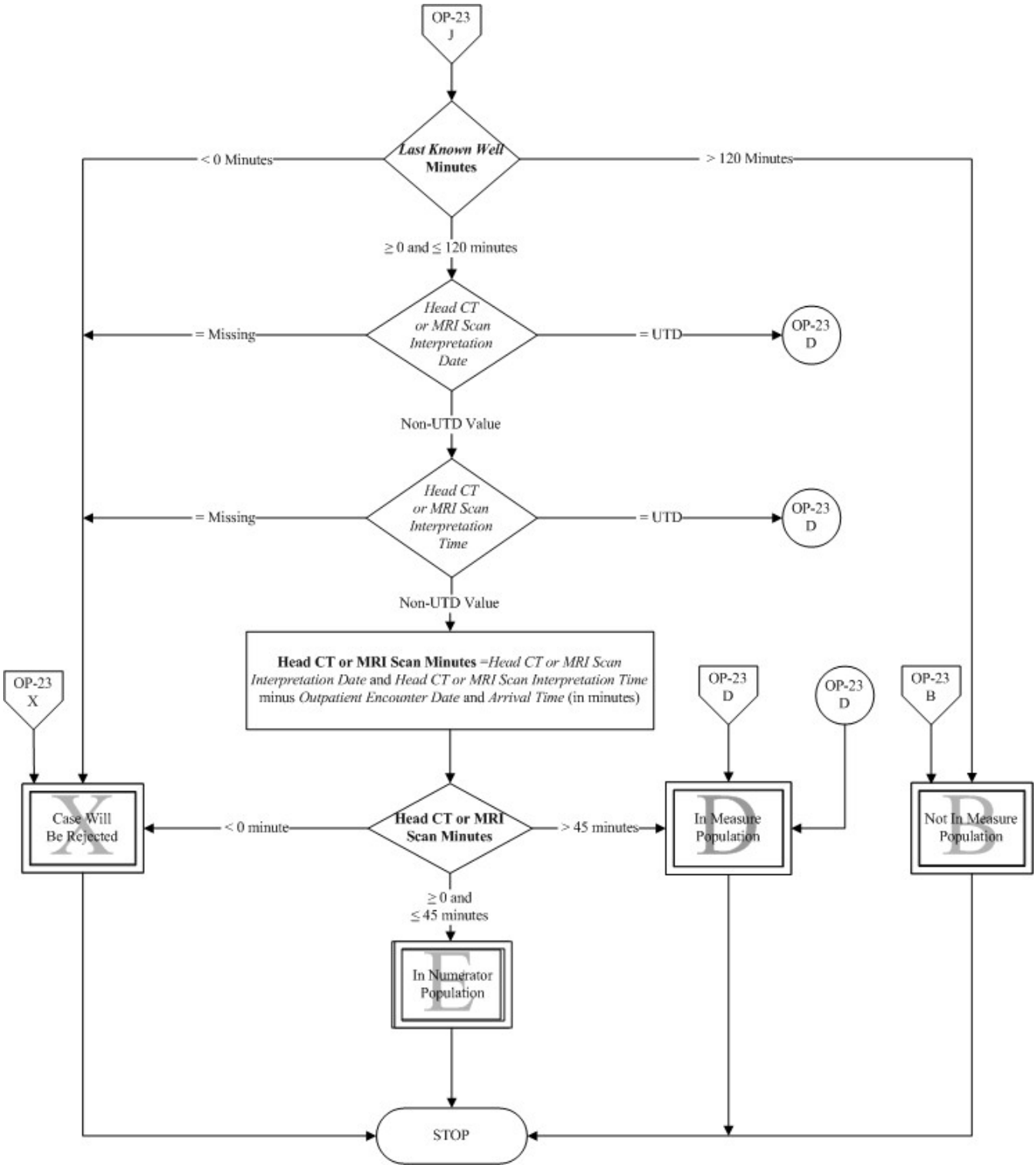
OP-23: Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation Within 45 Minutes of ED Arrival

Numerator: Emergency Department Acute Ischemic Stroke or Hemorrhagic Stroke patients arriving at the ED within 2 hours of the time last known well, with an order for a head CT or MRI scan whose time from ED arrival to interpretation of the Head CT scan is within 45 minutes of arrival.

Denominator: Emergency Department Acute Ischemic Stroke or Hemorrhagic Stroke patients arriving at the ED within 2 hours of the time last known well with an order for a head CT or MRI scan.



Algorithm Narrative for OP-23:
Head CT or MRI Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke Patients who Received Head CT or MRI Scan Interpretation Within 45 Minutes of ED Arrival

Numerator Statement: Emergency Department Acute Ischemic Stroke or Hemorrhagic Stroke patients who arrive at the ED within 2 hours of the onset of symptoms who have a head CT or MRI scan performed during the stay and having a time from ED arrival to interpretation of the Head CT or MRI scan within 45 minutes of arrival.

Denominator Statement: Emergency Department Acute Ischemic Stroke or Hemorrhagic Stroke patients arriving at the ED within 2 hours of the *Time Last Known Well* with an order for a head CT or MRI scan.

1. Start processing. Run cases that are included in the Stroke Hospital Outpatient Population and pass the edits defined in the Data Processing Flow through this measure.

2. Check *Discharge Code*.
   a. If *Discharge Code* is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
   b. If *Discharge Code* equals 6, 7, or 8, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
   c. If *Discharge Code* equals 1, 2, 3, 4a, 4b, 4c, 4d, or 5, continue processing and proceed to *Head CT or MRI Scan Order*.

3. Check *Head CT or MRI Scan Order*.
   a. If *Head CT or MRI Scan Order* is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
   b. If *Head CT or MRI Scan Order* equals No, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
   c. If *Head CT or MRI Scan Order* equals Yes, continue processing and proceed to *Last Known Well*.

4. Check *Last Known Well*.
   a. If *Last Known Well* is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
   b. If *Last Known Well* equals No, the case will proceed to a Measure Category Assignment of B and will not be in the Measure Population. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
   c. If *Last Known Well* equals Yes, continue processing and proceed to *Date Last Known Well*.

5. Check *Date Last Known Well*.
   a. If *Date Last Known Well* is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

b. If *Date Last Known Well* equals UTD, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
c. If *Date Last Known Well* equals a Non-UTD Value, continue processing and proceed to *Time Last Known Well.*

6. Check *Time Last Known Well*.
   a. If *Time Last Known Well* is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
   b. If *Time Last Known Well* equals UTD, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
   c. If *Time Last Known Well* equals a Non-UTD Value, continue processing and proceed to *Arrival Time*.

7. Check *Arrival Time*.
   a. If *Arrival Time* equals UTD, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
   b. If *Arrival Time* equals a Non-UTD Value, continue processing and proceed to Measurement Value.

8. Calculate Measurement Value. Measurement Value, in minutes, is equal to the *Outpatient Encounter Date* and *Arrival Time* minus *Date Last Known Well* and *Time Last Known Well*.

9. Check *Measurement Value*.
   a. If the Measurement Value is greater than 120 minutes, the case will proceed to a Measurement Category Assignment of B and will not be in the Measure Population. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
   b. If the Measurement Value is greater than or equal to zero and less than or equal to 120 minutes, continue processing and proceed to *Head CT or MRI Scan Interpretation Date*.
   c. If the Measurement Value is less than zero minutes, the case will proceed to a Measurement Category Assignment of X and will be rejected. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

10. Check *Head CT or MRI Scan Interpretation Date*.
    a. If *Head CT or MRI Scan Interpretation Date* is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
    b. If *Head CT or MRI Scan Interpretation Date* equals UTD, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
    c. If *Head CT or MRI Scan Interpretation Date* equals a Non-UTD Value, continue processing and proceed to *Head CT or MRI Scan Interpretation Time*.

11. Check *Head CT or MRI Scan Interpretation Time*.
    a. If *Head CT or MRI Scan Interpretation Time* is missing, the case will proceed to a Measure Category Assignment of X and will be rejected. Return to Transmission Data Processing Flow:

Clinical in the Data Transmission section.

b. If *Head CT Scan Interpretation Time* equals UTD, the case will proceed to a Measure Category Assignment of D and will be in the Measure Population. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
c. If *Head CT Scan Interpretation Time* equals a Non-UTD Value, continue processing and proceed to Measurement Value.

12. Calculate *Measurement Value*.
    a. *Measurement Value*, in minutes, is equal to the *Head CT or MRI Scan Interpretation Date* and *Head CT or MRI Scan Interpretation Time* minus *Outpatient Encounter Date* and *Arrival Time*.

13. Check *Measurement Value.*
    a. If the Measurement Value is greater than 45 minutes, the case will proceed to a Measurement Category Assignment of D and will be in the Measure Population. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
    b. If the Measurement Value is greater than or equal to zero and less than or equal to 45 minutes, the case will proceed to a Measure Category Assignment of E and will be in the Measure Population. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.
    c. If the Measurement Value is less than zero minutes, the case will proceed to a Measure Category Assignment of X and will be rejected. Return to Transmission Data Processing Flow: Clinical in the Data Transmission section.

Measure Information Form

Performance Measure Name: Magnetic Resonance Imaging (MRI) Lumbar Spine for Low Back Pain

Measure ID #: OP-8

Measure Set: Outpatient Imaging Efficiency (OIE) Measures

Description: This measure calculates the percentage of magnetic resonance imaging (MRI) studies of the lumbar spine with a diagnosis of low back pain on the imaging claim for which the Medicare fee-for-service (FFS) beneficiary did not have claims-based evidence of antecedent conservative therapy prior to undergoing the index imaging.

Antecedent conservative therapy may include:

1. Claim(s) for physical therapy in the 60 days preceding the lumbar spine MRI.
2. Claim(s) for chiropractic evaluation and manipulative treatment in the 60 days preceding the lumbar spine MRI.
3. Claim(s) for evaluation and management (E&M) (e.g., office visits) in the period >28 days and <60 days preceding the lumbar spine MRI.

Code-level information to identify the initial patient population, exclusions, and numerator quality actions appear below.

Rationale: OP-8 aims to promote use of high-quality, efficient care; reduce unnecessary exposure to contrast materials; ensure adherence to evidence-based medicine and clinical practice guidelines; and provide data to consumers and other stakeholders about imaging use at the facility, state, and national level.

Measure Results Interpretation: Lower scores are better. This means that a high-performing facility reports a value near zero percent, whereas a facility that may be performing too many inappropriate MRI lumbar spine studies scores closer to 100 percent.

Data Source: Medicare FFS claims.

Numerator Statement: Of Medicare FFS beneficiaries in the denominator, the number of MRI of the lumbar spine studies with a diagnosis of low back pain without having claims-based evidence of antecedent conservative therapy prior to the index imaging study.

- Numerator Codes and Time Windows
  - Indications of claims-based antecedent conservative therapy include any Current Procedural Terminology (CPT®) codes in the following three groups:

Name	Code Type	Object ID	Look-Back Period
Chiropractic evaluation and manipulation	CPT	2.16.840.1.113883.3.3157.1803	≤60 days prior to index MRI

Name	Code Type	Object ID	Look-Back Period
Evaluation and management	CPT	2.16.840.1.113883.3.3157.1804	28–60 days prior to index MRI
Physical therapy	CPT	2.16.840.1.113883.3.3157.1802	≤60 days prior to index MRI

Denominator Statement: Number of MRI of the lumbar spine studies with a diagnosis of low back pain on the imaging claim within a six-month window of claims data performed on Medicare FFS beneficiaries at outpatient hospital facilities reimbursed through the Outpatient Prospective Payment System (OPPS). Individuals can be included in the measure's initial patient population multiple times; each MRI lumbar spine study with a diagnosis of low back pain on the imaging claim performed at a facility measured under OPPS is counted once in the measure's denominator.

- Denominator Codes and Time Windows
  - Indications of low back pain include International Classification of Disease, Version 10 (ICD-10) codes that appear on the MRI claim:

Name	Code Type	Object ID	Look-Back Period
Biomechanical lesion, not elsewhere classified	ICD-10	2.16.840.1.113883.3.3157.1812	On the index MRI claim
Dislocation and sprain of joints and ligaments of lumbar spine and pelvis	ICD-10	2.16.840.1.113883.3.3157.1813	On the index MRI claim
MRI lumbar spine procedures	CPT	2.16.840.1.113883.3.3157.1805	On the index MRI claim
Other deforming dorsopathies	ICD-10	2.16.840.1.113883.3.3157.1809	On the index MRI claim
Other dorsopathies	ICD-10	2.16.840.1.113883.3.3157.1811	On the index MRI claim
Spondylopathies	ICD-10	2.16.840.1.113883.3.3157.1810	On the index MRI claim

Excluded Conditions: The OIE measures are not risk adjusted; instead, Medicare FFS beneficiaries who have a clinical diagnosis of one or more conditions for which imaging is considered appropriate are excluded from the measure. That is, these Medicare FFS beneficiaries are removed from the denominator, as well as from the numerator, since the numerator involves identifying Medicare FFS beneficiaries from the denominator.

For OP-8, Medicare FFS beneficiaries with a history of certain red-flag conditions are excluded from the measure. These include Medicare FFS beneficiaries with a history of lumbar spine surgery, cancer, congenital spine and spinal cord malformations, inflammatory and autoimmune disorders, infectious conditions including intraspinal abscess, spinal vascular malformations and/or occult subarachnoid hemorrhage, spinal cord infarction, neoplastic abnormalities, radiation therapy, spinal abnormalities

associated with scoliosis, syringohydromyelia, postoperative fluid collections and soft tissue changes, trauma, intravenous (IV) drug use, neurologic impairment, human immunodeficiency virus (HIV), and other unspecified immune deficiencies. Thus, any Medicare FFS beneficiary with a history of one or more of these conditions is excluded from the measure's denominator and numerator.

- Codes and Look-Back Period for Excluded Diagnoses
  - Indications of a red-flag condition include CPT or ICD-10 codes that appear in the Medicare FFS beneficiary's claims history:

Name	Code Type	Object ID	Look-Back Period
Cancer	ICD-10	2.16.840.1.113883.3.3157.1832	Up to 365 days prior to index MRI
Congenital spine and spinal cord malformations	ICD-10	2.16.840.1.113883.3.3157.1833	Up to 5 years prior to index MRI
HIV	ICD-10	2.16.840.1.113883.3.3157.1846	Up to 365 days prior to index MRI
Inflammatory and autoimmune disorders	ICD-10	2.16.840.1.113883.3.3157.1834	Up to 5 years prior to index MRI
Infectious conditions	ICD-10	2.16.840.1.113883.3.3157.1835	Up to 365 days prior to index MRI
Intraspinal abscess	ICD-10	2.16.840.1.13883.3.3157.4069	On the MRI claim
IV drug abuse	ICD-10	2.16.840.1.113883.3.3157.1844	Up to 365 days prior to index MRI
Lumbar spine surgery	CPT	2.16.840.1.113883.3.3157.18143	Up to 90 days prior to index MRI
Neoplastic abnormalities	ICD-10	2.16.840.1.113883.3.3157.1838	Up to 5 years prior to index MRI
Neurological impairment	ICD-10	2.16.840.1.113883.3.3157.1845	Up to 365 days prior to index MRI
Postoperative fluid collections and soft tissue changes	ICD-10	2.16.840.1.113883.3.3157.1842	Up to 365 days prior to index MRI
Spinal abnormalities associated with scoliosis	ICD-10	2.16.840.1.113883.3.3157.1840	Up to 5 years prior to index MRI
Spinal cord infarction	ICD-10	2.16.840.1.113883.3.3157.1837	Up to 365 days prior to index MRI
Spinal vascular malformations and/or the cause of occult subarachnoid hemorrhage	ICD-10	2.16.840.1.113883.3.3157.1836	Up to 5 years prior to index MRI
Syringohydromyelia	ICD-10	2.16.840.1.113883.3.3157.1841	Up to 5 years prior to index MRI
Trauma	ICD-10	2.16.840.1.113883.3.3157.1843	Up to 45 days prior to index MRI

Name	Code Type	Object ID	Look-Back Period
Treatment fields for radiation therapy	ICD-10	2.16.840.1.113883.3.3157.1839	Up to 5 years prior to index MRI
Unspecified immune deficiencies	ICD-10	2.16.840.1.113883.3.3157.1847	Up to 365 days prior to index MRI

Detailed specifications for OP-8 and the other OIE measures, including measure implementation information, can be found via the following link: https://qualitynet.cms.gov/outpatient/measures/imaging-efficiency.

Measure Information Form

Performance Measure Name: Abdomen Computed Tomography(CT)—Use of Contrast Material

Measure ID #: OP-10

Measure Set: Outpatient Imaging Efficiency (OIE) Measures

Description: This measure calculates the percentage of CT of the abdomen or abdomen and pelvis (referred to as *abdominopelvic CTs*) studies that are performed without and with contrast out of all CT of the abdomen or abdominopelvis studies performed—those without contrast, those with contrast, and those without then with contrast. The measure is calculated based on a one-year window of claims data.

Rationale: OP-10 aims to promote use of high-quality, efficient care; reduce unnecessary exposure to radiation and contrast materials; ensure adherence to evidence-based medicine and clinical practice guidelines; and provide data to consumers and other stakeholders about imaging use at the facility, state, and national level.

Measure Results Interpretation: Lower scores are better. This means that a high-performing facility reports a value near 0 percent, whereas a facility that may be performing too many CTs of the abdomen or abdominopelvis studies without then with contrast scores closer to 100 percent.

Data Source: Medicare fee-for-service (FFS) claims.

Numerator Statement: Among CT studies of the abdomen or abdominopelvis in the denominator, the number of CT abdomen and abdominopelvis studies performed without then with contrast (also referred to as *combined studies*).

- Numerator Codes
  - The following Current Procedural Terminology (CPT®) code category is included in the measure numerator:

Name	Code Type	Object ID
Abdomen CT Without then With Contrast	CPT	2.16.840.1.113883.3.3157.21

Denominator Statement: The number of CT studies of the abdomen or abdominopelvis performed—without contrast, with contrast, or without then with contrast—within a one-year window of Medicare FFS claims data for beneficiaries whose imaging was performed at outpatient hospital facilities reimbursed through the Outpatient Prospective Payment System (OPPS). Medicare FFS beneficiaries can be included in the measure's initial patient population multiple times; each abdomen or abdominopelvis CT (without contrast, with contrast, or both with and without contrast) performed at a facility measured under OPPS is counted once in the measure's denominator.

- Denominator Codes
  - The following International Classification of Disease, Version 10 (ICD-10) and CPT code categories are used to identify the measure denominator population:

Name	Code Type	Object ID
Abdomen CT Without Contrast	ICD-10	2.16.840.1.113883.3.3157.1
Abdomen CT With Contrast	ICD-10	2.16.840.1.113883.3.3157.2
Abdomen CT Without then With Contrast	CPT	2.16.840.1.113883.3.3157.21

Excluded Conditions: The OIE measures are not risk adjusted; instead, Medicare FFS beneficiaries who have a clinical diagnosis of one or more conditions for which imaging is considered appropriate are excluded from the measure. That is, these Medicare FFS beneficiaries are removed from the denominator, as well as from the numerator, since the numerator involves identifying Medicare FFS beneficiaries from the denominator.

For OP-10, Medicare FFS beneficiaries whose abdomen CT had one of the following clinical diagnoses recorded on the claim are excluded from the measure's initial patient population; these conditions include:

- Adrenal mass;
- Diseases of the urinary system;
- Hematuria;
- Infections of kidney;
- Jaundice;
- Liver lesion (mass or neoplasm);
- Malignant neoplasm of bladder;
- Malignant neoplasm of pancreas;
- Non-traumatic aortic disease;
- Pancreatic disorders; and
- Unspecified disorder of kidney or ureter.

For all conditions, clinical evidence exists (within a clinical practice guideline or the peer-reviewed literature) that indicates performing a CT study of the abdomen and/or abdominopelvis may be appropriate care. Consequently, any Medicare FFS beneficiary with one or more of these conditions documented on the CT claim is excluded from the measure.

- Denominator Exclusion Codes
  - The following ICD-10 code categories are excluded from the denominator population:

Name	Code Type	Object ID
Adrenal Mass	ICD-10	2.16.840.1.113883.3.3157.1017
Diseases of the Urinary System	ICD-10	2.16.840.1.113883.3.3157.1019
Hematuria	ICD-10	2.16.840.1.113883.3.3157.1020
Infections of the Kidney	ICD-10	2.16.840.1.113883.3.3157.1021
Jaundice	ICD-10	2.16.840.1.113883.3.3157.1022
Liver Lesion (Mass or Neoplasm)	ICD-10	2.16.840.1.113883.3.3157.1023
Malignant Neoplasm of Bladder	ICD-10	2.16.840.1.113883.3.3157.1024
Malignant Neoplasm of the Pancreas	ICD-10	2.16.840.1.113883.3.3157.1025
Non-Traumatic Aortic Disease	ICD-10	2.16.840.1.113883.3.3157.1026
Pancreatic Diseases	ICD-10	2.16.840.1.113883.3.3157.1027
Unspecified Disorder of the Kidney And Ureter	ICD-10	2.16.840.1.113883.3.3157.1028

Detailed specifications for OP-10 and the other OIE measures, including measure implementation information, can be found via the following link: https://qualitynet.cms.gov/outpatient/measures/imaging-efficiency.

Measure Information Form

Performance Measure Name: Cardiac Imaging for Preoperative Risk Assessment for Non-Cardiac Low-Risk Surgery

Measure ID #: OP-13

Measure Set: Outpatient Imaging Efficiency (OIE) Measures

Description: This measure calculates the percentage of stress echocardiography, single photon emission computed tomography myocardial perfusion imaging (SPECT MPI), coronary computed tomography angiography (CCTA), or stress magnetic resonance imaging (MRI) studies performed at a hospital outpatient facility in the 30 days prior to an ambulatory, non-cardiac, low-risk surgery performed in any location (e.g., within the same facility as the cardiac imaging, at another hospital unaffiliated with the site of the index cardiac imaging, or within a physician's office).

Rationale: OP-13 aims to promote use of high-quality, efficient care; reduces unnecessary exposure to radiation and contrast materials; ensure adherence to evidence-based medicine and clinical practice guidelines; and provide data to consumers and other stakeholders about imaging use at the facility, state, and national level.

Measure Results Interpretation: Lower scores are better. This means that a high-performing facility reports a value near 0 percent, whereas a facility that may be performing too many stress echocardiography, SPECT MPI, stress MRI, or CCTA studies before an ambulatory, non-cardiac, low-risk surgery scores closer to 100 percent.

Data Source: Medicare fee-for-service (FFS) claims.

Numerator Statement: Of cardiac imaging studies in the denominator, the number of stress echocardiography, SPECT MPI, stress MRI, and CCTA studies performed within a hospital outpatient department in the 30 days preceding a non-cardiac, low-risk surgery performed at any location.

- Numerator Codes and Time Windows
  - Of the stress echocardiography, SPECT MPI, stress MRI, and CCTA imaging procedures included in the denominator, the following procedures, identified using Current Procedural Terminology (CPT®) codes for non-cardiac, low-risk surgery, are included in the numerator if they occur on the same day or within 30 days following the cardiac imaging:

Name	Code Type	Object ID	Look-Forward Period[1]
Surgery/Integumentary System: Breast	CPT	2.16.840.1.113883.3.3157.1301	On the same day or within 30 days of a non-cardiac, low-risk surgery

[1] Non-cardiac, low-risk surgeries may occur between July 01 and June 30 of the measurement year.

Name	Code Type	Object ID	Look-Forward Period[1]
Surgery/Respiratory System: Accessory Sinuses	CPT	2.16.840.1.113883.3.3157.1302	On the same day or within 30 days of a non-cardiac, low-risk surgery
Surgery/Respiratory System: Larynx	CPT	2.16.840.1.113883.3.3157.1303	On the same day or within 30 days of a non-cardiac, low-risk surgery
Surgery/Respiratory System: Trachea and Bronchi	CPT	2.16.840.1.113883.3.3157.1304	On the same day or within 30 days of a non-cardiac, low-risk surgery
Surgery/Respiratory System: Lungs And Pleura	CPT	2.16.840.1.113883.3.3157.1305	On the same day or within 30 days of a non-cardiac, low-risk surgery
Surgery/Digestive System: Esophagus	CPT	2.16.840.1.113883.3.3157.13064	On the same day or within 30 days of a non-cardiac, low-risk surgery
Surgery/Digestive System: Intestines (except Rectum)	CPT	2.16.840.1.113883.3.3157.1307	On the same day or within 30 days of a non-cardiac, low-risk surgery
Surgery/Digestive System: Rectum	CPT	2.16.840.1.113883.3.3157.1308	On the same day or within 30 days of a non-cardiac, low-risk surgery
Surgery/Digestive System: Anus	CPT	2.16.840.1.113883.3.3157.1309	On the same day or within 30 days of a non-cardiac, low-risk surgery
Surgery/Digestive System: Biliary Tract	CPT	2.16.840.1.113883.3.3157.1310	On the same day or within 30 days of a non-cardiac, low-risk surgery
Surgery/Digestive System: Abdomen, Peritoneum, and Omentum	CPT	2.16.840.1.113883.3.3157.1311	On the same day or within 30 days of a non-cardiac, low-risk surgery
Surgery/Digestive System: Kidney	CPT	2.16.840.1.113883.3.3157.1312	On the same day or within 30 days of a non-cardiac, low-risk surgery
Surgery/Digestive System: Ureter	CPT	2.16.840.1.113883.3.3157.13133	On the same day or within 30 days of a non-cardiac, low-risk surgery
Surgery/Digestive System: Bladder	CPT	2.16.840.1.113883.3.3157.1314	On the same day or within 30 days of a non-cardiac, low-risk surgery
Surgery/Female Genital System: Cervix Uteri	CPT	2.16.840.1.113883.3.3157.1315	On the same day or within 30 days of a non-cardiac, low-risk surgery
Surgery/Female Genital System: Corpus Uteri	CPT	2.16.840.1.113883.3.3157.1316	On the same day or within 30 days of a non-cardiac, low-risk surgery
Surgery/Female Genital System: Oviduct/Ovary	CPT	2.16.840.1.113883.3.3157.1317	On the same day or within 30 days of a non-cardiac, low-risk surgery
Surgery/Eye And Ocular Adnexa: Anterior Segment	CPT	2.16.840.1.113883.3.3157.1318	On the same day or within 30 days of a non-cardiac, low-risk surgery
Other Surgeries	CPT	2.16.840.1.113883.3.3157.13193	On the same day or within 30 days of a non-cardiac, low-risk surgery

Denominator Statement: The number of stress echocardiography, SPECT MPI, stress MRI, and CCTA studies performed within a hospital outpatient department within a one-year window of claims data performed on Medicare FFS beneficiaries at outpatient hospital facilities reimbursed through the OPPS. Beneficiaries can be included in the measure's initial patient population multiple times; each stress

echocardiography, SPECT MPI, stress MRI, and CCTA studies performed at a facility measured by OPPS in the 30 days prior to a low-risk surgery is counted once in the measure's denominator.

- Denominator Codes and Time Windows
  - The following CPT and Healthcare Common Procedure Coding System (HCPCS) code categories are used to identify the measure denominator procedures:

Name	Code Type	Object ID	Time Window[2]
CCTA	CPT	2.16.840.1.113883.3.3157.1323	July 1 through May 31 of the measurement period
SPECT MPI	CPT, HCPCS	2.16.840.1.113883.3.3157.13202	July 1 through May 31 of the measurement period
Stress echocardiography	CPT, HCPCS	2.16.840.1.113883.3.3157.13213	July 1 through May 31 of the measurement period
Stress MRI	CPT, HCPCS	2.16.840.1.113883.3.3157.13222	July 1 through May 31 of the measurement period

Excluded Conditions: The OIE measures are not risk adjusted; instead, Medicare FFS beneficiaries who have a clinical diagnosis of one or more conditions for which imaging is considered appropriate are excluded from the measure. That is, these Medicare FFS beneficiaries are removed from the denominator, as well as from the numerator, since the numerator involves identifying Medicare FFS beneficiaries from the denominator.

For OP-13, Medicare FFS beneficiaries with a history of at least three diagnoses from the following categories are excluded from the measure's initial patient population:

- Diabetes mellitus;
- Renal insufficiency;
- Stroke or transient ischemic attack (TIA);
- Prior heart failure; and
- Ischemic heart disease.

For these conditions, clinical evidence exists (within a practice guideline or the peer-reviewed literature) that indicates these beneficiaries may be at high risk of cardiac complication during low-risk surgery. Consequently, performing a stress echocardiography, SPECT MPI, stress MRI, or CCTA study prior to an ambulatory non-cardiac, low-risk surgery may be appropriate care for these high-risk patients. Any Medicare FFS beneficiary with a history of **three or more** of these conditions is excluded from the measure.

Additionally, patients that received cardiac imaging in the emergency department (ED) or in the 30 days following an ED encounter are excluded from the measure as they often have a different clinical indication than those performed in other hospital outpatient care settings.

[2] Cardiac imaging procedures may occur between July 01 and May 31 of the measurement year. This allows for a 30-day look-forward period following the imaging to identify non-cardiac, low-risk surgeries.

- Denominator Exclusion Codes
  - The following ICD-10 and CPT code categories are excluded from the measure denominator population:

Name	Code Type	Object ID	Look-Back Period
Diabetes Mellitus	ICD-10	2.16.840.1.113883.3.3157.1329	Up to one year prior to cardiac imaging
Emergency Department Imaging	CPT	2.16.840.1.113883.3.3157.4057	On the same day or within the 30 days following an ED encounter[3]
Ischemic Heart Disease	ICD-10	2.16.840.1.113883.3.3157.1333	Up to three years prior to cardiac Imaging
Prior Heart Failure	ICD-10	2.16.840.1.113883.3.3157.1332	Up to three years prior to cardiac imaging
Renal Insufficiency	ICD-10	2.16.840.1.113883.3.3157.1330	Up to one year prior to cardiac imaging
Stroke/Transient Ischemic Attack	ICD-10	2.16.840.1.113883.3.3157.1331	Up to three years prior to cardiac imaging

Detailed specifications for OP-13 and the other OIE measures, including measure implementation information, can be found via the following link: https://qualitynet.cms.gov/outpatient/measures/imaging-efficiency.

[3] ED encounters may occur between June 01 (up to 30 days prior to the start of the measurement period) and May 31 of the measurement year. This allows for a 30-day look-forward period following the ED encounter to identify potentially related cardiac imaging.

Measure Information Form

Performance Measure Name: Breast Cancer Screening Recall Rates

Measure ID #: OP-39

Measure Set: Outpatient Imaging Efficiency (OIE) Measures

Description: This measure calculates the percentage of mammography or digital breast tomosynthesis (DBT) screening studies that are followed by a diagnostic mammography, diagnostic DBT, ultrasound of the breast, or magnetic resonance imaging (MRI) of the breast occurring on the same day or in the 45 days following the index screening study, performed in an outpatient or office setting.

Rationale: OP-39 aims to promote use of high-quality, efficient care; reduce unnecessary exposure to radiation and contrast materials; ensure adherence to evidence-based medicine and clinical practice guidelines; and provide data to consumers and other stakeholders about imaging use at the facility, state, and national level.

Measure Results Interpretation: If a facility's score is lower than 5 percent, that facility may be missing cases of cancer; if their score is above 12 percent, the facility may be recalling too many Medicare Fee-for-Service (FFS) beneficiaries for follow-up imaging (Lee et al. 2018). For OP-39, facilities with performance rates that are greater than 5 percent and less than 12 percent are likely recalling an appropriate number of beneficiaries following a screening mammogram or DBT study.

Data Source: Medicare FFS claims.

Numerator Statement: Of studies in the denominator, the number of diagnostic mammograms, diagnostic DBTs, ultrasounds of the breast, and MRIs of the breast that are performed on the same day or within 45 days of the screening mammogram or screening DBT study, occurring in an outpatient or office setting during the measurement period.

- Numerator Codes and Time Windows
  - The following Current Procedural Terminology (CPT®) and Healthcare Common Procedure Coding System (HCPCS) code categories and look back periods are included in the measure numerator:

Name	Code Type	Object ID	Look-Forward Period
Diagnostic Mammography Study	CPT HCPCS	2.16.840.1.113883.3.3157.190123	On the same day or within 45 days of the screening mammography or DBT
Diagnostic DBT Study	CPT HCPCS	2.16.840.1.113883.3.3157.4066	On the same day or within 45 days of the screening mammography or DBT
Ultrasound Of The Breast Study	CPT	2.16.840.1.113883.3.3157.1902	On the same day or within 45 days of the screening mammography or DBT
MRI of the Breast Study	CPT HCPCS	2.16.840.1.13883.3.3157.4068	On the same day or within 45 days of the screening mammography or DBT

Denominator Statement: The number of screening mammograms and screening DBTs performed for

Medicare FFS beneficiaries within outpatient hospital facilities reimbursed through the Outpatient Prospective Payment System (OPPS) during the measurement period. Beneficiaries can be included in the measure's initial patient population multiple times; each mammography and DBT screening performed at a facility measured under OPPS is counted once in the measure's denominator.

- Denominator Codes
  - The following CPT and HCPCS code categories are used to identify the measure denominator population:

Name	Code Type	Object ID
Screening Mammography and DBT Studies	CPT HCPCS	2.16.840.1.113883.3.3157.190412

Excluded Conditions: The OIE measures are not risk adjusted; instead, Medicare FFS beneficiaries who have a clinical diagnosis of one or more conditions for which imaging is considered appropriate are excluded from the measure. That is, these Medicare FFS beneficiaries are removed from the denominator, as well as from the numerator, since the numerator involves identifying Medicare FFS beneficiaries from the denominator.

There are currently no conditions excluded from OP-39.

Detailed specifications for OP-39 and the other OIE measures, including measure implementation information, can be found via the following link: https://qualitynet.cms.gov/outpatient/measures/imaging-efficiency.

References:

Lee CS, Parise C, Burleson J, & Seidenwurm D. (2018). Assessing the Recall Rate for Screening Mammography: Comparing the Medicare Hospital Compare Dataset With the National Mammography Database. American Journal of Roentgenology, 211(1):127-132. doi:10.2214/AJR.17.19229.

Measure Information Form

Performance Measure Name: Appropriate Follow-up Interval for Normal Colonoscopy in Average Risk Patients

Measure ID #: OP-29

Measure Set: Measures submitted via a Web-based Tool

Description: Percentage of patients aged 45 to 75 years of age receiving a screening colonoscopy without biopsy or polypectomy who had a recommended follow-up interval of at least 10 years for repeat colonoscopy documented in their colonoscopy report.

Numerator Statement: Patients who had a recommended follow-up interval of at least 10 years for repeat colonoscopy documented in their colonoscopy report.

Denominator Statement: All patients aged 45 to 75 years of age receiving screening colonoscopy without biopsy or polypectomy.

Denominator Criteria (Eligible Cases):
Patients aged ≥ 45 and ≤ 75 on date of encounter
and
ICD-10-CM Diagnosis code: Z12.11
and
CPT or HCPCS: 44388, 45378, G0121
without
CPT Category I Modifiers: 52, 53, 73, 74
without
ICD-10-CM Diagnosis codes: Z83.710, Z83.711, Z83.718, Z83.719, Z86.010, Z80.0, Z85.038

Denominator Exclusions:

- Documentation of medical reason(s) for not recommending at least a 10-year follow-up interval (e.g., inadequate prep, familial or personal history of colonic polyps, patient had no adenoma and age is ≥66 years old, or life expectancy is <10years, other medical reasons). Medical reason(s) are at the discretion of the physician. Documentation indicating no follow-up colonoscopy is needed or recommended is only acceptable if the patient's age is documented as ≥66 years old, or life expectancy <10 years. Documentation of a medical condition or finding can be used as a medical reason(s) for denominator exclusion purposes only if the documented recommended follow-up interval is less than 10 years.

  Examples:
  - Diverticulitis documented in the medical record and a follow-up interval of 5 years in the colonoscopy report.

- Family history of colon cancer and a follow-up interval of 3 years documented in the colonoscopy report.
- Less than adequate prep documented in the medical record with a repeat colonoscopy in 3 years in the colonoscopy report.

Annual data submission period: See the timeline posted to QualityNet.CMS.gov for this measure; select Hospitals-Outpatient and then Participation tab. Data will be completed through the *Hospital Quality Reporting (HQR) system* at https://hqr.cms.gov via an online tool available to authorized users.

Additional instructions: Patients will be counted in the numerator if there is reference in the final colonoscopy report that the appropriate follow-up interval for the repeat colonoscopy is at least 10 years from the date of the current colonoscopy (i.e., the colonoscopy performed during the measurement period). A range that includes "10 years" (e.g., 7 to 10 years) is not acceptable.

Measure Information Form

Performance Measure Name: Cataracts – Improvement in Patient's Visual Function within 90 Days Following Cataract Surgery

Measure ID #: OP-31*

Measure Set: Measures submitted via a Web-based Tool

Description: Percentage of patients aged 18 years and older who had cataract surgery and had improvement in visual function achieved within 90 days following the cataract surgery, based on completing a pre-operative and post-operative visual function survey.

Numerator Statement: Patients 18 years and older who had improvement in visual function achieved within 90 days following cataract surgery, based on completing **both** a pre-operative and post-operative visual function survey.

Denominator Statement: All patients aged 18 years and older who had cataract surgery and completed **both** a pre-operative and post-operative visual function survey.

Denominator Criteria (Eligible Cases):
Patients aged ≥ 18 years
and
CPT (without modifiers 55, 56): 66840, 66850, 66852, 66920, 66930, 66940, 66982, 66983, 66984, 66987, 66988

Excluded Populations: Patients who did not complete both a pre-operative and post-operative survey.

Annual data submission period: See the timeline posted to QualityNet.CMS.gov for this measure; select Hospitals-Outpatient and then Participation tab. Data will be completed through the *Hospital Quality Reporting (HQR) system* at https://hqr.cms.gov via an online tool available to authorized users.

Data Collection Approach: Include procedures performed from the beginning of the reporting year through 90 days prior to the end of the reporting period. This will allow the post-operative period to occur.

Definition for Survey: The data collection instrument is specified as an assessment tool that has been appropriately validated for the population for which it is being used. The surveys can be completed by phone, mail, email, or during physician follow-up. The same data collection instrument used pre-operatively must be used post-operatively.

For the purposes of this measure, survey instruments that may be used to assess changes in a patient's visual function are limited to the National Eye Institute Visual Function Questionnaire-25 (NEI-VFQ-25) (http://www.rand.org/health/surveys_tools/vfq.html) and two versions of the Visual Function Index, VF-14 (https://www.ncbi.nlm.nih.gov/books/NBK259054/bin/appd-m4.pdf) and VF-8R (https://www.aao.org/Assets/a14d8830-e753-4031-a22b-901fb4fe9498/635863021754000000/pre-cataract-

surgery-vf-8r-patient-questionnaire-pdf?inline1). For each of the VF tools (VF-14 or VF-8R), all questions have equal weight; only non-missing questions are included, and the total weight is 100.

Definition of Performance Met: Improvement in visual function achieved within 90 days following cataract surgery (Healthcare Common Procedure Coding System [HCPCS]: G0913).

Definition of Performance Not Met: Improvement in visual function not achieved within 90 days following cataract surgery (HCPCS: G0915).

Denominator Exception: Patient care survey was not completed by patient (HCPCS: G0914).

*Finalized in the Calendar Year (CY) 2015 Outpatient Prospective Payment System (OPPS)/Ambulatory Surgical Center (ASC) Final Rule, hospitals have the option to voluntarily collect and submit data for OP-31 for the CY 2017 payment determination and subsequent years. All data submitted voluntarily will be publicly reported as discussed in the CY 2014 OPPS/ASC Proposed Rule (78 FR 43645) and Final Rule with comment period (78 FR 75092). Although the CY 2022 Final Rule (86 FR 63458) adjusted the voluntary reporting to mandatory reporting beginning with the CY 2025 reporting period and CY 2027 payment determination, the CY 2023 Proposed Rule (87 FR 44727) and Final Rule (87 FR 71748) confirmed voluntary reporting would continue and not become mandatory with the CY 2025 reporting period and CY 2027 payment determination.

Measure Information Form

Performance Measure Name: COVID-19 Vaccination Coverage Among Health Care Personnel (HCP COVID-19 Vaccination)

Measure ID #: OP-38

Measure Set: Measures submitted via a web-based tool (NHSN)

Description: Percentage of All Core Healthcare Personnel (HCP) eligible to work at the hospital for at least one day of the self-selected week, in each month of quarterly data reporting, who received a complete primary vaccination series and are up to date with CDC recommended COVID– 19 vaccines*.

Annual data submission period: See the timeline posted to QualityNet.cms.gov for this measure; select Hospitals-Outpatient then click the Learn More dial, then select Participation from the banner options.

Denominator: Number of HCP eligible to work in the Hospital Outpatient for at least one day during the reporting period, excluding persons with contraindications to COVID–19 vaccination that are described by the CDC.

Numerator: Cumulative number of HCP eligible to work in the Hospital for at least one day during the reporting period who received a complete vaccination course and are up to date with CDC recommended COVID-19 vaccines.

Definitions:

All Core HCP: Sum of Employees (staff on facility payroll), Licensed independent practitioners: Physicians, advanced practice nurses, physician assistants, and adult students/trainees and volunteers.

Complete Primary Series: A complete primary series is defined as receiving a 2-dose series of a monovalent COVID-19 vaccine OR a single dose of Janssen OR a single dose of bivalent vaccine OR a single dose of 2023-2024 updated COVID-19 vaccine.

***Information on Key Terms and Up to Date Vaccination status definitions and examples can be found on the CDC site. Refer to the CDC site at least once per quarter. Report vaccination data according to the definitions corresponding to the week of data being reported.**

Measure Information Form

Performance Measure Name: Facility 7-Day Risk-Standardized Hospital Visit Rate after Outpatient Colonoscopy

Measure ID #: OP-32

Measure Set: CMS Outcome Measures (Claims-Based)

Description: The colonoscopy measure estimates a facility-level rate of risk-standardized, all-cause, unplanned hospital visits within seven days of an outpatient colonoscopy among Medicare FFS patients aged 65 years and older.

Rationale: The colonoscopy measure aims to reduce adverse patient outcomes associated with preparation for colonoscopy, the procedure itself, and follow-up care by capturing and making more visible to providers and patients all unplanned hospital visits following the procedure. The measure score assesses quality and inform quality improvement. CMS uses a comprehensive method for development, testing, and creating final specifications for the measure. For initial measure specifications, CMS assembled a multidisciplinary team of clinicians, health services researchers, and statisticians and convened, through a public process, a national technical expert panel (TEP) consisting of patients, surgeons, methodologists, researchers, and providers. CMS also held a public comment period soliciting stakeholder input on the measure methodology.

Type of Measure: Outcome

Improvement Noted As: A decrease in the facility-level risk-standardized unplanned hospital visit rate. A lower rate indicates better quality.

Numerator Statement:
The colonoscopy measure does not have a traditional numerator and denominator like a core process measure (e.g., percentage of adult patients with diabetes aged 18 to 75 years receiving one or more hemoglobin A1c tests per year); thus, we are using this field to define the outcome. The calculation of the rate is defined below, under the Measure Calculation section.

The outcome for the measure is all-cause, unplanned hospital visits within seven days of an outpatient colonoscopy. The measure defines a hospital visit as any emergency department (ED) visit, observation stay, or unplanned inpatient admission.

Denominator Statement:
The target population for the measure includes low-risk colonoscopies performed in the outpatient setting for Medicare FFS patients aged 65 years and older. For implementation in the Hospital OQR Program, the measure will be calculated among hospital outpatient departments.

Included Populations:
The target population for the measure is Medicare FFS patients aged 65 years and older undergoing an outpatient colonoscopy who have been enrolled in Part A and Part B Medicare for 12 months or more prior to the date of procedure to ensure the availability of administrative data for risk adjustment.

The measure is focused on low-risk colonoscopies. Cohort codes are located in the data dictionary that accompanies the Measure Updates and Specifications Report, on the Colonoscopy Measure Methodology *QualityNet* page: https://qualitynet.cms.gov/outpatient/measures/colonoscopy/methodology.

The measure does not include colonoscopy Current Procedural Terminology (CPT®) procedure codes that reflect fundamentally higher-risk or different procedures. Qualifying colonoscopies billed with a concurrent high-risk colonoscopy procedure code are not included in the measure; the data dictionary that accompanies the most recent Measure Updates and Specifications Report at the link above contains the complete listing of all high-risk procedure codes.

Cohort Exclusions (Excluded Colonoscopies):
See the Measure Updates and Specifications Report available on the Colonoscopy Measure Methodology *QualityNe*t page for detailed measure cohort exclusion criteria with the accompanying data dictionary containing the most current exclusion codes, located here:
https://qualitynet.cms.gov/outpatient/measures/colonoscopy/methodology.

Admissions Not Counted in the Outcome ("Planned Admissions"):
Admissions identified as planned by the planned admission algorithm are not counted in the outcome. The "algorithm" is a set of criteria for classifying admissions as planned using Medicare claims. The algorithm identifies admissions that are typically planned and may occur within seven days of an outpatient colonoscopy. CMS based the planned admission algorithm on three principles:

1. A few specific, limited types of care are always considered planned (transplant surgery, maintenance chemotherapy, rehabilitation);
2. Otherwise, a planned admission is defined as a non-acute admission for a scheduled procedure; and
3. Admissions for acute illness or for complications of care are never planned.

The planned admission algorithm uses a flowchart and four tables of procedures and conditions to operationalize these principles and to classify inpatient admissions as planned. ED visits and observation stays are never considered planned. The flowchart and tables are in the Measure Updates and Specifications Report available on the Colonoscopy Measure Methodology *QualityNet* page:
https://qualitynet.cms.gov/outpatient/measures/colonoscopy/methodology.

Risk Adjustment:
The measure's approach to risk adjustment is tailored to, and appropriate for, a publicly reported outcome measure as articulated in published scientific guidelines (Krumholz et al., 2006; Normand et al., 2007).

The measure uses a two-level hierarchical logistic regression model to estimate facility-level risk-standardized hospital visit rates. This approach accounts for the clustering of patients within facilities and variation in sample size across facilities. The measure adjusts for differences across facilities in patient demographics, clinical factors, and procedure-related risk. Potential candidate risk factors were identified

from related quality measures and the literature; a preliminary list of risk factors was developed and then revised based on a TEP and expert clinical input.

The risk-adjustment model has 15 patient-level variables (age, concomitant upper gastrointestinal endoscopy, polypectomy during the procedure, and 12 comorbidity variables). The measure defines comorbidity variables using condition categories (CCs), which are clinically meaningful groupings of the many thousands of International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) diagnosis codes. Certain CCs are considered possible complications of care; therefore, the measure does not risk-adjust for them if they occur only at the time of the procedure.

Therefore, only comorbidities that convey information about the patient at the time of the procedure or in the 12 months prior, and not complications that arose during the colonoscopy procedure are included in the risk adjustment. The Measure Updates and Specifications Report data dictionary contains complete definitions of risk factors and CCs that are considered possible complications of care and are not risk-adjusted for if they occur only at the time of the procedure.

Table 1: Patient-Level Risk-Adjustment Variables

Patient-Level Variables	Risk-Adjusted Variables
Demographics	Age (categorized; 65-69; 70-74; 75-79; 80-84; 85 and greater)
Procedural factors	Endoscopy during Procedure Polypectomy during Procedure
Comorbidities	Congestive Heart Failure Ischemic Heart Disease Stroke/Transient Ischemic Attack Chronic Lung Disease Metastatic Cancer Liver Disease Iron Deficiency Anemia Disorders of Fluid/Electrolyte/Acid-Base Pneumonia Psychiatric Disorders Substance Abuse Arrhythmias Age Categorized x Arrhythmia Interaction

Note: The relationship between age and risk of a hospital visit within seven days was modified by the presence or absence of a cardiac arrhythmia (p-value for interaction <0.001). Therefore, we included an interaction term (age categorized x arrhythmia) in the final model.

Full details of the development of the risk-adjustment model for this measure are available on the Colonoscopy Measure Archived Resources *QualityNet* page: https://qualitynet.cms.gov/outpatient/measures/colonoscopy/resources#tab2.

Data Collection Approach: Medicare administrative claims and enrollment data.

Data Accuracy: The administrative claims data used to calculate the measure are maintained by CMS' Office of Information Services. These data undergo additional quality assurance checks during measure development and maintenance.

Measure Analysis Suggestions: None

Sampling: No

Data Reported As: Facility-level seven-day risk-standardized unplanned hospital visit rate following outpatient colonoscopy.

Measure Calculation:
The measure estimates facility-level seven-day risk-standardized unplanned hospital visit rates using hierarchical logistic regression modeling (a form of hierarchical generalized linear modeling). In brief, the approach simultaneously models two levels (patient and facility) to account for the variance in patient outcomes within and between facilities. At the patient level, the model adjusts the log-odds of a hospital visit within seven days of the procedure for age, procedural factors, and selected clinical covariates. At the facility level, it estimates the facility-specific intercepts as arising from a normal distribution. The facility-specific intercept represents the underlying risk of a hospital visit within seven days after a colonoscopy at that facility while accounting for patient risk. The facility-specific intercepts also account for the clustering (non-independence) of patients within the same facility. If there were no differences among facilities, the facility-specific intercepts would be identical across all facilities after adjusting for patient risk.

The statistical modeling approach is described fully in the original technical report available on the Colonoscopy Measure Archived Resources *QualityNet* page: https://qualitynet.cms.gov/outpatient/measures/colonoscopy/resources#tab2.

Selected References:
Krumholz HM, Brindis RG, Brush JE, et al. Standards for Statistical Models Used for Public Reporting of Health Outcomes: An American Heart Association Scientific Statement from the Quality of Care and Outcomes Research Interdisciplinary Writing Group: Cosponsored by the Council on Epidemiology and Prevention and the Stroke Council Endorsed by the American College of Cardiology Foundation. Circulation. 2006;113(3):456–462.

Normand S-LT, Shahian DM. Statistical and Clinical Aspects of Hospital Outcomes Profiling. *Statistical Science*. 2007; 22(2):206–226.

Measure Information Form

Performance Measure Name: Admissions and Emergency Department Visits for Patients Receiving Outpatient Chemotherapy

Measure ID #: OP-35

Measure Set: CMS Outcome Measures (Claims-Based)

Description: The chemotherapy measure estimates hospital-level, risk-adjusted rates of inpatient admissions or ED visits for cancer patients aged 18 years and older for at least one of the following diagnoses—anemia, dehydration, diarrhea, emesis, fever, nausea, neutropenia, pain, pneumonia, or sepsis—within 30 days of hospital-based outpatient chemotherapy treatment. Rates of admission and ED visits are calculated and reported separately.

Rationale: Chemotherapy treatment can have severe, predictable side effects, which, if inappropriately managed, can reduce patients' quality of life and increase healthcare utilization and costs. The chemotherapy measure aims to assess the care provided to cancer patients and encourage quality improvement efforts to reduce the number of potentially avoidable inpatient admissions, observation stays, and ED visits among cancer patients receiving chemotherapy in a hospital outpatient setting. Improved management of these potentially preventable clinical conditions that are frequent side effects of chemotherapy treatment—including anemia, dehydration, diarrhea, emesis, fever, nausea, neutropenia, pain, pneumonia, or sepsis—could reduce admissions and ED visits and increase patients' quality of care and quality of life. This measure encourages hospitals to use guidelines from the American Society of Clinical Oncology, National Comprehensive Cancer Network, Oncology Nursing Society, Infectious Diseases Society of America, and other professional societies to integrate and promote use of evidence-based interventions to prevent and treat common side effects and complications of chemotherapy. CMS uses a comprehensive method for development, testing, and creating final specifications for the measure. For initial measure specifications, CMS assembled a multidisciplinary team of clinicians, health services researchers, and statisticians and convened, through a public process, a national technical expert panel (TEP) consisting of patients, surgeons, methodologists, researchers, and providers. CMS also held a public comment period soliciting stakeholder input on the measure methodology.

Type of Measure: Outcome

Improvement Noted As: A decrease in the hospital-level risk-adjusted rates of inpatient admissions or ED visits. Lower rate indicates better quality.

Numerator Statement:
The chemotherapy measure does not have a traditional numerator and denominator like a core process measure; thus, we are using this field to define the outcome. The outcomes for this measure are one or more inpatient admissions, and one or more ED visits or observation stays without an inpatient admission, for one of the following diagnoses—anemia, dehydration, diarrhea, emesis, fever, nausea, neutropenia, pain, pneumonia, or sepsis—within 30 days of receiving hospital-based outpatient chemotherapy treatment for

cancer. These 10 conditions are potentially preventable through appropriately managed outpatient care. The qualifying diagnosis on the inpatient admission or ED visit/observation visit claim must be (1) the principal diagnosis or (2) a secondary diagnosis accompanied by a principal diagnosis of cancer.

Outcomes are identified separately for the inpatient admissions and ED visits categories; a patient can only qualify for an outcome in either category, but not both. Patients who experience both an inpatient admission and an ED visit/observation stay during the performance period are counted towards the inpatient admission outcome. Among those with no qualifying inpatient admissions, qualifying ED visits will be counted. As a result, the rates can be viewed as an additive to provide a comprehensive performance estimate of quality of care following hospital-based outpatient chemotherapy treatment. The rates are calculated separately because the severity and cost of an inpatient admission is different from that of an ED visit and observation stay, and both adverse events are important signals of quality and represent important healthcare outcomes for patients. The Internal Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) codes that identify these diagnoses are in the data dictionary available on the Chemotherapy Measure Methodology *QualityNet* page: https://qualitynet.cms.gov/outpatient/measures/chemotherapy/methodology.

Denominator Statement:
The target population for the measure includes Medicare fee-for-service (FFS) patients, aged 18 years and older at the start of the performance period, with a diagnosis of any cancer (except leukemia), who received at least one outpatient chemotherapy treatment at the reporting hospital during the performance period.

ICD-10, Current Procedural Terminology (CPT®), Healthcare Common Procedure Coding System and revenue center codes that identify chemotherapy treatment are in the measure data dictionary on the Chemotherapy Measure Methodology *QualityNet* page: https://qualitynet.cms.gov/outpatient/measures/chemotherapy/methodology.

Cohort Exclusions:
See the Measure Updated and Specifications Report available on the Chemotherapy Measure Methodology *QualityNet* page for detailed measure cohort exclusion criteria with the accompanying data dictionary containing the most current exclusion codes, location here: https://qualitynet.cms.gov/outpatient/measures/chemotherapy/methodology.

Risk Adjustment:
The measure's approach to risk adjustment is tailored to, and appropriate for, a publicly reported outcome measure as articulated in published scientific guidelines (Krumholz et al., 2006; Normand et al., 2007).

Since the measure has two mutually exclusive outcomes—qualifying inpatient admissions and qualifying ED visits—it has two risk-adjustment models, one for each dependent variable (inpatient admissions and ED visits/observation stays). A two-level hierarchical logistic regression model is used to estimate risk-standardized outcome rates. This approach accounts for differences in patient mix, the clustering of patients within hospitals, and variation in sample size.

The measure adjusts for variables that are clinically relevant and associated with the outcome. It seeks to adjust for differences in patient demographics, clinical comorbidities, and treatment exposure which vary across

patient populations and influence the outcome but do not relate to quality. Specifically, the risk-standardized model for inpatient admissions has 25 patient-level variables (age, sex, exposure to chemotherapy, exposure to concurrent radiotherapy, nine comorbidity variables, and 12 cancer diagnosis categories). The risk-standardized model for ED visits has 20 patient-level variables (age, sex, exposure to chemotherapy, exposure to concurrent radiotherapy, six comorbidity variables, and 10 cancer diagnosis categories).

The comorbidities are based on version 24 of the CMS Condition Categories groups. Full Details of the development of the risk-standardization model for this measure are available on the Chemotherapy Measure Archived Resources *QualityNet* page: https://qualitynet.cms.gov/outpatient/measures/chemotherapy/resources#tab2.

Table 1: Patient-Level Risk-Adjustment Variable

Category	Inpatient Admission Outcome	ED Visit Outcome
Demographics	Age (years above 18, continuous) Sex	Age (years above 18, continuous) Sex
Exposure	Number of hospital outpatient chemotherapy treatments during the performance period Whether the patient received concurrent radiotherapy	Number of hospital outpatient chemotherapy treatments during the performance period Whether the patient received concurrent radiotherapy
Cancer type	Anal cancer Bladder cancer Breast cancer Digestive cancer Respiratory cancer Lymphoma Other cancer Ovarian cancer Pancreatic cancer Prostate cancer Secondary cancer of the lymph nodes Secondary cancer of solid tumor	Anal cancer Bladder cancer Breast cancer Digestive cancer Respiratory cancer Other cancer Ovarian cancer Pancreatic cancer Secondary cancer of the lymph nodes Secondary cancer of solid tumor
Comorbidities	Respiratory disorder Renal disease Diabetes Other injuries Metabolic disorder Gastrointestinal disorder Psychiatric disorder Neurological condition Cardiovascular disease	Respiratory disorder Other injuries Gastrointestinal disorder Psychiatric disorder Neurological condition Cardiovascular disease

Data Collection Approach: Medicare administrative claims and enrollment data.

Data Accuracy: The administrative claims data used to calculate the measure are maintained by CMS' Office of Information Services. These data undergo additional quality assurance checks during measure development and maintenance.

Measure Analysis Suggestions: None

Sampling: No

Data Reported As: Facility-level, risk-standardized rate of inpatient admissions and ED visits for cancer patients within 30 days of hospital-based outpatient chemotherapy treatment.

Measure Calculation:
The measure calculates a hospital-specific risk-adjusted rate for each of the two outcomes. Each rate is calculated as the ratio of a hospital's "predicted" number of outcomes to "expected" number of outcomes multiplied by the national observed outcome rate. It estimates the expected number of outcomes for each hospital using the hospital's patient case mix and the average hospital-specific intercept (that is, the average intercept among all hospitals in the sample). The measure estimates the predicted number of outcomes for each hospital using the same patient case mix, but an estimated hospital-specific intercept. Operationally, the measure obtains the expected number of outcomes for each hospital by summing the expected probabilities of outcomes for all patients treated at the hospital. It calculates the expected probability of outcomes for each patient via the hierarchical model, which applies the estimated regression coefficients to the observed patient characteristics and adds the average of the hospital-specific intercept. It calculates the predicted number of outcomes for each hospital by summing the predicted probabilities for all patients in the hospital. The measure calculates the predicted probability for each patient through the hierarchical model, which applies the estimated regression coefficients to the observed patient characteristics and adds the hospital-specific intercept. If there were no differences among facilities, the facility-specific intercepts would be identical across all facilities after adjusting for patient risk.

If a hospital's ratio of predicted to expected outcomes are less than one, it indicates that the hospital is performing better than expected given its case mix. If a hospital's ratio of predicted to expected outcomes is greater than one, it indicates that the hospital is performing worse than expected given its case mix. For ease of interpretation, we transform this ratio to a rate by multiplying by the national observed rate for that outcome. If the "predicted" number of outcomes is higher (or lower) than the "expected" number of outcomes for a given hospital, the risk-adjusted rate will be higher (or lower) than the national observed admission rate.

The statistical modeling approach is fully described in the Measure Updates and Specifications Report available on the Chemotherapy Measure Methodology *QualityNet* page: https://qualitynet.cms.gov/outpatient/measures/chemotherapy/methodology.

Selected References:
HCUP Clinical Classifications Software for Services and Procedures. Healthcare Cost and Utilization Project (HCUP). 2008. Agency for Healthcare Research and Quality, Rockville, MD http://www.hcup-us.ahrq.gov/toolssoftware/ccs_svcsproc/ccssvcproc.jsp, 2014.

Krumholz HM, Brindis RG, Brush JE, et al. Standards for Statistical Models Used for Public Reporting of Health Outcomes: An American Heart Association Scientific Statement From the Quality of Care and Outcomes Research Interdisciplinary Writing Group: Cosponsored by the Council on Epidemiology and Prevention and the Stroke Council Endorsed by the American College of Cardiology Foundation. Circulation. 2006; 113 (3): 456-462.

Normand S-LT, Shahian DM. Statistical and Clinical Aspects of Hospital Outcomes Profiling. Statistical Science. 2007; 22 (2): 206-226.

Measure Information Form

Performance Measure Name: Hospital Visits after Hospital Outpatient Surgery

Measure ID #: OP-36

Measure Set: CMS Outcome Measures (Claims-Based)

Description: The surgery measure provides the facility-level, post-surgical risk-standardized hospital visit ratio (RSHVR) of the predicted to expected number of all-cause, unplanned hospital visits within seven days of a same-day surgery at a hospital outpatient department among Medicare Fee-for-Service (FFS) patients aged 65 years and older.

Rationale: The surgery measure can improve transparency, inform patients and providers, and foster quality improvement. Outpatient same-day surgery is exceedingly common in the United States. Unanticipated hospital visits following same-day surgery reflect quality of care. While most outpatient surgery is safe, there are well-described and potentially preventable adverse events that occur after outpatient surgery, which can result in unanticipated hospital visits. Similarly, direct admissions after surgery that are primarily caused by non-clinical patient considerations, such as lack of transport home upon discharge, or facility logistical issues, such as delayed start of surgery, are common causes of unanticipated yet preventable hospital admissions following same-day surgery. CMS uses a comprehensive method for development, testing, and creating final specifications for the measure. For initial measure specifications, CMS assembled a multidisciplinary team of clinicians, health services researchers, and statisticians and convened, through a public process, a national technical expert panel (TEP) consisting of patients, surgeons, methodologists, researchers, and providers. CMS also held a public comment period soliciting stakeholder input on the measure methodology.

Type of Measure: Outcome

Improvement Noted As: A decrease in the ratio of predicted-to-expected unplanned hospital visits. Lower score indicates better quality.

Numerator Statement:
The surgery measure outcome is all-cause unplanned hospital visits, defined as 1) an inpatient admission directly following surgery or 2) an emergency department (ED) visit, observation stay, or unplanned inpatient admission occurring after discharge from the HOPD and within seven days of the outpatient surgery.

Denominator Statement:
Eligible same-day surgeries or cystoscopy procedures with intervention performed at HOPDs for Medicare FFS patients aged 65 years and older, with the exception of eye surgeries and same-day surgeries performed concurrently with high-risk procedures.

Included Populations:

The target population is Medicare FFS patients aged 65 years and older undergoing same-day surgery (those that do not typically require an overnight stay) at HOPDs. The measure is limited to patients who have been enrolled in Medicare Part A and Part B for 12 months or more prior to the date of surgery to ensure the availability of data for identifying comorbidities for risk adjustment.

The measure includes surgeries for which a physician claim identifies a qualifying surgery as having been performed in an outpatient setting and matches to a hospital facility claim to identify the HOPD where the surgery took place. For further information see the Cohort section of the Measure Updates and Specifications report available on the Surgery Measure Methodology *QualityNet* page: https://qualitynet.cms.gov/outpatient/measures/surgery/methodology. Surgeries for which a facility claim is not filed are not included in the measure cohort.

"Same-day surgeries" are substantive surgeries listed on Medicare's list of covered ambulatory surgery center (ASC) procedures. Medicare developed this list to identify surgeries that can be safely performed as same-day surgeries and do not typically require an overnight stay. Surgeries on the Medicare's list of covered ASC procedures do not involve or require major or prolonged invasion of body cavities, extensive blood loss, major blood vessels, or care that is either emergent or life-threatening. Although Medicare developed this list of surgeries for ASCs, this measure uses it for two reasons. First, it aligns with the target cohort of surgeries that have a low to moderate risk profile and are safe to be performed as same day surgeries. By only including surgeries on this list, the measure effectively does not include surgeries performed at hospitals that typically require an overnight stay which are more complex, higher risk surgeries. Second, this list of surgeries is annually reviewed and updated by Medicare and includes a transparent public comment submission and review process for addition and/or removal of procedures codes. The lists are posted at: https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/ASCPayment/11_Addenda_Updates.html (refer to Addendum AA of the respective link).

The measure cohort does not include eye surgeries. Although eye surgery is considered a substantive surgery, its risk profile is more representative of "minor" surgery, in that it is characterized by high volume and a low outcome.

The measure includes cystoscopy procedures with intervention because it is a common procedure, often performed for therapeutic intervention by surgical teams, and the outcome rate and causes of hospital visits post-procedure similar to other surgeries in the measure cohort.

Where multiple procedures occur concurrently, the measure only includes surgeries that are performed concurrently with another low to moderate risk procedure. The measure does not include same-day surgeries performed concurrently with a higher risk procedure such as an inpatient-only surgery.

For further details on the included surgeries and measure cohort, see the Measure Updates and Specifications Report available on the Surgery Measure Methodology *QualityNet* page: https://qualitynet.cms.gov/outpatient/measures/surgery/methodology.

Cohort Exclusions:

See the latest Measure Updates and Specifications Report available on the Surgery Measure Methodology *QualityNet* page for detailed measure cohort exclusion criteria with the accompanying data dictionary containing the most current exclusion codes, located here: https://qualitynet.cms.gov/outpatient/measures/surgery/methodology.

Admissions Not Counted in the Outcome ("Planned Admissions"):

Admissions identified as planned by the planned admission algorithm are not counted in the outcome. The "algorithm" is a set of criteria for classifying admissions as planned using Medicare claims. The algorithm identifies admissions that are typically planned and may occur within seven days of an outpatient surgery. CMS based the planned admission algorithm on three principles:

1. A few specific, limited types of care are always considered planned (transplant surgery, maintenance chemotherapy, rehabilitation);
2. Otherwise, a planned admission is defined as a non-acute admission for a scheduled procedure; and
3. Admissions for acute illness or for complications of care are never planned.

The planned admission algorithm uses a flowchart and four tables of procedures and conditions to operationalize these principles and to classify inpatient admissions as planned. The measure considers admissions occurring on the day of the surgery (Day 0) and Day 1 post-surgery unplanned. For inpatient admissions occurring after Day 1 following surgery, the measure only includes unplanned admissions in the measure outcome.

ED visits and observation stays are never considered planned. The flowchart and tables are available in the latest Measure Updates and Specifications Report, available on the Surgery Measure Methodology *QualityNet* page: https://qualitynet.cms.gov/outpatient/measures/surgery/methodology.

Risk Adjustment:
The measure approach to risk adjustment is tailored to, and appropriate for, a publicly reported outcome measure as articulated in published scientific guidelines.[1,2]

The measure uses a two-level hierarchical logistic regression model to estimate RSHVRs. This approach accounts for the clustering of patients within HOPDs and variation in sample size.

The risk-adjustment model has 27 patient-level variables, including age, clinical comorbidities, and indicators of surgical complexity.

The measure defines comorbidity variables using CMS Condition Categories (CCs), which are clinically meaningful groupings of many thousands of ICD-10-CM diagnosis codes. Certain CCs are considered possible complications of care and are not risk-adjusted for if they only occur at the surgery. See the data dictionary available on the Surgery Measure Methodology *QualityNet* page https://qualitynet.cms.gov/outpatient/measures/surgery/methodology for CCs that are considered possible complications of care and are not risk-adjusted for if they only occur at the surgery.

The measure risk adjusts for surgical procedural complexity using two variables. First, it adjusts for surgical procedural complexity using the Work Relative Value Unit (RVU) of the procedure. Work RVUs are assigned to each Current Procedural Terminology (CPT) code and approximate surgical procedural complexity by incorporating elements of physician time and effort. For patients with multiple concurrent CPT procedure codes, the measure risk adjusts for the CPT code with the highest Work RVU value. Second, it classifies each surgery into an anatomical body system group using the Agency for Healthcare Research and Quality (AHRQ) Clinical Classification System (CCS).[3] The measure uses the body system variable, in addition to the Work RVU of the surgery, to account for organ-specific difference in risk and complications which are not adequately captured by the Work RVU alone. This approach to risk adjustment for surgical procedural complexity is similar to that described in the literature and used for risk adjustment in the American College of Surgeons' National Surgical Quality Improvement Program.[4] The coding list for the body systems is available at: https://www.hcup-us.ahrq.gov/tools_software.jsp.

Table 1: Patient-Level Risk-Adjustment Variables

Patient-Level Variables	Risk-Adjusted Variables
Demographics	Age (years greater than 65)
Comorbidities	Cancer Diabetes and DM complications Disorders of fluid/electrolyte/acid-base Intestinal obstruction perforation Inflammatory bowel disease Bone/joint/muscle infections/necrosis Hematological disorders including coagulation defects and iron deficiency Dementia or senility Psychiatric disorders Hemiplegia, paraplegia, paralysis, functional disability Other significant CNS disease Cardiorespiratory arrest, failure and respiratory dependence Congestive heart failure Ischemic heart disease Hypertension and hypertensive disease Arrhythmias Vascular disease Chronic lung disease UTI and other urinary tract disorders Pelvic inflammatory disease and other specified female genital disorders Chronic ulcers Cellulitis, local skin infection Prior significant fracture Morbid obesity
Procedural Complexity	Work RVU AHRQ surgery body system

For a detailed description of the development and refinement of the risk-adjustment model, see the latest Hospital Visits after Hospital Outpatient Surgery: Measure Updates and Specifications Report, available on the Surgery Measure Methodology *QualityNet* page: https://qualitynet.cms.gov/outpatient/measures/surgery/methodology.

Data Collection Approach: Medicare administrative claims and enrollment data.

Data Accuracy: The administrative claims data used to calculate the measure are maintained by CMS' Office of Information Services. These data undergo additional quality assurance checks during measure development and maintenance.

Measure Analysis Suggestions: None

Sampling: No

Data Reported As: Facility-level seven-day risk-standardized unplanned hospital visit ratio following outpatient surgery.

Measure Calculation:
To calculate a facility-specific, post-surgical RSHVR for outpatient surgery patients, the measure uses hierarchical logistic regression to model the log-odds of the outcome as a function of the patient demographic and clinical characteristics, surgical procedure, and a random facility-specific intercept. This strategy accounts for within-facility correlation of the observed outcome, and it accommodates the assumption that underlying differences in quality across HOPDs lead to systematic difference in outcomes. For fairness, the model adjusts for demographic and clinical characteristics and procedural variables that vary across patient populations, are unrelated to quality, and influence the outcome to help ensure differences in the measure score do not reflect differences in case mix and surgical procedure mix across HOPDs. If there were no differences among facilities, the facility-specific intercepts would be identical across all facilities after adjusting for patient risk. The statistical approach to calculating RSHVR is described in Appendix D of the 2016 Measure Updates and Specifications Report, which can be found on the Archived Resources page of the Surgery Measure *QualityNet* page: https://qualitynet.cms.gov/outpatient/measures/surgery/resources#tab2.

Selected References:
HCUP Clinical Classifications Software for Services and Procedures. Healthcare Cost and Utilization Project (HCUP). 2008. Agency for Healthcare Research and Quality, Rockville, MD http://www.hcup-us.ahrq.gov/toolssoftware/ccs_svcsproc/ccssvcproc.jsp, 2014.

Krumholz HM, Brindis RG, Brush JE, et al. Standards for Statistical Models Used for Public Reporting of Health Outcomes: An American Heart Association Scientific Statement From the Quality of Care and Outcomes Research Interdisciplinary Writing Group: Cosponsored by the Council on Epidemiology and Prevention and the Stroke Council Endorsed by the American College of Cardiology Foundation.a Circulation. 2006; 113 (3): 456-462.

Normand S-LT, Shahian DM. Statistical and Clinical Aspects of Hospital Outcomes Profiling. Statistical Science. 2007; 22 (2): 206-226.

Raval MV, Cohen ME, Ingraham AM, et al. Improving American College of Surgeons National Surgical Quality Improvement Program risk adjustment: incorporation of a novel procedure risk score. Journal of the American College of Surgeons. Dec 2010; 211(6): 715-723.

Data Dictionary

Introduction:
This section of the manual describes the data elements required to calculate category assignments and measurements for the hospital outpatient measures. It includes information necessary for defining and formatting the data elements, as well as the allowable values for each data element. This information is intended to assist in processing patient-level data elements for hospital outpatient measures.

It is of primary importance that all hospitals using hospital outpatient measures gather and utilize the data elements as defined in this section. This will ensure that the data are standardized and comparable across hospitals.

Regardless of which measures are selected by a hospital, certain general data elements must be collected and submitted for **every** patient that falls into **any** of the selected outpatient populations. These data elements are considered "general" to each outpatient encounter.

These data elements include:
- *Arrival Time*
- *Birthdate*
- *CMS Certification Number* ‡, †
- *Hispanic Ethnicity*
- *Outpatient Encounter Date*
- *Patient Identifier*
- *Payment Source*
- *Postal Code*
- *Race*
- *Sex Assigned at Birth*

‡ Transmission Data Element.

† Defined in the Transmission Data Element List within the Hospital Outpatient Quality Measure Data Transmission section of this manual. ǂ Collected by CMS for patients with a Payment Source of Medicare who have a standard HIC number

Interpretation of Data Dictionary Terms:
Data elements fall into three broad categories in order to support specific measures. They include:
- ***General Data Elements*** – Data elements that must be collected by hospitals for each patient record.
  - Data elements required for each hospital outpatient encounter record submitted.
  - Data elements used to identify the hospital on each patient record required for each patient-level record submitted.
  - Patient demographic data required for each hospital outpatient encounter record submitted.
- ***Measure-Specific Data Elements*** – Data elements used by one specific measure or outpatient measure set, such as the ED-Throughput outpatient measure set.
- ***Optional Data Elements*** – Data elements collected to capture information that might be helpful for internal analysis.

Data Dictionary Terms

Data Element Name:	A short phrase identifying the data element.
Collected For:	Identifies the measure(s) that utilize this data element or specifies that the data element is used for data transmission or verification.
Definition:	A detailed explanation of the data element.
Suggested Data Collection Question:	A suggested wording for a data element question in a data abstraction tool.
Format:	Length = number of characters or digits allowed for the data element Type = type of information the data element contains (i.e., numeric, alphanumeric, date, decimal, or time) Occurs = the number of times the data element occurs in a single encounter record
Allowable Values:	A list of acceptable responses for this data element.
Notes for Abstraction:	Provided to assist abstractors in the selection of an appropriate value for a data element.
Suggested Data Sources:	Source document from which data can be identified such as an administrative or medical record. Some data elements also list excluded data sources that are unacceptable sources for collecting information.
Guidelines for Abstraction:	Designed to assist abstractors in determining how a data element should be answered.

General Abstraction Guidelines

The General Abstraction Guidelines are a resource designed to assist abstractors in determining how an abstraction question should be answered. The abstractor should first refer to the specific notes and guidelines under each data element as these instructions should take precedence over the following General Abstraction Guidelines. All the allowable values for a given data element are outlined, and notes and guidelines are often included in each data element's notes and guidelines which provide the necessary direction for abstracting a data element. Thus, it is important to utilize the information found in the notes and guidelines when entering or selecting the most appropriate answer.

Abstractors should not make inferences from documentation of a sequence of events alone or otherwise attempt to interpret from documentation. Clinical judgment should not be used in abstraction.

Medical Records

The hospital must have one unified medical record service that has administrative responsibility for all medical records, both inpatient and outpatient records. The hospital must create and maintain a medical record for every individual, both inpatient and outpatient evaluated or treated in the hospital. The term "medical records" includes at least written documents, computerized electronic information, radiology film and scans, laboratory reports and pathology slides, videos, audio recordings, and other forms of information regarding the condition of a patient (42CFR482.24). The medical record must contain information to justify admission and continued hospitalization, support the diagnosis, and describe the patient's progress and response to medications and services [42CFR428.24(c)].

Medical Record Documentation

The intent of abstraction is to use only documentation that was part of the medical record during the hospitalization (is present upon discharge) and that is present at the time of abstraction. There are instances where an addendum or late entry is added after discharge. This late entry or addendum can be used for abstraction purposes as long as it has been added within 30 days of discharge. Refer to the Medicare Conditions of Participation for Medical Records, 42CFR482.24(c)(4)(viii), unless otherwise specified in the data element. Documents containing amendments, corrections, or delayed entries must employ the following widely accepted recordkeeping principles (CMS "Medicare Program Integrity Manual" Chapter 3, Section 3.3.2.4):

- Clearly and permanently identify any amendments, corrections, or addenda;
- Clearly indicate the date and author of any amendments, corrections, or addenda; and
- Clearly identify all original content.

It is not the intent to have documentation added at the time of abstraction to ensure the passing of a measure.

Important Note: Data element specific notes and guidelines always take precedence over the General Abstraction Guidelines.

Per the Medicare Conditions of Participation, all documentation in the medical record must be legible and must be timed, dated, and authenticated [42CFR482.24(c) (1)]. However, documentation that is not timed, dated, or authenticated may still be used for abstraction if not required by the specific data element. When abstracting a medical record, if a handwritten document is determined to be not legible, other documentation should be reviewed to obtain the answer. If no other source document can verify the handwritten

documentation, only then is the abstractor to answer unable to determine from the medical record documentation, unless otherwise specified in the data element. Authentication may include written signatures, initials, computer key, or other codes.

Data element information should be retrieved from the current medical record, covering the encounter date being abstracted. Information ascertainable from previous testing or previous history **and** determined to be part of the current medical record may be used in abstraction. Previous testing or history information used in abstraction should be information that was part of the medical record during the encounter when care was being delivered. As electronic data are available at all times during the hospitalization, it is acceptable to use these data for abstraction purposes. If a hospital uses electronic data for abstraction and is unable to provide a paper or electronic copy of these data, and the record is chosen for validation, there is the potential for a mismatch to occur.

The medical record must be abstracted as documented (i.e., taken at "face value"). When the value documented is obviously in error (not a valid format/range or outside of the parameters for the data element) **and** no other documentation is found that provides this information, the abstractor should select "UTD."

Note:

- Hospitals should use abbreviations according to their policy. Frequently flow sheets or other documentation contain a "key" or "legend" that explains the meaning of the abbreviation or symbol, especially if it is unique to that facility. If the record is selected for validation, it is recommended that you include your policy, key, and/or legend if you believe it would have an impact on the validation of the medical record.
- Documentation that is "superscripted" or footnoted is allowable and can be used in abstraction.

Suggested Data Sources

- Suggested Data Sources are listed in alphabetical order, **not** priority order, unless otherwise specified. Suggested Data Sources are designed to provide guidance to the abstractor as to the locations/sources where the information needed to abstract a data element will likely be found. However, the abstractor is not limited to these sources for abstracting the information and is encouraged to review the entire medical record.
- In some instances, a data element may restrict the sources that may be used to gain the information, list a priority in which the sources should be used, or may restrict documentation by only physician/advanced practice nurse/physician assistant. If so, these sources will be identified and labeled as Excluded Data Sources, Only Acceptable Sources, Priority Source, or Physician/APN/PA Documentation Only.
- In the course of abstraction, if conflicting information is found in a source other than the Suggested Data Sources and use of this source is not restricted, consider using this information if it more accurately answers the question, unless otherwise specified.
- If, after due diligence, the abstractor determines that a value is not documented, or the abstractor is not able to determine the answer value, the abstractor must select UTD as the answer.
- Hospitals often label forms and reports with unique names or titles. Suggested Data Sources are listed by commonly used titles; however, information may be abstracted from any source that is equivalent to those listed.

Inclusions/Exclusions

- Inclusions are acceptable terms that should be abstracted as positive findings (e.g., Yes).

- Inclusion lists are limited to those terms that are believed to be most commonly used in medical record documentation. The list of inclusions should not be considered all-inclusive, unless otherwise specified in the data element.
- Exclusions are unacceptable terms that should be abstracted as negative findings (e.g., No).
- Exclusion lists are limited to those terms an abstractor may most frequently question whether or not to abstract as a positive finding for a particular element. The list of exclusions should not be considered all-inclusive, unless otherwise specified in the data element.
- When both an inclusion and exclusion are documented in a medical record, the inclusion takes precedence over the exclusion and would be abstracted as a positive finding (e.g., answer Yes), unless otherwise specified.

Physician/Advanced Practice Nurse/Physician Assistant Documentation

- Advanced Practice Nurse (APN, APRN) titles may vary between state and clinical specialties. Some common titles that represent the advanced practice nurse role are:
  - Nurse Practitioner (NP)
  - Certified Registered Nurse Anesthetist (CRNA)
  - Clinical Nurse Specialist (CNS)
  - Certified Nurse Midwife (CNM)
- When a physician/advanced practice nurse/physician assistant (physician/APN/PA) signs a form or report (e.g., ED sheet with triage and nursing information and a physician/APN/PA has signed somewhere on the form), information on that form/report should be considered physician/APN/PA documentation. Rubber-stamped physician/APN/PA signatures are not acceptable on any document within the medical record. Handwritten, electronic signatures, or facsimiles of original written or electronic signatures are acceptable.
- Resident and intern notes should be considered physician documentation. Medical student notes must be co-signed by a physician.
- For purposes of abstraction, telephone, or verbal physician/APN/PA orders (TO/VO) in the medical record are considered physician/APN/PA documentation at the time they were written, regardless of whether or not they were authenticated by the physician/APN/PA at the time of abstraction.
- "Scribe" documentation is acceptable if the documentation is signed by the treating physician/APN/PA (CMS "Medicare Program Integrity Manual" Chapter 3, Section 3.3.2.4).

Pharmacist Documentation

Pharmacist titles may vary. The following are some common titles that represent the pharmacist role:

- Doctor of Pharmacy (Pharm.D. or D.Ph.)
- Registered Pharmacist (R.Ph.)

Medications

- The approved medication tables contained in Appendix C may not be inclusive lists of all available therapeutic agents acceptable for a particular data element. Discrepancies must be reported.
- For electronic health records (EHRs) only accept documentation that reflects the actual administration of the medication in the context of the chart.
- If a medication in the physician orders has been initialed and signed off with a time, do **not** presume that the medication was administered. The documentation **must** indicate that the medication was actually given.

- For an EMT or ambulance record, there is no need for documentation indicating that the medication was given.
    - Example: If the EMT or ambulance record reflects "ASA 325mg po 1300" and no other documentation exists indicating that the medication was given (e.g., "given" or "administered"), this is acceptable documentation to abstract.

- Hospitals may allow a patient (or his or her caregiver/support person where appropriate) to self-administer both hospital-issued medications and the patient's own medications brought into the hospital. Hospitals must document the administration of each medication, as reported by the patient (or the patient's caregiver/support person where appropriate) in the patient's medical record [42CFR482.23(c)(6)].

Nursing Care Plans, Standing Orders, and Protocols

- Per Medicare Conditions of Participation [42CFR482.23(b)(4)], hospitals have the option of having a stand-alone nursing care plan or a single interdisciplinary care plan that addresses nursing and other disciplines.
- Hospitals may use pre-printed and electronic standing orders, order sets, and protocols for patient orders if such orders and protocols are dated, timed, and authenticated promptly in the patient's medical record by the ordering practitioner responsible for the care of the patient [42CFR482.24(c)(3)].

Abstraction Recommendations for Multiple Same-Day Encounters

- If two ED visits on the same day are rolled into one claim, abstract the **first** chronological encounter that meets the inclusion criteria for the population.
- If two ED visits on the same encounter date meet the inclusion criteria and are billed as two separate claims, **both** cases may be eligible for abstraction according to sampling requirements. Because the data element *Arrival Time* is used to differentiate between two cases that occur on the same encounter date, if both cases are submitted with UTD for *Arrival Time*, the case submitted last will override the previous case.

Electronic Clinical Quality Measures (eCQM)

- Refer to the Technical Specifications and Resources for the CMS Quality Reporting Document Architecture (QRDA) Category I Implementation Guide for the applicable reporting period, measure specification information including data elements, and program resources to support successful eCQM reporting on the eCQI Resource Center.
- For questions regarding eCQM specifications, value sets, and appropriateness of mapping, please submit questions to the Office of the National Coordinator for Health Information Technology (ONC) eCQM Issue Tracker at https://oncprojectracking.healthit.gov/support/projects/CQM/summary. The eCQM Issue Tracker is an online database that allows for the submission and retrieval of questions and answers based on the measure and keyword criterion.

Alphabetical Data Element List

Element Name	Page #	Collected For:
Arrival Time	2-8	All Records
Birthdate	2-11	All Records
Date Last Known Well	2-12	OP-23
Discharge Code	2-15	OP-18, OP-23
E/M Code	2-17	OP-18, OP-23
ED Departure Date	2-18	OP-18
ED Departure Time	2-20	OP-18
First Name	2-23	All Records
Gender Identity	2-24	Optional for All Records
Head CT or MRI Scan Interpretation Date	2-26	OP-23
Head CT or MRI Scan Interpretation Time	2-28	OP-23
Head CT or MRI Scan Order	2-31	OP-23
Hispanic Ethnicity	2-33	All Records
ICD-10-CM Principal Diagnosis Code	2-34	OP-18, OP-23
Last Known Well	2-35	OP-23
Last Name	2-37	All Records
Outpatient Encounter Date	2-38	All Records
Patient Identifier	2-39	All Records
Payment Source	2-40	All Records
Physician 1	2-41	Optional for All Records
Physician 2	2-42	Optional for All Records
Postal Code	2-43	All Records
Race	2-44	All Records
Sex Assigned at Birth	2-46	All Records
Sexual Orientation	2-47	Optional for All Records
Time Last Known Well	2-49	OP-23

Data Element Name: ***Arrival Time***

Collected For: All records (used in algorithms for OP-18, OP-23)

Definition: The earliest documented time (military time) the patient arrived at the outpatient or emergency department.

Suggested Data Collection Question: What was the **earliest** documented time the patient arrived at the outpatient or emergency department?

Format:

Length: 5 – HH:MM (with or without colon) or UTD

Type: Time

Occurs: 1

Allowable Values:

HH = Hour (00–23)

MM = Minutes (0–59)

UTD = Unable to Determine

Time must be recorded in military time format.

With the exception of midnight and noon:
- If the time is in the a.m., conversion is not required.
- If the time is in the p.m., add 12 to the clock time hour.
  Examples:
  - Midnight = 0000 Noon = 1200
  - 5:31 a.m. = 0531 5:31 p.m. = 1731
  - 11:59 a.m. = 1159 11:59 p.m. = 2359

Note: 0000 = midnight. If the time is documented as 0000 11-24-20XX, review supporting documentation to determine if the *Outpatient Encounter Date* should remain 11-24-20XX or if it should be converted to 11-25-20XX.

When converting midnight, or 2400, to 0000, do not forget to change the *Outpatient Encounter Date*.
Example:
- Midnight or 2400 on 11-24-20XX = 0000 on 11-25-20XX.

Notes for Abstraction:
- For times that include seconds, remove the seconds and record the time as is.
  Example:
  - 1500:35 would be recorded as 1500

- If the time of the arrival is unable to be determined from medical record documentation, select UTD.
- The medical record must be abstracted as documented (taken at "face value"). When the time documented is obviously in error (not a valid time) **and** no other documentation is found that provides this information, the abstractor should select UTD.
  Example:
  - Documentation indicates the arrival time was 3300. No other documentation in the list of Only Acceptable Sources provides a valid time. Since the *Arrival Time* is outside of the range in the Allowable Values for Hour, it is not a valid time, and the abstractor should select UTD. **Note:** Transmission of a case with an invalid time as described above will be rejected from the CMS Clinical Data Warehouse. Use of UTD for *Arrival Time* allows the case to be accepted into the Warehouse.
- Review the Only Acceptable Sources to determine the earliest time the patient arrived at the ED or observation. The intent is to utilize any documentation which reflects processes that occurred after the arrival at the ED or after arrival to observation.
- Documentation outside of the Only Acceptable Sources list should **not** be referenced (e.g., ambulance record, physician office record, H&P).
  Examples:
  - ED Triage Time 0800. ED rhythm strip 0830. EMS report indicates patient was receiving EMS care from 0805 through 0825. The EMS report is disregarded. Enter 0800 for *Arrival Time*.
  - ED noted arrival time of 0945. Lab report shows blood culture collected at 0830. It is not clear that the blood culture was collected in the ED because the lab report does not specify it was collected in the ED (unable to confirm lab report as an Only Acceptable Source). Enter 0945 for *Arrival Time*.
- *Arrival Time* should **not** be abstracted simply as the earliest time in one of the Only Acceptable Sources, without regard to other substantiating documentation. When looking at the Only Acceptable Sources, if the earliest time documented appears to be an obvious error, this time should not be abstracted.
  Examples:
  - ED arrival time notes as 2300 on 10-28-20xx. ED MAR shows an antibiotic administration time of 0100 on 10-28-20xx. Surrounding documentation on the ED MAR makes clear that the 10-28-20xx date is an obvious error- Date was not changed to 10-29-20xx. The antibiotic administration date/time would be converted to 0100 on 10-29-20xx. (Please see the note under the Allowable Values section of this data element). Enter 2300 for *Arrival Time*.
  - ED face sheet lists arrival time of 1320. ED Registration Time 1325. ED Triage Time 1330. ED Consent to treat form has 1:17 time but "AM" is circled. ED record documentation suggests the 1:17 AM is an obvious error. Enter 1320 for *Arrival Time*.
  - ED ECG timed as 1742. ED Greet Time 2125. ED Triage Time 2130. There is no documentation in the Only Acceptable Sources which suggests the 1742 is an obvious error. Enter 1742 for *Arrival Time*.
  - ED RN documents on the nursing triage note, "Blood culture collected at 0730." ED arrival time is documented as 1030. There is no documentation in the Only Acceptable Sources which suggests the 0730 is an obvious error. Enter 0730 for *Arrival Time*.
- The source "Emergency Department record" includes any documentation from the time period that the patient was an ED patient.
- The source "Procedure notes" refers to procedures such as cardiac caths, endoscopies, and surgical procedures. Procedure notes do not include ECG and x-ray reports.
- The *Arrival Time* may differ from the admission time.

Observation Status:
- If the patient was admitted to observation from an outpatient setting of the hospital, use the time the patient arrived at the ED or on the floor for observation care as the *Arrival Time*.
- If the patient was admitted to observation from the ED of the hospital, use the time the patient arrived at the ED as the *Arrival Time*.

Suggested Data Sources:

Only Acceptable Sources:
- Emergency Department record, which may include:
  - ED face sheet
  - ED consent/Authorization for treatment forms
  - ED/Outpatient registration/Sign-in forms
  - ED ECG reports
  - ED telemetry/rhythm strips
  - ED laboratory reports
  - ED x-ray reports
- Observation record
- Procedure notes
- Vital signs graphic record

Inclusion Guidelines for Abstraction: None

Exclusion Guidelines for Abstraction:
- Addressographs/stamps
- Pre-printed times on a vital sign graphic record

Data Element Name: ***Birthdate***

Collected For: All records

Definition: The month, day, and year the patient was born.

Note: Patient Age on *Outpatient Encounter Date* (in years) is calculated by *Outpatient Encounter Date* minus *Birthdate*. The algorithm to calculate age must use the month and day portion of encounter date and birthdate to yield the most accurate age.

Suggested Data Collection Question: What is the patient's date of birth?

Format:
Length: 10 – MM-DD-YYYY (includes dashes)
Type: Date
Occurs: 1

Allowable Values:
MM = Month (01–12)
DD = Day (01–31)
YYYY = Year (1907–Current Year)

Notes for Abstraction:

Because this data element is critical in determining the population for all measures, the abstractor should **not** assume that the claim information for the birthdate is correct. If the abstractor determines through chart review that the date is incorrect, correct and override the downloaded value. If the abstractor is unable to determine the correct birthdate through chart review, default to the date of birth on the claim information.

Suggested Data Sources:
- Outpatient record
- Emergency Department record

Inclusion Guidelines for Abstraction: None

Exclusion Guidelines for Abstraction: None

Data Element Name: ***Date Last Known Well***

Collected For: OP-23

Definition: The date prior to hospital arrival at which the patient was last known to be without the signs and symptoms of the current stroke or at his or her baseline state of health.

Suggested Data Collection Question: What was the date associated with the time at which the patient was last known to be well or at his or her baseline state of health?

Format:
Length: 10 – MM-DD-YYYY (includes dashes) or UTD
Type: Date
Occurs: 1

Allowable Values:
MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (20xx)
UTD = Unable to Determine

Notes for Abstraction:

- Enter the date associated with the *Time Last Known Well.* If the *Date Last Known Well* is unable to be determined from medical record documentation, enter UTD.
- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid date/format) **and** no other documentation is found that provides this information, the abstractor should select UTD.
  Example:
  - Documentation indicates the *Date Last Known Well* was 03-**42**-20xx. No other documentation in the medical record provides a valid date. Since the *Date Last Known Well* is outside of the range listed in the Allowable Values for Day, it is not a valid date, and the abstractor should select UTD. **Note:** Transmission of case with an invalid date as described above will be rejected from the CMS Clinical Data Warehouse. Use of UTD for *Date Last Known Well* allows the case to be accepted into the Warehouse.
- If both the Date Last Known Well and symptom onset are documented, select the Date Last Known Well.
  Example:
  - ED provider note states, "Patient watching TV with family and complained of blurred vision in both eyes this morning." Neuro provider note states, "Patient normal 12-10-20xx at 8:30 PM." Date Last Known Well is 12-10-20xx.

- If the *Date Last Known Well* is documented as a specific date and entered as *Date Last Known Well* on a Code Stroke Form or stroke-specific electronic template, enter that date as *Date Last Known Well*. Documentation of the *Date Last Known Well* on a stroke-specific form or template should be selected regardless of other dates last known well documented elsewhere in the medical record.
  Exceptions:

- **Any** physician/APN/PA documentation that *last known well*/onset of signs/symptoms is unknown/uncertain/unclear takes precedence over specific time on a Code Stroke Form.
- References in relation to arrival date are acceptable (e.g., today, tonight, this evening, or this morning). The *Date Last Known Well* and the arrival date may be the same date or a different date.
  Examples:
  - "Wife reports patient normal this evening until approximately 9 PM." Hospital arrival is 0030 on 12-10-20xx. *Date Last Known Well* is 12-09-20xx.
  - "Patient states he felt perfectly fine earlier today. At noon, he began to have trouble seeing." Hospital arrival is 1559 on 12-10-20xx. *Date Last Known Well* is 12-10-20xx.
- If a reference to *date last known well* is documented without a specific date, enter that date for *Date Last Known Well*. If multiple dates are documented, select the earliest date.
  Examples:
  - "Patient last known well today (day of arrival)." Select arrival date for *Date Last Known Well.*
  - "Patient normal yesterday" (day before arrival) documented in H&P and consult note documents that patient was last known to be well on Monday (two days prior to arrival). Select Monday's date for *Date Last Known Well*.
- A Code Stroke Form is used by the stroke team or ED staff to document the acute stroke process. See the inclusion list for acceptable terms used for a Code Stroke Form. The list is not all-inclusive.
- *Date Last Known Well* on a Code Stroke Form may be documented by a nurse or other member of the care team authorized to serve as a scribe.

Suggested Data Sources:
- Ambulance record
- Code Stroke Form/template
- Emergency Department records
- History and Physical
- IV flow sheets
- Medication administration record
- Nursing flow sheets
- Progress notes
- Transfer sheet

Inclusion Guidelines for Abstraction:
Signs and Symptoms of Stroke
- Sudden numbness or weakness of the face, arm, or leg, especially on one side of the body
- Sudden confusion, trouble speaking or understanding
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, loss of balance or coordination
- Sudden severe headache
- Syncope
- Seizure

Code Stroke Form
- Stroke Activation Form
- Stroke Alert Form
- Stroke Assessment Form

  - Stroke Intervention Form
  - Stroke Rapid Response Form
  - Thrombolysis Checklist
- tPA Eligibility Form
- Exclusion Guidelines for Abstraction:
  Code Stroke Form
  - Stroke Education Form
  - Core Measure Form

Data Element Name: ***Discharge Code***

Collected For: OP-18, OP-23

Definition: The final place or setting to which the patient was discharged from the outpatient setting.

Suggested Data Collection Question: What was the patient's discharge code from the outpatient setting?

Format:
Length: 2
Type: Alphanumeric
Occurs: 1

Allowable Values:
1 Home
2 Hospice – Home
3 Hospice – Health Care Facility
4a Acute Care Facility – General Inpatient Care
4b Acute Care Facility – Critical Access Hospital
4c Acute Care Facility – Cancer Hospital or Children's Hospital
4d Acute Care Facility – Department of Defense or Veteran's Administration
5 Other Health Care Facility
6 Expired
7 Left Against Medical Advice/AMA
8 Not Documented or Unable to Determine (UTD)

Notes for Abstraction:
- Use the latest documentation. However, if there is documentation that further clarifies the level of care, that documentation should be used to determine the correct value to abstract, even if it is not the latest.
  Example:
  - Nursing discharge note documentation reflects that the patient is being discharged to "XYZ" Hospital. The Social Service notes from the day before discharge further clarify that the patient will be transferred to the rehab unit at "XYZ" Hospital; select Value 5.
- If the medical record states only that the patient is being discharged to another hospital and does not reflect the level of care that the patient will be receiving, select Value 4a.
- When determining whether to select Value 7 ("Left Against Medical Advice"):
  - A signed AMA form is not required for this data element, but in the absence of a signed form, the medical record must contain physician or nurse documentation that the patient left against medical advice or AMA.
  - Do not consider AMA documentation and other disposition documentation as "contradictory." If any source states the patient left against medical advice, select Value 7, regardless of whether the AMA documentation was written last (e.g., AMA form signed and discharge instruction sheet states "Discharged home with belongings"—Select Value 7).
  - Physician order written to discharge to home. Nursing notes reflect that the patient left before discharge instructions could be given; select Value 1.

Suggested Data Sources:

- Discharge instruction sheet
- Nursing discharge notes
- Progress notes
- Emergency Department record
- Physician orders
- Transfer record

Excluded Data Sources:

- UB-04

Inclusion Guidelines for Abstraction:

For Value 1:

- Assisted Living Facilities
- Court/Law Enforcement – includes detention facilities, jails, and prison
- Home – includes board and care, foster or residential care, group or personal care homes, and homeless shelters
- Home with Home Health Services
- Outpatient Services including outpatient procedures at another hospital, Outpatient Chemical Dependency Programs, and Partial Hospitalization

For Value 3:

- Hospice Care – General Inpatient and Respite
- Hospice Care – Residential and Skilled Facilities
- Hospice Care – Other Health Care Facilities (excludes home)

For Value 5:

- Extended or Intermediate Care Facility (ECF/ICF)
- Long Term Acute Care Hospital (LTACH)
- Nursing Home or Facility, including Veteran's Administration Nursing Facility
- Psychiatric Hospital or Psychiatric Unit of a Hospital
- Rehabilitation Facility, including Inpatient Rehabilitation Facility/Hospital or Rehabilitation Unit of a Hospital
- Skilled Nursing Facility (SNF), Sub-Acute Care, or Swing Bed
- Transitional Care Unit (TCU)

Exclusion Guidelines for Abstraction: None

Data Element Name: ***E/M Code***

Collected For: OP-18, OP-23

Definition: The code used to report evaluation and management services provided in the emergency department.

Suggested Data Collection Question: What was the E/M code documented for this emergency department encounter?

Format:
Length: 5
Type: Alphanumeric
Occurs: 1

Allowable Values:
- Select the *E/M Code* from Appendix A, OP Table 1.0.

Suggested Data Sources:
- Outpatient record

Inclusion Guidelines for Abstraction:
- Refer to Appendix A, OP Table 1.0, EM Codes for Emergency Department Encounters.

Exclusion Guidelines for Abstraction: None

Data Element Name: ***ED Departure Date***

Collected For: OP-18

Definition: The month, day, and year at which the patient departed from the emergency department.

Suggested Data Collection Question: What is the date the patient departed from the emergency department?

Format:
Length: 10 – MM-DD-YYYY (includes dashes) or UTD
Type: Date
Occurs: 1

Allowable Values:
MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (20xx)
UTD = Unable to Determine

Notes for Abstraction:
- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid format/range or outside of the parameters of care **and** no other documentation is found that provides this information), the abstractor should select UTD.
  Examples:
  - Documentation indicates the ED departure date was 03-**42**-20xx. No other documentation in the list of Only Acceptable Sources provides a valid date. Since the *ED Departure Date* is outside of the range listed in the Allowable Values for Day, it is not a valid date, and the abstractor should select UTD.
  - Patient expired on 02-12-20xx, and all documentation within the Only Acceptable Sources indicates the *ED Departure Date* was 03-12-20xx. Other documentation in the medical record supports the date of death as being accurate. Since the *ED Departure Date* is after the *Discharge Date* (death), it is outside of the parameter of care, and the abstractor should select UTD.
  - **Note:** Transmission of a case with an invalid date as described above will be rejected from the CMS Clinical Data Warehouse. Use of UTD for *ED Departure Date* allows the case to be accepted into the warehouse.
- If the date the patient departed is unable to be determined from medical record documentation, select UTD.
- If the date of departure is not documented but you are able to determine the date from other documentation, this is acceptable (e.g., you are able to identify from documentation the patient arrived and was transferred on the same day).
- If there is documentation the patient left against medical advice and it cannot be determined what date the patient left against medical advice, select UTD.
- For patients who are placed into observation services, use the date of the physician/APN/PA order for observation services as *ED Departure Date*.
- The inclusion and exclusion lists are not to be considered comprehensive lists of inclusions and exclusions.

- If there is a discharge date listed on a disposition sheet, this may be abstracted as *ED Departure Date*.
- Obstetric ED considerations:
  - For patients who arrive in the ED and are triaged to Labor and Delivery (L&D) or who receive Emergency care in a L&D Triage unit, and if there is no ED record or if the discharge date is only documented within the L&D record, select UTD for the *ED Departure Date*.

Suggested Data Sources:
Only Acceptable Sources:
- Emergency Department record

Inclusion Guidelines for Abstraction:
- ED departure date
- ED discharge date
- ED leave date

Exclusion Guidelines for Abstraction:
- Disposition date
- Departure or discharge date from an L&D record

Data Element Name: ***ED Departure Time***

Collected For: OP-18

Definition: The time (military time) represented in hours and minutes at which the patient departed from the emergency department.

Suggested Data Collection Question: What is the time the patient departed from the emergency department?

Format:
Length: 5 – HH-MM (with or without colon) or UTD
Type: Time
Occurs: 1

Allowable Values:
HH = Hour (00–23)
MM = Minutes (0–59)
UTD = Unable to Determine

Time must be recorded in military time format.

With the exception of midnight and noon:
- If the time is in the a.m., conversion is not required.
- If the time is in the p.m., add 12 to the clock time hour.
  Examples:
  - Midnight = 0000 Noon = 1200
  - 5:31 a.m. = 0531 5:31 p.m. = 1731
  - 11:59 a.m. = 1159 11:59 p.m. = 2359

Note: 0000 = midnight. If the time is documented as 0000 11-24-20xx, review supporting documentation to determine if the *ED Departure Date* should remain 11-24-20xx or if it should be converted to 11-25-20xx.

When converting midnight, or 2400, to 0000, do not forget to change the *ED Departure Date*.
Example:
- Midnight or 2400 on 11-24-20xx = 0000 on 11-25-20xx.

Notes for Abstraction:

- The intention is to capture the latest time at which the patient was receiving care in the emergency department, under the care of emergency department services, or awaiting transport to service/care.
- For times that include seconds, remove the second and record the time as is.
  Example:
  - 1500:35 would be recorded as 1500.
- The medical record must be abstracted as documented (taken at "face value"). When the time documented is obviously in error (not a valid format/range) **and** no other documentation is found that provides this information, the abstractor should select UTD.

Example:
- Documentation indicates the ED departure time was 3300. No other documentation in the list of Only Acceptable Sources provides a valid time. Since the *ED Departure Time* is outside of the range in the Allowable Values for Hour, it is not a valid time, and the abstractor should select UTD. **Note:** Transmission of a case with an invalid time as described above will be rejected from the CMS Clinical Data Warehouse. Use of UTD for *ED Departure Time* allows the case to be accepted into the warehouse.

- *ED Departure Time* is the documented time the patient physically left the emergency department.
- Do not use the time the discharge order was written because it may not represent the actual time of departure.
- If there is a discharge time listed on the disposition sheet, this may be used for *ED Departure Time*.
- When more than one emergency department departure/discharge time is documented, abstract the latest time.

  Examples:
  - ED nursing notes contain documentation that the patient was transferred to floor at 1800 and transport documentation states that patient left the ED via stretcher at 1815. There are multiple times documented for departure. Use the later time of 1815 as *ED Departure Time*.
  - ED nursing notes contain documentation that the patient departed the ED at 0500. ED record contains documentation of medication administration at 0510 and that the patient departed the ED at 0620. Physician notes contain documentation of an assessment at 0540. As there are multiple departure times documented, enter 0620 for *ED Departure Time*, as it is the latest time documented.
- If the time the patient departed is unable to be determined from medical record documentation, select UTD.

  Example:
  - ED nursing notes documented patient departed from the ED at 1225. Nursing notes document medication administration at 1245. Physician progress notes document assessment at 1310. There is substantial documentation to support that the patient was in the ED after documented departure and no additional documented time of ED departure. Enter UTD for *ED Departure Time*.
- If *ED Departure Time* is documented prior to arrival, abstract as UTD.
- If patient expired in the ED, use the time of death as the departure time.
- The inclusion and exclusion lists are not to be considered comprehensive lists of inclusions and exclusions.

Observation Status:
- For patients who are placed into observation services, use the time of the physician/APN/PA order for observation for *ED Departure Time*.
- If the physician/APN/PA observation order time is after the documented ED departure time, use the documented ED departure time.
- The intent of this guidance is to abstract the time that the patient is no longer under the care of the ED. When a patient is placed into observation, their clinical workflow may vary from patients who are not placed into observation prior to departure from the ED, so the observation order may be used instead of the actual ED departure time.

Obstetric ED considerations:
- For patients who arrive in the ED and are triaged to Labor and Delivery (L&D) or who receive

emergency care in a L&D Triage unit, and if there is no ED record or if the discharge time is only documented within the L&D record, select UTD for the *ED Departure Time*.

- Suggested Data Sources:
  Only Acceptable Sources:
  - Emergency Department record

  Inclusion Guidelines for Abstraction:
  - ED leave time
  - ED discharge time
  - ED departure time
  - ED checkout time
  - ED order for observation status
  - Gone time
  - Transfer time
  - The event log, registration sheet, transfer record, etc. (if a discharge time is noted and the document is part of the permanent record)
  - Release Time
  - Out time
  - Transport documented time

  Exclusion Guidelines for Abstraction:
  - Report called time
  - Disposition time
  - Discharge instructions time
  - Coding summary
  - Physician's discharge summary
  - ED record released from holding time
  - Chart closed time
  - Off the tracking board time
  - Departure or discharge time from an L&D record

Data Element Name: ***First Name***

Collected For: All records

Definition: The patient's first name.

Suggested Data Collection Question: What is the patient's first name?

Format:
Length: 30
Type: Character
Occurs: 1

Allowable Values:
Enter the patient's first name.

Notes for Abstraction: None

Suggested Data Sources:
- Outpatient record
- Emergency Department record

Inclusion Guidelines for Abstraction: None

Exclusion Guidelines for Abstraction: None

Data Element Name: ***Gender Identity***

Collected For: All records (Optional Element) effective July 1, 2024

Definition: A multi-tiered question asking patients to describe their gender identity.
Gender identity is useful as basic demographic information when used with the Sex Assigned at Birth data element.

Suggested Data Collection Question: Which term best describes the patients gender identity?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1 – 6

Allowable Values:
Select all that apply:

1 = Man
2 = Woman
3 = Non-binary
4 = Transgender
5 = None of the Above, Other, or Unable to Determine
6 = Preferred Not to Answer

Notes for Abstraction:
- It is acceptable to select up to six values. If values 5 and/or 6 is selected, it is acceptable to also select values 1, 2, 3, and/or 4.
- If the patient does not describe themselves as non-binary, transgender, and/or describes themself in other terms, select value 5.
- Consider the gender identity to be unable to be determined and select value 5 if the sexual orientation is not documented or not available.

Suggested Data Sources:
- Consultation notes
- Emergency Department record
- Face sheet
- History and Physical
- Nursing admission notes
- Progress notes
- UB-04

Inclusion Guidelines for Abstraction:
Values 3, 4, and 5 includes but are not limited to the following:
- Trans man/Transgender Man/Female to Male (FTM)
- Trans woman/Transgender Woman/Male to Female (MTF)

- Genderqueer
- Genderfluid
- Gender variant
- Questioning or unsure of their gender identity

Exclusion Guidelines for Abstraction: None

Data Element Name: ***Head CT or MRI Scan Interpretation Date***

Collected For: OP-23

Definition: The month, day, and year at which the earliest head CT or MRI scan interpretation was completed or reported.

Suggested Data Collection Question: What is the date the earliest head CT or MRI scan interpretation was completed or reported?

Format:
Length: 10 – MM-DD-YYYY (includes dashes) or UTD
Type: Date
Occurs: 1

Allowable Values:
MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (20xx)
UTD = Unable to Determine

Notes for Abstraction:

- The medical record must be abstracted as documented (taken at "face value"). When the date documented is obviously in error (not a valid format/range) or outside of the parameters of care and no other documentation is found that provides this information, the abstractor should select UTD.
  Examples:
  - Documentation indicates the *Head CT or MRI Scan Interpretation Date* was 03-**42**-20xx. No other documentation in the list of Suggested Data Sources provides a valid date. Since the *Head CT or MRI Scan Interpretation Date* is outside of the range listed in the Allowable Values for Day, it is not a valid date, and the abstractor should select UTD.
  - Patient expires on 02-12-20xx, and all documentation within the Suggested Data Sources indicates the *Head CT or MRI Scan Interpretation Date* was 03-12-20xx. Other documentation in the medical record supports the date of death as being accurate. Since the *Head CT or MRI Scan Interpretation Date* is after the date of death, it is outside of the parameter of care, and the abstractor should select UTD.
    Note: Transmission of a case with an invalid date as described above will be rejected from the CMS Clinical Data Warehouse. Use of UTD for *Head CT or MRI Scan Interpretation Date* allows the case to be accepted into the Warehouse.
- Enter the date associated with *Head CT or MRI Scan Interpretation Time*.
  Examples:
  - CT Head WO contrast resulted (date)
  - Imaging final result CT Head WO contrast(date)
  - Results were relayed to physician / discussed with physician (date)
  - Imaging result in the EHR: Electronically signed by: M.D. (date)
  - CT/CTA/MRI/MRA scan report date/time
- If the date of the head CT or MRI scan interpretation is unable to be determined from medical record documentation, abstract UTD.

- Abstract the result of the earliest head CT or MRI scan interpretation (closest to arrival).
- If there are multiple result dates documented for the same head CT or MRI scan, use the earliest result date.
- Computed Tomography Angiography (CTA) and Magnetic Resonance Angiography (MRA) of the head or brain is acceptable for abstraction.

Suggested Data Sources:
- Emergency Department record

Inclusion Guidelines for Abstraction:
Head CT or MRI Scan
- Brain CT
- Brain CTA
- Head CT
- Head CTA
- Brain MRI
- Brain MRA
- Head MRI
- Head MRA
- Head or brain computed tomography angiography (CTA)
- Head or brain CT angiography
- Head or brain computed or computerized tomography (CT)
- Head or brain magnetic resonance angiogram (MRA)
- Head or brain magnetic resonance imaging (MRI)
- Enhanced or unenhanced MR imaging

Exclusion Guidelines for Abstraction: None

Data Element Name: ***Head CT or MRI Scan Interpretation Time***

Collected For: OP-23

Definition: The time (military time) represented in hours and minutes at which the earliest head CT or MRI scan interpretation was completed or reported.

Suggested Data Collection Question: What is the time the earliest head CT or MRI scan interpretation was completed or reported?

Format:
Length: 5 – HH-MM (with or without colon) or UTD
Type: Time
Occurs: 1

Allowable Values:
HH = Hour (00–23)
MM = Minutes (0–59)
UTD = Unable to Determine

Time must be recorded in military time format.

With the exception of midnight and noon:
- If the time is in the a.m., conversion is not required.
- If the time is in the p.m., add 12 to the clock time hour.
  Examples:
  - Midnight = 0000 Noon = 1200
  - 5:31 a.m. = 0531 5:31 p.m. = 1731
  - 11:59 a.m. = 1159 11:59 p.m. = 2359

Note: 0000 = midnight. If the time is documented as 0000 11-24-20xx, review supporting documentation to determine if the *Head CT or MRI Scan Interpretation Date* should remain 11-24-20xx or if it should be converted to 11-25-20xx.

When converting midnight, or 2400, to 0000, do not forget to change the *Head CT or MRI Scan Interpretation Date.*
Example:
- Midnight or 2400 on 11-24-20xx = 0000 on 11-25-20xx.

Notes for Abstraction:
- For times that include seconds, remove the seconds and record the time as is.
  Example:
  - 1500:35 would be recorded as 1500.
- If the *Head CT or MRI Scan Interpretation Time* is unable to be determined from medical record documentation, select UTD.
- The medical record must be abstracted as documented (taken at "face value"). When the time documented is obviously in error (not a valid time) **and** no other documentation is found that provides this information, the abstractor should select UTD.

Example:
  - Documentation indicates the head CT or MRI scan interpretation was 3300. No other documentation in the medical record provides a valid time. Since the *Head CT or MRI Scan Interpretation Time* is outside of the range listed in the Allowable Values for Hour, it is not a valid time, and the abstractor should select UTD.
    Note: Transmission of a case with an invalid time as described above will be rejected from the CMS Clinical Data Warehouse. Use of UTD for *Head CT or MRI Scan Interpretation Time* allows the case to be accepted into the warehouse.
- If the time of the head CT or MRI scan interpretation is unable to be determined from medical record documentation, abstract UTD.
- Abstract the result of the earliest head CT or MRI scan interpretation (closest to arrival).
- The dictation time or the time of a preliminary interpretation may be abstracted if it is known to be an accurate representation of when the earliest head CT or MRI scan interpretation time occurred.
- If there are multiple result times documented for the same head CT or MRI scan, use the earliest result time.
- If the head CT or MRI scan interpretation is documented prior to arrival, abstract UTD.
- It is acceptable to use nurse documentation of a head CT or MRI scan interpreted by a physician. The interpretation must be performed by the physician/APN/PA, but it can be documented by a nurse.
- Head CT or MRI Scan Interpretation Time should not be abstracted as the time the results of the scan were relayed to the ED physician/APN/PA if an earlier interpretation time is documented.
  Example:
  - Radiology head CT report at 1100. ED physician notes: "Received head CT report at 1130." Head CT or MRI Scan Interpretation Time is 1100.
  - Preliminary CT dictated by radiologist at 2205. ED physician documents "Findings discussed directly with radiologist at 2209." Head CT or MRI Scan Interpretation Time is 2205.
  - Nurse documents "CT scan completed at 1400; physician notified of results at 1445." Head CT or MRI Scan Interpretation Time is 1445.
- Computed Tomography Angiography (CTA) and Magnetic Resonance Angiography (MRA) of the head or brain is acceptable for abstraction.
  Example:
  - CTA ordered per stroke protocol; unenhanced CT image results relayed to ED physician at 1318; CTA final report at 1500. Head CT or MRI Scan Interpretation Time is 1318.

Suggested Data Sources:
- Emergency Department record

Inclusion Guidelines for Abstraction:
Head CT or MRI Scan
- Brain CT
- Brain CTA
- Head CT
- Head CTA
- Brain MRI
- Brain MRA
- Head MRI
- Head MRA

- Head or brain computed tomography angiography (CTA)
- Head or brain CT angiography
- Head or brain computed or computerized tomography (CT)
- Head or brain magnetic resonance angiogram (MRA)
- Head or brain magnetic resonance imaging (MRI)
- Enhanced or unenhanced MR imaging

Exclusion Guidelines for Abstraction: None

Data Element Name: ***Head CT or MRI Scan Order***

Collected For: OP-23

Definition: Documentation in the medical record that a Computerized Tomography (CT) or Magnetic Resonance Imaging (MRI) scan of the head was ordered during an emergency department visit.

Suggested Data Collection Question: Was a head CT or MRI scan ordered by the physician during the emergency department visit?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:
Y (Yes) There is documentation a head CT or MRI scan was ordered by the physician/APN/PA during the emergency department visit.

N (No) There is no documentation a head CT or MRI scan was ordered by the physician/APN/PA during the emergency department visit.

Notes for Abstraction:
- If there is documentation a head CT or MRI scan is ordered during the emergency department visit but is cancelled and there are no other head CT or MRI scans ordered during the emergency department visit, abstract No.
- An order for a CT Angiography (CTA) or Magnetic Resonance Angiography (MRA) of the head or brain is acceptable for abstraction.

Suggested Data Sources:
- Nurses notes
- Physician notes/orders
- Radiology notes

Inclusion Guidelines for Abstraction:
Head CT or MRI Scan
- Brain CT
- Brain CTA
- Head CT
- Head CTA
- Brain MRI
- Brain MRA
- Head MRI
- Head MRA
- Head or brain computed tomography angiography (CTA)
- Head or brain CT angiography

- Head or brain computed or computerized tomography (CT)
- Head or brain magnetic resonance angiogram (MRA)
- Head or brain magnetic resonance imaging (MRI)
- Enhanced or unenhanced MR imaging

Exclusion Guidelines for Abstraction: None

Data Element Name: ***Hispanic Ethnicity***

Collected For: All records

Definition: Documentation that the patient is of Hispanic, Latino, or Spanish ethnicity.

Suggested Data Collection Question: Is the patient of Hispanic Latino, or Spanish ethnicity?

Format:
Length: 1
Type: Character
Occurs: 1

Allowable Values:
Y (Yes) Patient is of Hispanic, Latino, or Spanish ethnicity.

N (No) Patient is not of Hispanic, Latino, or Spanish ethnicity, or unable to determine from medical record documentation.

Notes for Abstraction:
- The data element *Race* is required in addition to this data element.

Suggested Data Sources:
- Outpatient record
- Emergency Department record

Inclusion Guidelines for Abstraction:
A person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin, regardless of race. The term "Spanish origin" can be used in addition to "Hispanic or Latino."

Examples:
- Black-Hispanic
- Chicano
- Colombian
- Ecuadorian
- Dominican
- Guatemalan
- Hispanic
- Latin American
- Latino/Latina
- Mexican-American
- Salvadoran
- Spaniard
- Spanish
- White-Hispanic

Exclusion Guidelines for Abstraction: None

Data Element Name: ***ICD-10-CM Principal Diagnosis Code***

Collected For: OP-18, OP-23

Definition: The International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM) code associated with the diagnosis established after study to be chiefly responsible for the outpatient encounter.

Suggested Data Collection Question: What was the ICD-10-CM code selected as the principal diagnosis for this record?

Format:
Length: 8 (without decimal point or dot)
Type: Alphanumeric
Occurs: 1

Allowable Values:
Any valid diagnosis code as per the CMS ICD-10-CM master code table (Code Descriptions in Tabular Order): https://www.cms.gov/Medicare/Coding/ICD10/index.html

Notes for Abstraction: None

Suggested Data Sources:
- Outpatient record
- Emergency Department record
- UB-04

Inclusion Guidelines for Abstraction: None

Exclusion Guidelines for Abstraction: None

Data Element Name: ***Last Known Well***

Collected For: OP-23

Definition: The date and time prior to hospital arrival at which it was witnessed or reported that the patient was last known to be without the signs and symptoms of the current stroke or at his or her baseline state of health.

Suggested Data Collection Question: Is there documentation that the date and time of *Last Known Well* was witnessed or reported?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:
Y (Yes) There is documentation that the date and time of *Last Known Well* was witnessed or reported.

N (No) There is no documentation that the date and time of *Last Known Well* was witnessed or reported, **or** Unable to Determine from medical record documentation.

Notes for Abstraction:
- Select Yes if **both** a date *Last Known Well* and a *Time Last Known Well* are documented.
- Select No if there is **any** physician/APN/PA documentation that the *Time Last Known Well* is "unknown." Documentation must explicitly state that the *Time Last Known Well* is unknown/uncertain.
  - If one physician/APN/PA documents *Time Last Known Well* unknown, and another documents a *Time Last Known Well*, select No.
    Exception:
    - If the physician/APN/PA documents *Last Known Well* as unknown and the same physician/APN/PA crosses out unknown or mentions in a later note that *Last Known Well* is now known with a time documented, select Yes.
- Documentation must explicitly state that the *Time Last Known Well* is unknown/uncertain/unclear. Documentation that time of symptom onset is unknown/uncertain/unclear is also acceptable when *Time Last Known Well* is not documented. If *Last Known Well* is not explicitly documented as unknown, do not make inferences (e.g., do not assume that patient awoke with stroke so *Last Known Well* unknown unless explicitly documented).
  - If one physician/APN/PA documents a *Time Last Known Well* and another documents time of symptom onset unknown, select Yes.
  - If the physician/APN/PA documents time of symptom onset is unknown, and a *Time Last Known Well* is not documented, select No.
  - If one physician/APN/PA documents a *Time Last Known Well* and nurse/EMS documents *Last Known Well* unknown, select Yes.
- If the *Time Last Known Well* is clearly greater than 2 hours prior to hospital arrival **and** no specific time is documented, select No.
  Example:
  - "Patient OK last night." Select No because no other documentation of a specific time/time range/time reference was present in the medical record and the time is required for the *Time Last Known Well*.

- If there is no documentation that *Last Known Well* or stroke signs/symptoms occurred prior to hospital arrival but there is documentation that *Last Known Well* first occurred after *Arrival Time* (e.g., in-house stroke), select No.

Suggested Data Sources:
- Ambulance record
- Code Stroke Form/template
- Emergency department record
- History and Physical
- Nursing flow sheets
- Progress notes
- Transfer sheet

Inclusion Guidelines for Abstraction:
Signs and Symptoms of Stroke
- Sudden numbness or weakness of the face, arm, or leg, especially on one side of the body
- Sudden confusion, trouble speaking or understanding
- Sudden trouble seeing in one or both eyes
- Sudden trouble walking, dizziness, loss of balance or coordination
- Sudden severe headache
- Syncope
- Seizure

Exclusion Guidelines for Abstraction: None

Data Element Name: ***Last Name***

Collected For: All records

Definition: The patient's last name.

Suggested Data Collection Question: What is the patient's last name?

Format:
Length: 60
Type: Character
Occurs: 1

Allowable Values:
Enter the patient's last name.

Notes for Abstraction: None

Suggested Data Sources:
- Outpatient record
- Emergency Department record

Inclusion Guidelines for Abstraction: None

Exclusion Guidelines for Abstraction: None

Data Element Name: ***Outpatient Encounter Date***

Collected For: All records

Definition: The documented month, day, and year the patient arrived in the hospital outpatient setting.

Suggested Data Collection Question: What was the date the patient arrived in the hospital outpatient setting?

Format:
Length: 10 – MM-DD-YYYY (includes dashes)
Type: Date
Occurs: 1

Allowable Values:
MM = Month (01-12)
DD = Day (01-31)
YYYY = Year (20xx)

Notes for Abstraction:
- The intent of this data element is to determine the date the patient arrived in the hospital outpatient setting.
- UTD is **not** an allowable value.
- Consider the outpatient encounter date as the earliest documented date the patient arrived in the applicable hospital outpatient setting.

Suggested Data Sources:
- Outpatient record
- Emergency Department record

Inclusion Guidelines for Abstraction: None

Exclusion Guidelines for Abstraction:
- Preoperative tests or screening

Data Element Name: ***Patient Identifier***

Collected For: All records

Definition: The number used by the hospital to identify this patient's hospital outpatient encounter. The number provided will be used to identify the patient in communications with the hospital outpatient setting, e.g., Medical Record Number, Account Number, Unique Identifiable Number as determined by the facility, etc.

A *Patient Identifier* is required.

Suggested Data Collection Question: What was the number used to identify this outpatient encounter?

Format:
Length: 40
Type: Character
Occurs: 1

Allowable Values:
Up to 40 letters and/or numbers

Notes for Abstraction: The only characters that will be allowed are spaces, hyphens, dashes and under-scores.

Suggested Data Sources:
- Outpatient record
- Emergency Department record

Inclusion Guidelines for Abstraction: None

Exclusion Guidelines for Abstraction: None

Data Element Name: ***Payment Source***

Collected For: All records

Definition: The source of payment for this outpatient encounter.

Suggested Data Collection Question: What is the patient's source of payment for this outpatient encounter?

Format:
Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:
1 Source of payment is Medicare.
2 Source of payment is Non-Medicare.

Notes for Abstraction:
- If Medicare is listed as the primary, secondary, tertiary, or even lower down on the list of payers, select 1.
- If the patient is an Undocumented Alien or illegal immigrant, select 1.
  Undocumented Alien: Section 1011 of the Medicare Modernization Act of 2003 allows for reimbursement for services rendered to patients who are: Undocumented aliens, aliens paroled into a United States port of entry for the purpose of receiving eligible services, and Mexican citizens permitted to enter the United States for not more than 72 hours under the authority of a laser visa, issued in accordance with the requirements of regulations prescribed under the Immigration and Nationality Act.

Suggested Data Sources:
- Face sheet
- UB-04

Inclusion Guidelines for Abstraction:
Medicare includes, but is not limited to:
- Black Lung
- End Stage Renal Disease (ESRD)
- Medicare Fee-for-Service (includes DRG or PPS)
- Medicare HMO/Medicare Advantage
- Medicare Part A, B, C, D, F, G, K, L, M, and N
- Medicare Secondary Payer
- Railroad Retirement Board (RRB)

Exclusion Guidelines for Abstraction: None

Data Element Name: ***Physician 1***

Collected For: All records (optional element)

Definition: The first physician identifier.

Suggested Data Collection Question: What is the first physician identifier?

Format:
Length: 50
Type: Alphanumeric
Occurs: 1

Allowable Values:
Enter the first physician identifier, as directed. Up to 50 letters, numbers, and/or special characters can be entered.
Note: Only the following special characters will be allowed:
~ ! @ # $ % ^ * ( ) _ + { } | : ? ` - = [ ] \ ; ‘ . , / and space

Notes for Abstraction:
This data element may be used to capture physician information that might be helpful in internal analysis. This information is for internal analysis only and will not be shared with any external parties in any data output.

Suggested Data Sources: None

Inclusion Guidelines for Abstraction: None

Exclusion Guidelines for Abstraction: None

Data Element Name: ***Physician 2***

Collected For: All records (optional element)

Definition: A second physician identifier.

Suggested Data Collection Question: What is the second physician identifier?

Format:
Length: 50
Type: Alphanumeric
Occurs: 1

Allowable Values:
Enter the second physician identifiers, as directed. Up to 50 letters, numbers, and/or special characters can be entered.
Note: Only the following special characters will be allowed:
~ ! @ # $ % ^ * ( ) _ + { } | : ? ‘ - = [ ] \ ; . , / and space

Notes for Abstraction:
This data element may be used to capture physician information that might be helpful in internal analysis. This information is for internal analysis only and will not be shared with any external parties in any data output.

Suggested Data Sources: None

Inclusion Guidelines for Abstraction: None

Exclusion Guidelines for Abstraction: None

Data Element Name: ***Postal Code***

Collected For: All records

Definition: The postal code of the patient's residence. For United States ZIP codes, the hyphen is implied. If the patient is determined to not have a permanent residence, then the patient is considered homeless.

Suggested Data Collection Question: What is the postal code of the patient's residence?

Format:
Length: 9
Type: Character
Occurs: 1

Allowable Values:
Any valid five or nine-digit postal code, or "homeless" if the patient is determined not to have a permanent residence. If the patient is not a resident of the United States, use "non-US."

Notes for Abstraction:
- If the postal code of the patient is unable to be determined from medical record documentation, enter the provider's postal code.

Suggested Data Sources:
- Outpatient record
- Emergency Department record
- UB-04

Inclusion Guidelines for Abstraction: None

Exclusion Guidelines for Abstraction: None

Data Element Name: ***Race***

Collected For: All records

Definition: Documentation of the patient's race.

Suggested Data Collection Question: What is the patient's race?

Format:
Length: 1
Type: Character
Occurs: 1

Allowable Values:
1 **White:** Patient's race is White, or the patient has origins in Europe, the Middle East, or North Africa.
2 **Black or African American:** Patient's race is Black or African American.
3 **American Indian or Alaska Native:** Patient's race is American Indian/Alaska Native.
4 **Asian or Pacific Islander:** Patient's race is Asian/Pacific Islander.
5 **Retired Value:** effective January 1, 2021, encounters.
7 **UTD:** Unable to determine the patient's race or not stated (e.g., not documented, conflicting documentation, or patient unwilling to provide).

Notes for Abstraction:
- The data element *Hispanic Ethnicity* is required in addition to this data element.
- If documentation indicates the patient has more than one race (e.g., Black-White, Indian-White), select the first listed race.
- Although the terms "Hispanic," "Latino," and "Spanish" are descriptions of the patient's ethnicity, it is not uncommon to find them referenced as race. If the patient's race is documented only as Hispanic, Latino, or Spanish, select "White." If the race is documented as mixed Hispanic/Latino with another race, use whatever race is given (e.g., Black-Hispanic – select "Black"). Other terms for Hispanic, Latino, or Spanish include Chicano, Cuban, H (for Hispanic), Latin American, Latina, Mexican, Mexican-American, Puerto Rican, and South or Central American.

Suggested Data Sources:
- Outpatient record
- Emergency Department record

Inclusion Guidelines for Abstraction:

Black or African American: A person having origins in any of the black racial groups of Africa (e.g., Jamaican, Haitian, Nigerian, Ethiopian, Somali, Negro).

American Indian or Alaska Native: A person having origins in any of the original peoples of North America (including Central America) and who maintains tribal affiliation or community attachment (e.g., any recognized tribal entity in North and Central America, Native American).

Asian or Pacific Islander: A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia,

Pakistan, the Philippine Islands, the Pacific Islands, Native Hawaiian, Guam, Samoa, Thailand, and Vietnam.

White: A person having origins in any of the original peoples of Europe, the Middle East, or North Africa (e.g., German, Irish, English, Italian, Lebanese, Egyptian).

Exclusion Guidelines for Abstraction: None

Data Element Name: ***Sex Assigned at Birth***

Collected For: All records (effective July 1, 2024)

Definition: The patient's biological sex assigned at birth. Collecting the sex that is assigned at birth is useful as basic demographic information when used with the Gender Identity data element.

Suggested Data Collection Question: What was the patient's reported sex assigned at birth?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 = Female
2 = Male
3 = Intersex
4 = None of the Above, Other, or Unable to Determine
5 = Preferred Not to Answer

Notes for Abstraction:

- Collection of this data element can be self-administered, or interviewer administered.
- Intersex is a general term used to refer to individuals born with, or who develop naturally in puberty, biological sex characteristics that are typically male or female.
- If the patient does not describe themselves as female, male, intersex, describes themself in other terms or if the medical record does not include information about the patient's biological sex assigned at birth, select value 4.
- Consider the sex to be unable to be determined and select value 4 if there is contradictory documentation or if the sex assigned at birth is not documented or not available.

Suggested Data Sources:

- Consultation notes
- Emergency Department record
- Face sheet
- History and Physical
- Nursing admission notes
- Progress notes
- UB-04

Inclusion Guidelines for Abstraction: None

Exclusion Guidelines for Abstraction: None

Data Element Name: ***Sexual Orientation***

Collected For: All records (Optional Element) effective July 1, 2024

Definition: A multi-part question which decsribes the patient's sexual orientation including:
- Identity: A person's core internal sense of their sexuality.
- Attraction: A multidimensionl concept that includes the gender(s) to which a person is attracted and the strength of this attraction, including whether a person feels attraction at all.
- Behavior: A multidimensional concept that includes the gender(s) of sexual partners, specific sexual activities, and frequency of activities.

A person's sexual orientation does not always align with behavior or attraction. This data element is useful as basic demographic information.

Suggested Data Collection Question: Which term best represents how the patient thinks of themselves?

Format:

Length: 1
Type: Alphanumeric
Occurs: 1

Allowable Values:

1 = Gay
2 = Lesbian
3 = Straight (Not Gay or Lesbian)
4 = Bisexual
5 = None of the Above, Other, or Unable to Determine
6 = Preferred Not to Answer

Notes for Abstraction:
- If the patient does not describe themselves as gay, lesbian, straight, or bisexual and/or describes themself in other terms, select value 5.
- Consider the sexual orientation to be unable to be determined and select value 5 if there is contradictory documentation or if the sexual orientation is not documented or not available.

Suggested Data Sources:
- Consultation notes
- Emergency Department record
- Face sheet
- History and Physical
- Nursing admission notes
- Progress notes
- UB-04

Inclusion Guidelines for Abstraction:
Value 5 includes but is not limited to the following:

- Queer
- Polysexual, omnisexual, sapiosexual, or pansexual
- Asexual
- Two-spirit
- Has not figured out or is in the process of figuring out their sexuality
- Mostly straight, but sometimes attacted to people of their own sex
- Does not think of themselves as having sexuality
- Does not use labels to identify themselves
- Does not know the answer

Exclusion Guidelines for Abstraction: None

Data Element Name: ***Time Last Known Well***

Collected For: OP-23

Definition: The time prior to hospital arrival at which the patient was last known to be without the signs and symptoms of the current stroke or at his or her baseline state of health.

Suggested Data Collection Question: At what time was the patient last known to be well or at his or her prior baseline state of health?

Format:
Length: 5 – HH-MM (with or without colon) or UTD
Type: Time
Occurs: 1

Allowable Values:
HH = Hour (00–23)
MM = Minutes (00–59)
UTD = Unable to Determine

Time must be recorded in military time format.

With the exception of midnight and noon:
- If the time is in the a.m., conversion is not required.
- If the time is in the p.m., add 12 to the clock time hour.
  Examples:
  - Midnight = 0000 Noon = 1200
  - 5:31 a.m. = 0531 5:31 p.m. = 1731
  - 11:59 a.m. = 1159 11:59 p.m. = 2359

Note: 0000 = midnight. If the time is documented as 0000 11-24-20XX, review supporting documentation to determine if the *Date Last Known Well* should remain 11-24-20xx or if it should be converted to 11-25-20xx.

When converting midnight, or 2400, to 0000, do not forget to change the *Date Last Known Well*.
Example:
- Midnight or 2400 on 11-24-20XX = 0000 on 11-25-20XX.

Notes for Abstraction:
- For times that include seconds, remove the seconds and record the time as is.
  Example:
  - 1500:35 would be recorded as 1500
- If the *Time Last Known Well* is unable to be determined from medical record documentation, select UTD.

Exception:
- If the only *Time Last Known Well* is documented as a time immediately before hospital arrival without a specific time range in minutes, e.g., "symptoms started just prior to ED arrival," and no other documentation mentioning *Time Last Known Well* is available in the medical record, use the

Arrival Time for *Time Last Known Well*.

- The medical record must be abstracted as documented (taken at "face value"). When the time documented is obviously in error (not a valid time) and no other documentation is found that provides this information, the abstractor should select UTD.
  Example:
  - Documentation indicates the *Time Last Known Well* was 3300. No other documentation in the medical record provides a valid time. Since the *Time Last Known Well* is outside of the range listed in the Allowable Values for Hour, it is not a valid time, and the abstractor should select UTD. **Note:** Transmission of a case with an invalid time as described above will be rejected from the CMS Clinical Data Warehouse. Use of UTD for *Time Last Known Well* allows the case to be accepted into the Warehouse.
- If the *Time Last Known Well* is documented as a specific time and entered as *Time Last Known Well* on a Code Stroke Form or stroke-specific electronic template, enter that time as the *Time Last Known Well*. Documentation of the *Time Last Known Well* on a stroke-specific form or template should be selected regardless of other times last known well documented elsewhere in the medical record.
  Exceptions:
  - **Any** physician/APN/PA documentation that *Last Known Well*/onset of signs/symptoms is unknown/uncertain/unclear takes precedence over specific time on a Code Stroke Form.
  - Crossing out of a specific time on a Code Stroke Form and a specific time documented on the same or different Code Stroke Form, use the specific time that is not crossed out.
  - A specific time on a Code Stroke Form and another time reference documented, e.g., 8 hours, on the same or different Code Stroke Forms, use the specific time.
  - Multiple specific times on the same or different Code Stroke Forms, use abstraction guidelines below that reference multiple times of last known well documented.
  - If unable to determine if a form is a Code Stroke Form, continue to review the medical record for *Time Last Known Well* documentation in other sources.
- If the *Time Last Known Well* is documented as being a specific number of hours prior to arrival (e.g., felt left side go numb 2 hours ago) rather than a specific time, subtract that number from the time of ED arrival and enter that time as the *Time Last Known Well.*
- If the *Time Last Known Well* is noted to be a range of time prior to ED arrival (e.g., felt left side go numb 2 hours to 3 hours ago), assume the maximum time from the range (e.g., 3 hours), and subtract that number of hours from the time of arrival to compute the *Time Last Known Well*.
- If both the *Time Last Known Well* and symptom onset are documented, select the *Time Last Known Well.*
  Examples:
  - H&P states, "Patient watching TV with family and complained of blurred vision in both eyes at 8:30 PM." ED MD notes, "Patient normal at 8:30 PM." *Time Last Known Well* is 2030.
  - "Patient was doing well at 4:30 PM – noticed difficulty speaking around 6:00 pm." *Time Last Known Well* is 1630.
  - "Patient normal at 2200 before going to bed. Awoke at 0200 with headache and took two aspirin before returning to sleep. OK at 0700 and went to work. Felt confused, unable to speak without slurring at 0800." *Time Last Known Well* is 0700.
- If the only time documented is time of symptom onset without mention of when the patient was last known well, use the time of symptom onset for the *Time Last Known Well*.
  Example:
- "Sudden onset headache one hour before ED arrival," documented by ED MD. *Arrival Time* 1924. No other documentation referencing time last known well available in the medical record. *Time Last*

Known Well is 1824.

- If there are multiple times of last known well documented in the absence of the *Time Last Known Well* explicitly documented on a Code Stroke Form, use physician/APN/PA documentation first before other sources, e.g., nursing, EMS.
  Example:
  - "Patient last seen normal this morning at 1000" per H&P. ED nurse documented 0950 as time last well. *Time Last Known Well* is 1000.
- If multiple times last known well are documented by the same or different physicians/APNs/PAs, use the earliest time documented.
- If there is documentation of one or more episodes of stroke symptoms and documentation of symptom resolution between episodes, use the time of the most recent (last) episode prior to arrival, regardless if all symptoms resolved prior to arrival.
  Examples:
  - "Patient reported right hand paresthesia two days ago that resolved spontaneously after a few minutes. New onset of symptoms today around 0700 involving right arm and right leg." *Time Last Known Well* is 0700.
  - "Wife states that he was having trouble with slurred speech and confusion yesterday. Symptom free this morning. Return of symptoms with facial droop noted around noon." *Time Last Known Well* is 1200.
  - "Wife noticed slurred speech at 8:30 last night. Without symptoms early this morning. Wife noticed slurred speech again at 9:00 during breakfast conversation." *Time Last Known Well* is 0900.
  - "Wife noticed slurred speech at 8:30 last night. Symptom-free this morning. Came to ED to get checked out." *Time Last Known Well* is 2030.
- A Code Stroke Form is used by the stroke team or ED staff to document the acute stroke process. See the inclusion list for acceptable terms used for a Code Stroke Form. The list is not all-inclusive.
- *Time Last Known Well* on a Code Stroke Form may be documented by a nurse or other member of the care team authorized to serve as a scribe.
- If the time is noted to be "less than" a period of time prior to ED arrival, assume the maximum range. Example: *Time Last Known Well* less than one hour ago. Subtract one hour from the time of arrival to compute *Time Last Known Well*.

Suggested Data Sources:

- Ambulance record
- Code Stroke Form/template
- Emergency Department record
- History and physical
- IV flow sheets
- Medication administration record
- Nursing flow sheets
- Progress notes
- Transfer sheet

Inclusion Guidelines for Abstraction:

Signs and Symptoms of Stroke

- Sudden numbness or weakness of the face, arm, or leg, especially on one side of the body
- Sudden confusion, trouble speaking or understanding
- Sudden trouble seeing in one or both eyes

- Sudden trouble walking, dizziness, loss of balance or coordination
- Sudden severe headache
- Syncope
- Seizure

Code Stroke Form
- Stroke Activation Form
- Stroke Alert Form
- Stroke Assessment Form
- Stroke Intervention Form
- Stroke Rapid Response Form
- Thrombolysis Checklist
- tPA Eligibility Form

Exclusion Guidelines for Abstraction:
Code Stroke Form
- Stroke Education Form
- Core Measure Form

Missing and Invalid Data

Introduction

Missing data are data elements required for calculating a hospital outpatient measure that have no values present for one or more encounters. Invalid data are data element values required for calculating a hospital outpatient measure that fall outside of the range of allowable values defined for that data element.

Reducing the levels of missing and invalid data is important as it minimizes the potential for measure rate bias. Because records with missing or invalid data cannot be included in the calculation of the observed measure rate, a measure's observed rate may not accurately reflect the patient population. The excluded records may have differed significantly from the records with no missing data (i.e., the records remaining may not be representative of the actual population).

Data Collection and the Unable to be Determined (UTD) Allowable Value

Abstractors provide an answer to every data element that is applicable per the combined skip logic for all measures in a hospital outpatient measure set for the record to be deemed complete and to not be rejected. While there is an expectation that all data elements are collected, it is recognized that, in certain situations, information may not be available (dates, times, codes, etc.). If, after due diligence, the abstractor determines that a value is not documented or is not able to determine the answer value, the abstractor must select UTD as the answer. Note that some data elements do not allow a UTD value for data transmission. The UTD allowable value is used as follows:

- *Birthdate*, *CPT® Code*, *E/M Code*, *ICD-10-CM Principal* and *Outpatient Encounter Date* do not have a UTD allowable value for data transmission. Encounter records containing UTD for any of these data elements are rejected when submitted.
- Date, time, and numeric data elements, other than *Birthdate* and *Outpatient Encounter Date*, have a UTD allowable value option.
  - Rate-based algorithms evaluate records to a Measure Category Assignment = D (failed) when a date, time, or numeric data element containing an allowable value of UTD is evaluated.
  - Continuous variable algorithms evaluate records to a Measure Category Assignment = Y (UTD value exists) when a date, time, or numeric data element containing an allowable value of UTD is evaluated.
  - The method by which data collection software collects UTD information is determined by each software vendor, except the software cannot automatically default to a UTD answer. The decision to enter a UTD for each data element must be made by the abstractor, not the software.
- Yes/No data elements: The allowable value No incorporates UTD into the definition. Refer to the measure algorithms in which each Yes/No data element is used to determine how the record is treated.
- Data elements containing two or more categorical values: The UTD value is either classified as a separate allowable value or included in the same category as "None of the above/Not documented." Refer to the measure algorithms in which each categorical data element is used to determine how the record is treated.

Missing and Invalid Data

For rejected data to be accepted, errors must be corrected, and the data must be resubmitted before the transmission deadline.

- The majority of general data elements that are missing data* cause the encounter record to be rejected. Refer to the Data Dictionary Introduction in this manual for the complete list of general data elements.

- In addition, if both the *ICD-10-CM Principal Diagnosis Code* and the CPT® Code data elements are missing data*, the entire record will be rejected.
- Not all patients have *ICD-10-CM Other Diagnosis Codes*. Records will be accepted for missing data for this data element.
- Measure-specific data elements that are missing data* cause the record to be rejected if any measure algorithm results in a Measure Category Assignment = X (missing data). If no measure evaluates to a category assignment of X, the record will be accepted.
- General and measure-specific data elements that contain invalid data cause the record to be rejected.

*A missing value occurs when the abstractor does not select an answer for a data element (leaves it blank) or the software incorrectly transmits a "null" instead of the correct value for a data element. A UTD allowable value is not considered missing data.

Abstraction Software Skip Logic and Missing Data

Skip logic allows hospitals and vendors to minimize abstraction burden by using vendor software edit logic to bypass abstraction of data elements not utilized in the measure algorithm. However, these bypassed elements will negatively impact data quality and the hospital's CMS chart audit validation results when elements are incorrectly abstracted and subsequent data elements are bypassed and left blank.

The use of skip logic by hospitals and vendors is optional and not required. Hospitals should be aware of the potential impact of skip logic on data quality, abstraction burden, and CMS chart audit validation scores. Vendors and hospitals utilizing skip logic should closely monitor the accuracy rate of abstracted data elements, particularly data elements placed higher in the algorithm flow.

Missing, Invalid, UTD Data Summary

- Missing Data – No data element value is present (blank or "null").
- Invalid Data – The data element value falls outside of the range of defined allowable values.
- UTD – The allowable value of UTD is present for the data element.

Population and Sampling Specifications

Introduction

Population

Defining the population is the first step to estimate a hospital's performance. A population is generally defined as a collection of patients sharing a common set of universally measured characteristics, such as an ICD-10-CM Principal Diagnosis or CPT® Code. The outpatient population and diagnosis/CPT® codes meet this description for the hospital outpatient quality measures. For the purpose of measuring hospital outpatient quality measures, the term "outpatient population" is defined below:

- An outpatient population refers to all patients (Medicare and non-Medicare) who share a common set of specified, administratively derived data elements. This may include ICD-10-CM diagnosis codes, CPT® codes, or other population characteristics such as age.
- Population sampling algorithms have been developed for the selected six measures. Each algorithm defines the initial population on the basis of a limited number of criteria such as age, CPT® codes (including Evaluation/Management [E/M] codes), and ICD-10-CM codes. These basic data elements could be easily obtained from electronic files (e.g., from the billing department) and usually allow a computer-based sampling process to be employed.

Note: Data entry for OP-22 will be achieved through the secure side of https://hqr.cms.gov/via an online tool available to authorized users. Because the measure uses administrative data and not claims data to determine the measure's denominator population, OP-22 is not included in the ED-Throughput Population Algorithm.

The measure sets and measure populations are presented in **Table 1** below.

Table 1: Hospital Outpatient Measure Sets and Measure Populations

Measure Set:	**ED-Throughput**
Population:	Throughput
Measure(s):	OP-18
Measure Set:	**Stroke**
Population:	Stroke
Measure(s):	OP-23
Measure Set:	**Measures Submitted via a Web-Based Tool**
Population:	Endoscopy/Cataract
Measure(s):	OP-29 and OP-31

Note: Data entry for OP-29 and OP-31 will be achieved through the secure side of https://hqr.cms.gov/via an online tool available to authorized users. These measures use chart-abstracted data to enter a numeric value as a numerator and denominator via the web-based tool.

For the definition of the outpatient population for each sampling population, refer to the appropriate outpatient population discussion in the Measure Information section of this manual.

Sampling

Sampling is a process of selecting a representative part of a population in order to estimate the hospital's performance without collecting data for its entire population. Using a statistically valid sample, a hospital can measure its performance in an effective and efficient manner. Sampling is a particularly useful technique for performance measures that require primary data collection from a source such as the medical record.

Sampling should not be used unless the hospital has a large number of cases in the outpatient population because a fairly large number of sample cases are needed to achieve a representative sample of the population. For the purpose of sampling hospital outpatient quality measures, the terms "sample," "effective sample," and "case" are defined below:

- The "sample" is the fraction of the population that is selected for further study.
- "Effective sample" refers to the part of the sample that makes it into the denominator of an outpatient measure set. This is defined as the sample for an outpatient measure set minus all the exclusions and contraindications for the outpatient measure set in the sample.
- A "case" refers to a single record (or an encounter) within the population. For example, during the first quarter a hospital may have 100 patients who had a principal diagnosis associated with the OP-23 measure. The hospital's outpatient population would include 100 cases or 100 outpatient records for these measures during the first quarter.

To obtain statistically valid sample data, the sample size should be carefully determined, and the sample cases should be randomly selected in such a way that the individual cases in the population have an equal chance of being selected. Only when the sample data truly represent the whole population can the sample-based performance outpatient measure set data be meaningful and useful. Each hospital is ultimately responsible for adhering to the sampling requirements outlined in this manual.

As a general rule/policy of CMS, providers are encouraged to submit as many cases as possible up to the entire population of cases if reasonably feasible. For example, if the raw data can be easily extracted from an existing electronic database or the abstraction burden is manageable, providers should consider submitting the entire population of cases that meet the initial selection criteria. Otherwise, a statistically valid sample can be selected.

Note: Hospitals are **not** required to sample their data if they elect to include all eligible cases. For example, a hospital has 100 cases for the quarter and must select a sample of 80 cases. The hospital may choose to use all 100 cases given the minimal benefit sampling would offer.

Order of Data Flow

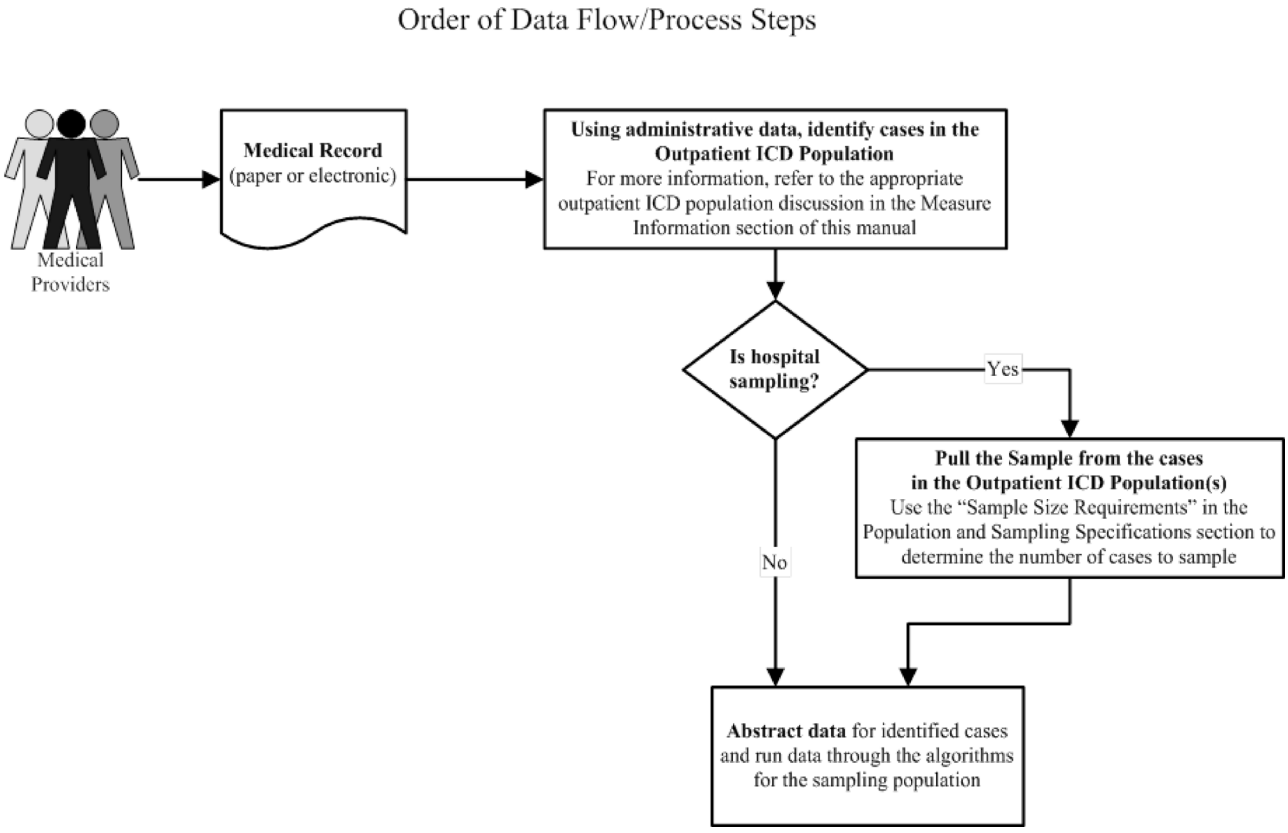
Each outpatient measure set has a unique definition of outpatient population. However, the same data flow or process steps can be used to identify the data that are transmitted to the CMS Clinical Data Warehouse. These process steps are:

- First, identify the outpatient population for the outpatient measure set. An outpatient population is defined for each outpatient measure set, and the count is collected in the *Outpatient Population Size* data element. This data pull utilizes administrative data such as ICD-10-CM diagnosis codes, CPT® codes, outpatient encounter date, and birthdate.
  - All ICD-10-CM diagnosis codes and CPT® codes included in the appropriate outpatient population definition must be applied. This identification process must be completed prior to application of the data integrity filter, outpatient measure set exclusions, and sampling methodology.
  - For specific outpatient measure set definitions, refer to the appropriate outpatient population discussion in the Measure Information section of this manual.
- Second, if the hospital is sampling, use the outpatient population identified above and pull the sample of medical records for each outpatient measure set using the requirements identified in the Quarterly Sampling Requirements section.

  Third, collect or abstract from the identified medical records the general and outpatient measure set-specific data elements that are needed for the sampling population. The count of the number of cases used in this step is collected in the *Outpatient Sample Size* data elements (If the hospital is not sampling, the

Outpatient Sample Size will equal the *Outpatient Population Size*).

- If the hospital is not sampling, use all medical records identified in the outpatient population.
- If the hospital is sampling, use the medical records from the cases in the identified sample.



Sample Size Requirements

Each hospital is ultimately responsible for meeting or exceeding the sample size requirements outlined below. Hospital samples must be monitored to ensure that sampling procedures consistently produce statistically valid and useful data. As a general rule, and based on prior experience with CMS hospital inpatient measures, sample size requirements for this project are based on commonly accepted sampling criteria for surveys:

- A five percent margin of error is recommended. The margin of error is the extent of error the investigator is willing to tolerate. Lower margins of error (e.g., three percent) would require substantially larger sample sizes and generate more reliable results from the samples, but the burden of abstraction may not be acceptable for most providers. Inversely, higher margins of error would require relatively smaller sample sizes but less reliable results from those samples.
- For OP-18, to reduce the burden of abstraction for smaller hospitals, a 10 percent margin of error was employed to limit the number of cases for the sample size requirements.
- The size of the population, also referred to as the universe population, is the volume of eligible patients from which the sample will be drawn. This number is obviously expected to vary widely among providers. Different sample size estimates are provided for various populations. See Tables 2, 3, and 4 for sample size requirements.
- Given that the number of cases in the sample could further be reduced during the analysis phase

due to missing data in the medical records and additional outpatient measure set-specific exclusion criteria, hospitals are strongly advised to overestimate their sample sizes by 10 to 20 percent, or as much as possible.

- A hospital may choose to use a larger sample size than is required.
- Hospitals whose outpatient population size is less than the minimum number of cases for the sampling population must include all eligible cases in their data.
- As a quality check to ensure that sampling methodology was applied correctly, the provider must run a basic comparative analysis of common demographic variables including age distribution, gender ratio, race/ethnicity distribution, and the proportion of Medicare patients between the sampled set and the population of eligible patients. The relative frequencies or distribution of these common variables should be very close between the two data sets. Any significant discrepancy should trigger a review and a restart of the sampling process.
- As indicated earlier, the adequacy of the sample size will be monitored as the project progresses and revised, as needed. Providers that choose to sample are responsible for the sampling process. However, for each sampled case, providers are required to clearly indicate the sample size (n) to which the case belongs, the population size (N) from which the sample was drawn, and the proportion of Medicare and non-Medicare patients in the sample.

Sampling Requirements

A hospital may choose to use a larger sample size than is required. Hospitals whose population size is less than the minimum number of cases per quarter for the measure set cannot sample. Refer to **Table 2** to determine the minimum number of cases that need to be sampled for the Stroke population per quarter per hospital for OP-23. Refer to **Table 3** to determine the minimum number of cases that need to be sampled for each population per quarter per hospital for OP-18. Refer to **Table 4** to determine the annual sample size requirements for OP-29 and OP-31.

It is important to point out that if a hospital elects to use the monthly sampling guidelines, the hospital is still required to meet the minimum sampling requirements. Given the potential for substantial variation in monthly sampling population sizes, the monthly sample sizes should be based on the known or anticipated population size. When necessary, appropriate oversampling should be employed to ensure that the hospital meets the minimum sample size requirements.

Table 2: Sample Size Requirements per Quarter per Hospital for OP-23

Population Per Quarter	**≤ 80**
Quarterly Sample Size	Use all cases
Monthly Sample Size	Use all cases
Population Per Quarter	**81–100**
Quarterly Sample Size	80
Monthly Sample Size	27
Population Per Quarter	**101–125**
Quarterly Sample Size	95
Monthly Sample Size	32
Population Per Quarter	**126–150**
Quarterly Sample Size	109
Monthly Sample Size	37

Population Per Quarter	**151–175**
Quarterly Sample Size	121
Monthly Sample Size	41
Population Per Quarter	**176–200**
Quarterly Sample Size	132
Monthly Sample Size	44
Population Per Quarter	**201–225**
Quarterly Sample Size	143
Monthly Sample Size	48
Population Per Quarter	**226–250**
Quarterly Sample Size	152
Monthly Sample Size	51
Population Per Quarter	**251–275**
Quarterly Sample Size	161
Monthly Sample Size	54
Population Per Quarter	**276–300**
Quarterly Sample Size	169
Monthly Sample Size	57
Population Per Quarter	**301–325**
Quarterly Sample Size	177
Monthly Sample Size	59
Population Per Quarter	**326–350**
Quarterly Sample Size	184
Monthly Sample Size	62
Population Per Quarter	**351–375**
Quarterly Sample Size	191
Monthly Sample Size	64
Population Per Quarter	**376–400**
Quarterly Sample Size	197
Monthly Sample Size	66
Population Per Quarter	**401–425**
Quarterly Sample Size	203
Monthly Sample Size	68
Population Per Quarter	**426–450**
Quarterly Sample Size	208
Monthly Sample Size	70
Population Per Quarter	**451–500**
Quarterly Sample Size	218
Monthly Sample Size	73
Population Per Quarter	**501–600**
Quarterly Sample Size	235
Monthly Sample Size	79
Population Per Quarter	**601–700**
Quarterly Sample Size	249
Monthly Sample Size	83

Population Per Quarter	**701–800**
Quarterly Sample Size	260
Monthly Sample Size	87
Population Per Quarter	**801–900**
Quarterly Sample Size	270
Monthly Sample Size	90
Population Per Quarter	**901–1,000**
Quarterly Sample Size	278
Monthly Sample Size	93
Population Per Quarter	**1,001–2,000**
Quarterly Sample Size	323
Monthly Sample Size	108
Population Per Quarter	**2,001–3,000**
Quarterly Sample Size	341
Monthly Sample Size	114
Population Per Quarter	**3,001–4,000**
Quarterly Sample Size	351
Monthly Sample Size	117
Population Per Quarter	**4,001–5,000**
Quarterly Sample Size	357
Monthly Sample Size	119
Population Per Quarter	**5,001–10,000**
Quarterly Sample Size	370
Monthly Sample Size	124
Population Per Quarter	**≥ 10,001**
Quarterly Sample Size	377
Monthly Sample Size	126

Table 3: Sample Size Requirements per Quarter per Hospital for OP-18

Population Per Quarter	**0–900**
Quarterly Sample Size	63
Monthly Sample Size	21
Population Per Quarter	**≥ 901**
Quarterly Sample Size	96
Monthly Sample Size	32

Table 4: Sample Size Requirements per Year per Hospital for OP-29 and OP-31*

Population Per Year	**0–900**
Yearly Sample Size	63
Quarterly Sample Size	16
Monthly Sample Size	6
Population Per Year	**≥ 901**
Yearly Sample Size	96
Quarterly Sample Size	24
Monthly Sample Size	8

***If a hospital has 20 or fewer cases**, it is not required to submit any data, but it may voluntarily submit these data.

Sampling Approaches

OP-29 and OP-31

Hospitals have the option to sample from their population or submit their entire population. Hospitals that choose to sample for these measures should use a simple sample approach, selecting the population from cases that meet requirements to be included in the denominator. Once the population has been determined, the sample size will be determined based on Table 4 and will either be 63 or 96 cases for the year. This will constitute an acceptable sample methodology and will meet the annual reporting size requirements. If hospitals choose to select data monthly or quarterly, one option they can use is to select the first month of each quarter/year until they meet the annual reporting requirements.

Sample Size Examples

OP-18

- A hospital's outpatient population size for OP-18 is 700 during the third quarter. According to Table 3, the required quarterly sample size would be 63 cases per quarter. The same hospital has an outpatient population size for OP-18 of 2,000 during the fourth quarter. The hospital had an increase in population size of 1,300 between quarters three and four; the required quarterly sample size would be 96 because the quarterly sample size has been capped at 96 for population sizes of equal to or greater than 901.

OP-29 and OP-31

- A hospital's outpatient population size for OP-29 or OP-31 is 430 during the year. If a hospital elects to sample monthly based on Table 4, the monthly sample size would be a minimum of six patients per month. The hospital is ultimately responsible for meeting the yearly sample size requirement, which is a minimum of 63 patients for the year.
- A hospital's outpatient population size for OP-29 or OP-31 is 950 during the year. According to Table 4, the required yearly sample size would be 96 cases.
- A hospital's outpatient center performs 950 cataract operations during the year; 800 patients complete a pre- and post-operative visual function survey. Select 96 patients out of the 800 patients that have completed both surveys to determine the denominator and meet the required annual sample size.

Sampling Approaches

As previously stated in this section, hospitals have the option to sample from their population or submit their entire population. Hospitals that choose to sample must ensure that the sampled data represents their outpatient population by using either the simple random sampling or systematic random sampling method

and that the sampling techniques are applied consistently within a quarter. For example, quarterly samples for a sampling population must use consistent sampling techniques across the quarterly submission period.

- Simple random sampling – Selecting a sample size (*n*) from the population of size (*N*) in such a way that every case has the same chance of being selected.
- Systematic random sampling – Selecting every k^{th} record from a population size (*N)* in such a way that a sample size of *n* is obtained, where $k = N/n$ rounded to the lower digit. The first sample record (i.e., the starting point) must be randomly selected before taking every k^{th} record. This is a two-step process:
    1. Randomly select the starting point by choosing a number between one and *k* using a table on random number or a computer-generated random number, then
    2. Select every k^{th} record thereafter until the selection of the sample size is completed.

Each hospital is ultimately responsible that the sampling techniques applied for their hospital adhere to the sampling requirements outlined in this manual. Performance measurement systems are responsible for ensuring that the sampling techniques are applied consistently across their client hospitals.

Transmission of Outpatient Population and Sample Data Elements
Refer to the *QualityNet* website or the Hospital Outpatient Quality Measure Data Transmission section of this manual for the most current CMS Hospital OQR Program submission requirements for transmission of outpatient population and sample count data elements to the CMS Clinical Data Warehouse. Transmission of outpatient population and sample count data elements are used to assist in evaluating completeness of submission in accordance with CMS sampling requirements.

All ICD-10-CM diagnosis codes and CPT® codes included in the appropriate outpatient population definition must be applied. This identification process must be completed prior to the application of a data integrity filter, outpatient measure set exclusions, and sampling methodology. For specific definitions, refer to the appropriate outpatient population in this manual.

The outpatient population and sample data elements are:

- *Outpatient Population Size – Medicare Only*
- *Outpatient Population Size – Non-Medicare Only*
- *Outpatient Sampling Frequency*
- *Outpatient Sample Size – Medicare Only*
- *Outpatient Sample Size – Non-Medicare Only*

Outpatient Sampling Frequency indicates whether the hospital sampled its original population, whether the entire population was used for the specific time period, or the hospital had five or fewer encounters for the encounter quarter and did not submit patient-level data.

Outpatient Population and Sample Size Examples

Example 1 – Hospital does not sample
A hospital uses the OP-23 CPT® Codes (as listed in Appendix A, Table 8.0) and patient age to identify 125 cases in the OP-23 outpatient population during the second quarter. The hospital does not sample the OP-23 measure, so data for all 125 cases are collected and used to calculate the hospital's rate for the outpatient measure set. Forty of the 125 cases in the OP-23 outpatient population are Medicare patients.

The breakdown of data by month and Medicare/Non-Medicare:

	April	May	June	**Total**
Outpatient Population – Medicare patients	10	15	15	**40**
Outpatient Population – Non-Medicare patients	20	30	35	**85**
Total Outpatient Population Size	**30**	**45**	**50**	**125**
Outpatient Sample Size – Medicare patients	10	15	15	**40**
Outpatient Sample Size – Non-Medicare patients	20	30	35	**85**
Total Sample Size	**30**	**45**	**50**	**125**

The following is transmitted for each month in the quarter:

	April	**May**	**June**
Outpatient Population Size – Medicare only	10	15	15
Outpatient Population Size – Non-Medicare only	20	30	35
Outpatient Sampling Frequency (2 = not sampling)	2	2	2
Outpatient Sample Size – Medicare only	10	15	15
Outpatient Sample Size – Non-Medicare only	20	30	35

Example 2 – Hospital samples

A hospital uses the OP-23 CPT® Codes (as listed in Appendix A, OP Table 8.0) and patient age to identify 125 cases in the OP-23 outpatient population during the second quarter. From these 125 cases, the hospital randomly selects a sample of 95 cases. Data for these 95 cases are collected and are then used to calculate the hospital's rate for each OP-23 outpatient measure. Forty of the 125 cases in the OP-23 outpatient population are Medicare patients, and 25 of these cases were included in the sample.

The breakdown of data by month and Medicare/Non-Medicare:

	April	**May**	**June**	**Total**
Outpatient Population – Medicare patients	10	15	15	**40**
Outpatient Population – Non-Medicare patients	20	30	35	**85**
Total Outpatient Population Size	**30**	**45**	**50**	**125**
Outpatient Sample Size – Medicare patients	5	10	10	**25**
Outpatient Sample Size – Non-Medicare patients	15	25	30	**70**
Total Sample Size	**20**	**35**	**40**	**95**

The following is transmitted for each month in the quarter:

	April	**May**	**June**
Outpatient Population Size – Medicare only	10	15	15
Outpatient Population – Non-Medicare only	20	30	35
Outpatient Sampling Frequency (1 = sampled data)	1	1	1
Outpatient Sample Size –Medicare only	5	10	10
Outpatient Same Size – Non-Medicare only	15	25	30

Hospital Outpatient Quality Measure Data Transmission

Introduction

This section of the manual is provided to highlight the unique data transmission specifications for hospital outpatient measure data for the Centers for Medicare & Medicaid Services (CMS) and the Hospital Quality Reporting (HQR) system.

This section is divided into three parts: Guidelines for Submission of Data, Transmission Data Element List, and Transmission Data Processing Flow.

The Guidelines for Submission of Data section provides the user with the data standards required for submission to HQR. It includes an overview of the data required for submission HQR, as well as the Hospital Outpatient Clinical Data XML file layout and the *Hospital Outpatient Population Data XML File Layout*.

The Transmission Data Element List describes the data elements that are either used to identify the hospital and hospital outpatient measure set associated to the transmitted data or is calculated by the vendor using the hospital's patient-level data and measure results. These data elements are not used in the Population Algorithms or Measure Algorithms.

The Transmission Data Processing Flow contains information regarding the order in HQR evaluates the Hospital Outpatient measures.

IMPORTANT SUBMISSION ALERT!!

To submit Hospital Outpatient Quality Reporting (OQR) Program measures to CMS, files must meet the specifications found only in this CMS manual. Otherwise, the files will be rejected for not meeting CMS quality data submission requirements and providers may not receive the full payment update.

Guidelines for Submission of Data

Data collected for CMS are transmitted to the Hospital Quality Reporting (HQR) Data Submission File. All data submitted are required to meet transmission requirements. The file layout requirements are included in this section.

Submission Threshold

In order to reduce the burden on hospitals that treat a low number of patients but otherwise meet the submission requirements for a particular quality measure, hospitals that have five or fewer cases in a quarter (both Medicare and non-Medicare) for any measure set (i.e., Stroke) will **not** be required to submit patient-level data for the entire measure set for that quarter.

Submission of Hospital Outpatient Clinical Data

Hospital outpatient clinical data are submitted to the HQR Data Submission File on a quarterly submission schedule. All clinical data submitted to HQR must adhere to the *Hospital Outpatient Clinical Data XML File Layout* specifications provided later in the transmission section.

Each case must have a separate XML file. For example, if you have 12 records that you have abstracted, you must have 12 separate XML files. If you have abstracted more than one hospital outpatient measure set for a patient encounter, then a separate XML file must be created for each hospital outpatient measure set. Each hospital outpatient measure can only be abstracted once for the same medical record.

Submission of Hospital Outpatient Population Data
CMS collects population size and declaration of sampling by hospital outpatient measure set on a quarterly basis. For hospitals submitting the Hospital Outpatient Population Data, information may be submitted via an XML file to HQR. All population data submitted to HQR must adhere to the *Hospital Outpatient Population Data XML File Layout* specifications provided later in the transmission section. Each file may contain data for only one provider.

Additional guidelines related to the submission of Hospital Outpatient Clinical Data and Hospital Outpatient Population Data are outlined below.

Overview
The guidelines below are for the submission of Hospital Outpatient Clinical Data and Hospital Outpatient Population Data to CMS.

Data Submission Verification
Prior to processing measure outcomes, all data will be verified according to the rules in the Data Transmission section and the edits documents. Cases submitted to HQR that do not meet the requirements outlined in these documents will be rejected.

Requirements for XML Tags and Associated Data
Do not put spaces between XML tags and associated data. Cases with inappropriate spaces will be rejected from HQR.

Export File Character Limitations
Cases exported for submission to HQR may not have greater than 50 characters in the file name.

Missing Data Policy
All cases submitted to HQR must have all data required to calculate the measures. Files submitted, which are missing data required to calculate measures (any case that would result in a Measure Category X assignment), will be rejected from the warehouse. These cases should be reviewed by the provider, corrected, and resubmitted prior to the submission deadline with an allowable value indicated for any data element that was missing. Please refer to the Missing and Invalid Data Section for additional information.

Required Patient Identifiers Based on Payment Source
All cases submitted to HQR are required to include the Patient Identifier. Please refer to the Data Dictionary for the definition of this data element.

Unique Record Key (What fields make a record unique?)
CMS Certification Number, Patient Identifier, Arrival Time, Outpatient Encounter Date, and Outpatient Measure Set.

Principal and Other Diagnosis Codes
Effective March 1, 2007, the National Uniform Billing Committee implemented a Present on Admission (POA) indicator for Principal and other Diagnosis codes. These POA indicators do not apply to outpatient billing and should not be present on outpatient claims. Therefore, data submitted to HQR must have any POA Indicator removed prior to submission. Failure to remove the indicator will result in cases being rejected from HQR.

Hospital Outpatient Clinical Data XML File Layout
The XML file layout is divided into the following sections. Please refer to the Hospital Outpatient Clinical Data XML file layout example for details on how the file elements are nested.

Submission – Parent element. This is a **required** element.

The following attributes identify the initiative and file content of this element:

1. **type** – Describes the setting for which the data are being submitted (OUTPATIENT).
2. **data** – Describes the type of data being submitted (CLINICAL).
3. **version** – The version of the file layout (1.0).
4. **action-code** – Describes the intended action of the file being submitted (ADD or DELETE).
   Note: In order to replace or delete an existing case utilizing the action–code ADD or DELETE, the following data element values must match:
   - *CMS Certification Number (provider-id),*
   - *Patient Identifier (patient-id),*
   - *Arrival Time (arrival-time),*
   - *Encounter Date (encounter-date),* and
   - *Measure Set (encounter measure-set).*

file-audit-data – Sub-element of "*submission*" used to identify file characteristics. This sub-element is **not required** for the parent element "*submission"* and has no attributes.

The following identifies the file content on the "*file-audit-data"* sub-element. This file content is **not a required** sub-element of *"file-audit-data"* and has attributes.

1. **create-date –** Sub-element of "*file-audit-data*" identifying the month, day, and year the file was created.
2. **create-time –** Sub-element of "*file-audit-data*" identifying the hour and minutes representing the time the file was created.
3. **create-by –** Sub-element of "*file-audit-data*" identifying the entity creating the file.
4. **version –** Sub-element of "*file-audit-data*" identifying the version of the file being submitted.
5. **create-by-tool –** Sub-element of "*file-audit-data*" identifying the tool used to create the file.

abstraction-audit-data – Sub-element of "*submission*" identifying characteristics of the abstraction. This sub-element is not required for the parent element "*submission*" and has no attributes.

The following identifies the file content of the "*abstraction-audit-data*" sub-element. This file content is **not a required** sub-element of "*abstraction-audit-data*" and has no attributes.

1. **abstraction-date –** Sub-element of "*abstraction-audit-data*" identifying the month, day, and year the abstraction was created.
2. **abstractor-id –** Sub-element of "*abstraction-audit-data*" identifying the abstractor.
3. **total-abstraction-time –** Sub-element of "*abstraction-audit-data*" identifying the total time in seconds required to abstract the information,
4. **comment –** Sub-element of "*abstraction-audit-data*" containing abstractor comments.

provider – Required sub-element of "*submission*" identifying provider, patient, and encounter information. This sub-element and the file content listed below have no attributes.

1. **provider-id – Required** sub-element of "*provider*" identifying the provider's CMS Certification Number (CCN).
2. **npi –** Sub-element of "*provider*" identifying the provider's National Provider Identifier (NPI). This is not a required sub-element of "*provider.*"

patient – Required sub-element of "*provider*" identifying patient demographics. This sub-element has no attributes.

1. **first-name –** Sub-element of "*patient*" providing the patient's first name. This is not a required sub-element of "*patient*" and has no attributes.

2. **last-name** – Sub-element of "*patient*" providing the patient's last name. This is not a required sub-element of "*patient*" and has no attributes.
3. **birthdate** – Sub-element of "*patient*" providing the patient's birthdate. This is a **required** sub-element of "*patient*" and has no attributes.
4. **sex-birth** – Sub-element of "*patient*" identifying the patient's sex assigned at birth. This is a **required** sub-element of "*patient*" and has no attributes.
5. **gender-identity** – Sub-element of "*patient*" describing the gender-identity of the patient. This is not a required sub-element of "*patient*" and has no attributes.
6. **sexual-orientation** – Sub-element of "*patient*" describing the patient's sexual orientation. This is not a required sub-element of "*patient*" and has no attributes.
7. **race** – Sub-element of "*patient*" identifying the patient's race. This is a **required** sub-element of "*patient*" and has no attributes.
8. **ethnic** – Sub-element of "*patient*" identifying the patient's Hispanic ethnicity. This is a **required** sub-element of "*patient*" and has no attributes.
9. **postal-code** – Sub-element of "*patient*" providing the patient's ZIP code. This is a **required** sub-element of "*patient*" and has no attributes.

encounter – Required sub-element of "*patient*" identifying the measure set and the patient's abstracted data. The following attributes identify the initiative and file content of this element:

1. **measure set** – Identifies the measure set for which the data were abstracted. The attribute of "encounter" identifies the measure set.
2. **encounter-date – Required** sub-element of "encounter" identifying the month, day, and year the patient encounter occurred. This sub-element has no attributes.
3. **arrival-time – Required** sub-element of "*encounter*" providing the patient's arrival time. This sub-element has no attributes.
4. **patient-id – Required** sub-element of "*encounter*" identifying the patient associated with the abstracted data. This sub-element has no attributes.

detail – Required sub-element of "*encounter*" identifying the provider-abstracted information. The following attributes of "*detail*" identify the abstracted information.

1. **question-cd** – Question being asked of the abstractor.
2. **answer-cd** – Answer identification code provided by the abstractor.
3. **row-number** – Sequential number identifying each response to a multiple answer question.

answer-value – Sub-element of "*detail*" providing the answer value text attributable to the answer-cd. This is **not a required** sub-element of "detail" and has no attributes

Example of nested Hospital Outpatient Clinical XML file elements:

- submission (plus attributes type, data, version, and action-code)
  - file-audit-data
    - create-date
    - create-time
    - create-by
    - version
    - create-by-tool
  - abstraction-audit-data
    - abstraction-date
    - abstractor-id
    - total abstraction-time

- comment
- provider
  - provider-id
  - npi
  - patient
    - first-name
    - last-name
    - birthdate
    - sex-birth
    - gender-identity
    - sexual-orientation
    - race
    - ethnic
    - postal-code
    - encounter (plus attribute measure-set)
      - encounter-date
      - arrival-time
      - patient-id
      - detail (plus attributes answer-code, question-cd, row-number)
        - answer-value

To obtain further information about these questions and their possible attribute values, refer to the applicable data element names (as identified in the first column, Question of the Clinical Data Elements worksheet) in Section 2, Data.

Hospital Outpatient Population Data XML File Layout

The XML file layout is divided into the following sections. Please refer to the *Hospital Outpatient Population Data XML File Layout* example for details on how the file elements are nested.

submission – Parent element. This element **is required.**

The following attributes identify the initiative and file content of this element.

1. **type –** Describes the setting for which the data are being submitted (OUTPATIENT).
2. **data –** Describes the type of data being submitted (POPULATION).
3. **version –** The version of the file layout (1.0).
4. **action-code –** Describes the intended action of the file being submitted (ADD).
   Note: In order to replace an existing case utilizing the action-code ADD, the following data element values must match.
   - *CMS Certification Number* (provider-id),
   - Time period start date (time-period start-date),
   - Time period end date (time-period end-date), and
   - *Measure Set* (encounter measure-set).

file-audit-data – Sub-element of "submission" used to identify file characteristics of the file. This sub-element and the file content listed below **are not required** and have no attributes.

The following identify the file content of the "*file-audit-data*" sub-element:

1. **create-date –** Sub-element of "*file-audit-data*" identifying the month, day, and year the file was created.
2. **create-time –** Sub-element of "*file-audit-data"* identifying the hours and minutes representing the time the file was created.

3. **create-by –** Sub-element of "*file-audit-data"* identifying the entity creating the file.
4. **version –** Sub-element of "*file-audit-data*" identifying the version of the file being submitted.
5. **create-by-tool –** Sub-element of "*file-audit-data*" identifying the tool used to create the file.

provider – **Required** sub-element of "*submission*" identifying encounter period and population data. There are no attributes for this element.

1. **provider-id –** Sub-element of "*provider*" identifying the provider.
2. **npi –** Sub-element of "*provider"* identifying the provider's National Provider Identifier (NPI). This is not a required sub-element of "provider."

time-period – **Required** sub-element of "*provider*" with attributes of delimiting the encounter period.

1. **start-date –** The starting month, day, and year for the encounters associated with the submitted data.
2. **end-date –** The ending month, day, and year for the encounters associated with the submitted data. **Note:** Dates in these fields should reflect the encounter time period related to the data being submitted. Time period start and end dates must reflect full month increments and not be greater than one month. Files submitted to HQR are required to contain three one-month time-periods comprising the calendar quarter for which data are being submitted.
   Example
   If the Hospital Outpatient Population Data file is being submitted for the second quarter of 2025, the file must contain the following time periods and appropriate associated data (including all data elements as the Population Details section that follows):
   April 2025
   May 2025
   June 2025

   Files submitted with time periods that do not meet the above requirements will be rejected from HQR.

encounter – **Required** sub-element of "*time-period*" identifying the measure set and the population. The following attributes identify the file content of this element:

1. **measure set –** Identifies the outpatient measure set for which the case was abstracted.
2. **population size**– **Required** sub-element of "*encounter*" identifying population components. There are no attributes for this element.
   a. **Medicare** – **Required** sub-element of "*population-size*" identifying the numbers of Medicare submissions. There are no attributes for this element.
   b. **non-Medicare** – **Required** sub-element of "*population-size*" identifying the number of non-Medicare submissions. There are no attributes for this element.
3. **sampling frequency** – **Required** sub-element of "*encounter*" identifying if the provider is sampling. This sub-element has no attributes.
4. **sample-size** – **Required** sub-element of "*encounter*" identifying sampled population sizes. This sub-element has no attributes.
   a. **Medicare** – **Required** sub-element of "*sample-size*" identifying the number of Medicare submissions in the sample. There are no attributes for this element.
   b. **non-Medicare** – **Required** sub-element of "*sample-size*" identifying the number of non-Medicare submissions in the sample. There are no attributes for this element.

Example of nested Hospital Outpatient Population XML file elements:
The XML file elements are nested as follows:

- submission (plus attributes type, data, version, and action-code)

- file-audit-data
  - create-date
  - create-time
  - create-by
  - version
  - create-by-tool
- provider
  - provider-id
  - npi
  - time period (plus attributes start-date and end-date)
    - encounter (plus attribute measure-set)
    - population-size
      - Medicare
      - non-Medicare
    - sampling-frequency
    - sample-size
      - Medicare
      - non-Medicare

Please refer to the Transmission Data Element List for further definition of the data elements. Please refer to *Hospital Outpatient Population Data XML File Layout* for further information on details of the XML file format. All data elements are based on encounters that occurred during the associated time period.

Measures Submitted Via a Web-Based Tool
Annual Data Submission Period: See the timeline posted to QualityNet.CMS.gov for these measures; select Hospital Outpatient and then Data Submission in the drop-down menu.

Submission Instructions: Data entry will be achieved through the Hospital Quality Reporting (HQR) system via an online tool available to authorized users. After logging into the system using HARP credentials:

1. Log into the Hospital Quality Reporting (HQR) system.
2. Select *Data Submission* under the *Dashboard* drop-down menu.
3. Select the Web-based Measures tab.
4. Click on *Data Form.*
5. Select the OQR Launch Data Form option.
6. View the Web-based measures and answer each of the required measure questions:

   OP-22*, OP-29, OP-31**

   * The Emergency Department Volume (EDV) is based on the volume of patients submitted by a hospital as the Denominator used for the measure OP-22: Left without Being Seen.
   ** Data submission for OP-31 is voluntary
   All measure data must be submitted by the deadline.

Data Submitted for *Outpatient and Ambulatory Surgery Consumer Assessment (OAS CAHPS)*
Hospitals contract with a CMS-approved OAS CAHPS Survey vendor to conduct the survey. A list of approved survey vendors is available at the following link: https://oascahps.org/General-Information/Approved-Survey-Vendors.

Beginning with CY 2024 reporting period, hospitals are required to report quarterly data by the submission deadlines provided on the OAS CAHPS website. Data deadlines are also available in Hospital Outpatient Quality Reporting tab on QualityNet.cms.gov.

Data Submitted for *Electronic Clinical Quality Measures (eCQM)*

Beginning with CY 2024 reporting period, hospitals are required to report one self-selected calendar quarter for OP-40: ST-elevation myocardial infarction (STEMI) data. For CY 2025 reporting period the requirement increases to two self-selected calendar quarters of data, followed by three required quarters in CY 2026 and all four quarters beginning with CY 2027 reporting period. For more information on the adoption of OP-40 eCQM, please refer to the CY 2022 OPPS/ASC Final Rule, beginning on page 63837, published in the Federal Register.

Refer to the Technical Specifications and Resources for the CMS Quality Reporting Document Architecture (QRDA) Category I Implementation Guide for the applicable reporting period, measure specification information, and program resources to support successful eCQM reporting on the eCQI Resource Center.

Transmission Data Element List

These data elements are used either to identify the hospital and hospital outpatient measure set associated with the transmitted data or are calculated by the vendor using the hospital's patient-level data measure results. These data elements are not used in the Outpatient Population Algorithms or Measure Algorithms.

Element Name	Page #	Collected For:
CMS Certification Number	5-10	All Records
National Provider Number (NPI)	5-11	Optional for All Records
Outpatient Measure Set	5-12	Used in transmission of the Hospital Outpatient Population Data XML file and the Hospital Outpatient Clinical Data XML file
Outpatient Population Size – Medicare Only	5-13	Used in transmission of the Hospital Outpatient Population Data XML file
Outpatient Population Size – Non-Medicare Only	5-14	Used in transmission of the Hospital Outpatient Population Data XML file
Outpatient Sample Size – Medicare Only	5-15	Used in transmission of the Hospital Outpatient Population Data XML file
Outpatient Sample Size – Non-Medicare Only	5-16	Used in transmission of the Hospital Outpatient Population Data XML file
Outpatient Sampling Frequency	5-17	Used in transmission of the Hospital Outpatient Population Data XML file

IMPORTANT SUBMISSION ALERT!!

To submit Hospital Outpatient Quality Reporting (OQR) Program measures to CMS, files must meet the specifications found only in this CMS manual. Otherwise, the files will be rejected for not meeting CMS quality data submission requirements and providers may not receive the full payment update.

Data Element Name: ***CMS Certification Number***

Collected For: All records

Definition: Hospital's six-character acute care CMS Certification Number (CCN).

Suggested Data Collection Question: What is the hospital's six-character acute care CMS Certification Number?

Format:
Length: 6
Type: Character
Occurs: 1

Allowable Values:
Any valid six-character CMS Certification Number.

The first two digits are the numeric or alphanumeric state code. The third digit of zero represents an acute facility. The third digit of "1" and fourth digit of "3" represents a Critical Access Hospital (CAH).

Notes for Abstraction: None

Suggested Data Sources: None

Inclusion Guidelines for Abstraction: None

Exclusion Guidelines for Abstraction: None

Data Element Name: ***National Provider Identifier (NPI)***

Collected For: Optional for all records

Definition: All Health Insurance Portability and Accountability Act of 1996 (HIPAA) covered healthcare providers must obtain an NPI. The NPI may be provided in addition to the Medicare provider number.

Suggested Data Collection Question: What is the NPI for this provider?

Format:
Length: 10
Type: Character
Occurs: 1

Allowable Values: Any valid 10-digit NPI number.

The 10th digit is a numeric check digit based off the first 9 digits.

Notes for Abstraction: None

Suggested Data Sources: UB-04, Field Location: 56

Inclusion Guidelines for Abstraction: None

Exclusion Guidelines for Abstraction: None

Data Element Name: ***Outpatient Measure Set***

Collected For: Used in transmission of the Hospital Outpatient Population Data XML file and the Hospital Outpatient Clinical XML file.

Definition: Indicates which hospital outpatient measure set is being transmitted for the hospital.

Suggested Data Collection Question: Not Applicable.

Format:
Length: 22
Type: Character
Occurs**:** 1

Allowable Values: Refer to the Hospital Outpatient Clinical Data XML file and the Hospital Outpatient Population Data XML file layouts located just after the Transmission Data Processing Flow portion of this section.

Notes for Abstraction: None

Suggested Data Sources: Not Applicable

Inclusion Guidelines for Abstraction: None

Exclusion Guidelines for Abstraction: None

Data Element Name: ***Outpatient Population Size – Medicare Only***

Collected For: Used in transmission of the Hospital Outpatient Population Data XML file.

Note: Refer to the Hospital Outpatient Population Data XML file layout located just after the Transmission Data Processing Flow portion of this section.

Definition: Indicates the number of encounter records identified for a hospital with Medicare listed as a payment source prior to the application of data integrity filters, measure exclusions, and/or sampling methodology for the specified time period.

The data element is based on the hospital's initial identification of Medicare encounter records for a hospital outpatient measure set. *Outpatient Population Size – Medicare Only* includes all patients that are billed under Medicare or Title 18. Medicare can be listed as a primary, secondary, tertiary, or lower on the list of payment sources for the patient. In addition, patients who are participating as a member of a Medicare HMO/Medicare Advantage are included in the Medicare counts (e.g., Medicare Blue, Humana Gold, Secure Horizons, AARP, Coventry Advantra). This initial data pull utilizes administrative data such as ICD-10-CM diagnosis codes, CPT® codes, outpatient encounter date, and birthdate.

For specific hospital outpatient measure set definitions, refer to the appropriate outpatient population discussion in the Measure Information section of this manual.

Note: If the hospital's data have been sampled, this field contains the population from which the sample was originally drawn, **not** the sample size.

Suggested Data Collection Question: Not Applicable.

Format:
Length: 6
Type: Numeric
Occurs: One *Outpatient Population Size – Medicare Only* per hospital outpatient measure set

Allowable Values: 0 through 999,999

Notes for Abstraction: *Outpatient Population Size – Medicare Only* must contain the actual number of patients in the population.

Suggested Data Sources: Not Applicable

Inclusion Guidelines for Abstraction: None

Exclusion Guidelines for Abstraction: None

Data Element Name: ***Outpatient Population Size – Non-Medicare Only***

Collected For: Used in transmission of the Hospital Outpatient Population Data XML file.

Note: Refer to the Hospital Outpatient Population Data XML file layout located just after the Transmission Data Processing Flow portion of this section.

Definition: Indicates the number of encounter records identified for a hospital with Medicare **not** listed as a payment source prior to the application of data integrity filters, measure exclusions, and/or sampling methodology for the specified time period.

The data element is based on the hospital's initial identification of non-Medicare encounter records for a hospital outpatient measure set. This initial data pull utilizes administrative data such as ICD-10-CM diagnosis codes, CPT® codes, outpatient encounter date, and birthdate.

For specific hospital outpatient measure set definitions, refer to the appropriate outpatient population discussion in the Measure Information section of this manual.

Note: If the hospital's data have been sampled, this field contains the population from which the sample was originally drawn, **not** the sample size.

Suggested Data Collection Question: Not Applicable.

Format:
Length: 6
Type: Numeric
Occurs: One *Outpatient Population Size – Non-Medicare Only* per hospital outpatient measure set

Allowable Values: 0 through 999,999

Notes for Abstraction: *Outpatient Population Size – Non-Medicare Only* must contain the actual number of patients in the population.

Suggested Data Sources: Not Applicable

Inclusion Guidelines for Abstraction: None

Exclusion Guidelines for Abstraction: None

Data Element Name: ***Outpatient Sample Size – Medicare Only***

Collected For: Used in transmission of the Hospital Outpatient Population Data XML file.

Note: For more information, refer to the Population and Sampling Specifications section and the Hospital Outpatient Population Data XML file layout located just after the Transmission Data Processing Flow portion of this section.

Definition: Indicates the number of encounter records identified for a hospital with Medicare listed as a payment source for a hospital to perform data abstraction on. This count is after the appropriate sampling methodology, if any, has been applied for the specific time period.

Notes:
- If the hospital is sampling the hospital outpatient measure set, then the *Outpatient Sample Size – Medicare Only* will be less than the *Outpatient Population Size – Medicare Only* for the hospital outpatient measure set.
- If the hospital is not sampling the hospital outpatient measure set, then the *Outpatient Sample Size – Medicare Only* will equal the *Outpatient Population Size – Medicare Only* for the hospital outpatient measure set.

Suggested Data Collection Question: Not Applicable.

Format:
Length: 6
Type: Numeric
Occurs: One *Outpatient Sample Size – Medicare Only* per hospital outpatient measure set

Allowable Values: 0 through 999,999

Notes for Abstraction: When *Outpatient Sampling Frequency* = "N/A" because the hospital decided to not submit patient-level data, *Outpatient Sample Size – Medicare Only* equals zero.

Suggested Data Sources: Not Applicable

Inclusion Guidelines for Abstraction: None

Exclusion Guidelines for Abstraction: None

Data Element Name: ***Outpatient Sample Size – Non-Medicare Only***

Collected For: Used in transmission of the Hospital Outpatient Population Data XML file.

Note: For more information, refer to the Population and Sampling Specifications section and the Hospital Outpatient Population Data XML file layout located just after the Transmission Data Processing Flow portion of this section.

Definition: Indicates the number of encounter records identified for a hospital with Medicare **not** listed as a payment source for a hospital to perform data abstraction on. This count is after the appropriate sampling methodology, if any, has been applied for the specific time period.

Notes:
- If the hospital is sampling the hospital outpatient measure set, then the *Outpatient Sample Size – Non-Medicare Only* will be less than the *Outpatient Population Size – Non-Medicare Only* for the hospital outpatient measure set.
- If the hospital is not sampling the hospital outpatient measure set, then the *Outpatient Sample Size – Non-Medicare Only* will equal the *Outpatient Population Size – Non-Medicare Only* for the hospital outpatient measure set.

Suggested Data Collection Question: Not Applicable.

Format:
Length: 6
Type: Numeric
Occurs**:** One *Outpatient Sample Size – Non-Medicare Only* per hospital outpatient measure set

Allowable Values: 0 through 999,999

Notes for Abstraction: When *Outpatient Sample Frequency* = "N/A" because the hospital decided not to submit patient-level data, *Outpatient Sample Size – Non-Medicare Only* equals zero.

Suggested Data Sources: Not Applicable

Inclusion Guidelines for Abstraction: None

Exclusion Guidelines for Abstraction: None

Data Element Name: ***Outpatient Sampling Frequency***

Collected For: Used in transmission of the Hospital Outpatient Population Data XML file.

Note: Refer to the Population and Sampling Specifications section and the Hospital Outpatient Population Data XML file layout located just after the Transmission Data Processing Flow portion of this section.

Definition: Indicates if the data being transmitted for a hospital have been sampled or represent an entire population for the specified time period.

Suggested Data Collection Question: Not Applicable.

Format:
Length: 1
Type: Character
Occurs: One *Outpatient Sampling Frequency* per hospital outpatient measure set

Allowable Values:
1. Yes, the hospital is sampling.
2. No, the hospital is not sampling.
3. N/A, submission of patient-level data is not required.

Notes for Abstraction: Hospitals that have five or fewer cases (both Medicare and non-Medicare) for any measures included in a measure topic (i.e., ED and Stroke) in a quarter will not be required to submit patient-level data for the entire measure topic for that quarter. For example, hospitals with five or fewer cases (both Medicare and non-Medicare) for the ED measure topic in a quarter will not be required to submit patient-level data for that quarter.

Suggested Data Sources: Not Applicable

Inclusion Guidelines for Abstraction: None

Exclusion Guidelines for Abstraction: None

Transmission Data Processing Flow

Introduction

This section contains information regarding the order in which the Hospital Quality Reporting (HQR) system evaluates the hospital outpatient measures.

The data processing flow ensures that only valid data are used in the measure algorithms. Each case that is rejected by the process will be listed on a report along with a brief description of the problem. HQR has reports available to assist the submitter to determine how the data were processed. Please refer to QualityNet.cms.gov for more information about the CMS HQR system, data upload process, and these reports.

Data Processing Flow

All data transmitted pass through the following process:

1. If appropriate, files are verified to be proper ZIP and XML files.
   - If the files are invalid, reject the files(s) and stop processing.
   - If the files are valid, continue processing.

Starting with this step, processing is per case (individual XML file):

2. Data are evaluated to ensure the quarter associated to the *Outpatient Encounter Date* is open for data transmission.
   - If the encounter date is missing or not valid per the calendar year, issue the appropriate critical error message, reject the individual XML file, and stop processing.
   - If the encounter date is valid per the calendar year, continue processing.
   - If the Data Collection quarter is closed, issue the appropriate critical error message, reject the individual XML file, and stop processing.
   - If the Data Collection quarter is open, continue processing.
3. Data are evaluated to ensure the *Outpatient Measure Set* is expected from the submitter for the time frame (*Outpatient Encounter Date*) in question. In addition, HQR verifies the data are expected for *CMS Certification Number*.
   - If the data are not expected, missing, or invalid, issue the appropriate critical error message, reject the individual XML file, and stop processing.
   - If the data are expected, continue processing.
4. Check the action-code.
   - If the action-code = ADD, continue with step #5.
   - If the action-code = DELETE, check submission data type.
   - If the submission data type = POPULATION, issue appropriate critical message and reject file(s).
   - If the submission data type = CLINICAL, continue with step # 13.

The following steps are performed if the record's action-code = ADD:

5. The general data elements, as defined in the Data Dictionary section, are evaluated to ensure they exist and contain valid allowable values. These data elements are generally required for all hospital outpatient measures (with the exception of NPI).
   - If any general data element is missing or invalid, issue the appropriate critical error message(s), reject the individual XML file, and stop processing.
   - If all general data elements exist and contain valid allowable values, continue processing.

6. The Outpatient Population Algorithm associated to the *Outpatient Measure Set* is evaluated to ensure that the data are in the population of the set. Refer to the appropriate *Outpatient Measure Set* Data Element List for the algorithm.
   - If the Outpatient Population Algorithm returns an **Outpatient Population Reject Case Flag** = Yes (case is not in the outpatient population), reject the XML file and stop processing.
   - If the Outpatient Population Algorithm returns an **Outpatient Population Reject Case Flag** = No (case is not in the outpatient population), reject the XML file and stop processing.
7. The *Outpatient Measure Set* specific data elements are evaluated to ensure they contain valid allowable values. This step does not evaluate for missing data because that process is performed by the measure algorithms.
   - If any *Outpatient Measure Set* specific data elements are invalid, issue the appropriate critical error message(s), set the Edit Reject Case Flag = Yes, and continue processing with step #8.
   - If all *Outpatient Measure Set* specific data elements contain valid allowable values, continue processing.
8. If appropriate for the *Outpatient Measure Set*, grid data elements are evaluated to ensure each row does not contain missing data. This step does not ensure that the entire grid is empty because that process is performed by the measure algorithms.
   - If any row of the grid is missing data, issue the appropriate critical error message(s), set the Edit Reject Case Flag = Yes, and continue processing with step #9.
   - If all data elements exist in each row, continue processing.
9. Each XML file is evaluated for unexpected data. While a case may be in the population of more than one outpatient measure set, each XML file is associated to only one set.
   - If any data exist that are not expected for the Outpatient Measure Set, issue the appropriate critical error message(s), set the Edit Reject Case Flag = Yes, and continue processing with step #10.

   If no unexpected data for the *Outpatient Measure Set* exist, continue processing.
10. Evaluate the Edit Reject Case Flag.
    - If the Edit Reject Case Flag = Yes, issue the appropriate critical error message(s), reject the individual XML file, and stop processing.
    - If the Edit Reject Case Flag = No, continue with step #11.
11. Execute each measure algorithm associated to the measures the hospital has selected for the *Outpatient Measure Set*. Refer to the appropriate Measure Information Forms for the *Outpatient Measure Set* for the measure algorithms.
    - If any measure evaluates with a Measure Category Assignment = X, reject the XML file and stop processing.
    - If all measures evaluate with Measure Category Assignment = B, D, E, and/or Y, continue processing.
12. The case is accepted into the HQR system.

The following steps are performed if the record's action-code = DELETE:

13. The remaining data elements that are part of the Unique Record Key are evaluated to ensure they exist and contain valid allowable values. These data elements are required for all *Outpatient Measure Sets*.
    - If any Unique Record Key data element is missing or invalid, reject the XML file and stop processing.
    - If all Unique Record Key data elements exist and contains valid allowable values, continue processing.
14. The database is checked to see if a record with the same Unique Record Key already exists.

- If the case does not already exist in the database, then the transmitted DELETE record is rejected.
- If the record already exists in the database, it is deleted.

Hospital Outpatient Clinical Data XML File Layout v18.0								
Element Name	**XML Attribute/ question-cd**	**Data Type**	**Field Size**	**Occurs**	**Answer Code**	**Answer Value**	**Applicable Measure(s)**	**Programming Notes**
Date Last Known Well	Suggested Data Collection Question: What was the date associated with the time at which the patient was last known to be well or at his or her baseline state of health?							
	DATELASTWELL	Date	10	1	(MM-DD-YYYY) Must be a valid date: MM (01-12) DD (01-31) YYYY (20xx)	User Entered (MM-DD-YYYY)	OP-23	
					UTD	Unable to Determine		
Discharge Code	Suggested Data Collection Question: What was the patient's discharge code from the outpatient setting?							
	DISCHGCODE	Alphanumeric	2	1	1	Home	OP-18, OP-23	
					2	Hospice - Home		
					3	Hospice - Health Care Facility		
					4a	Acute Care Facility - General Inpatient Care		
					4b	Acute Care Facility - Critical Access Hospital		
					4c	Acute Care Facility - Cancer Hospital or Children's Hospital		
					4d	Acute Care Facility - Department of Defense or Veteran's Administration		
					5	Other Health Care Facility		
					6	Expired		
					7	Left Against Medical Advice /AMA		
					8	Not Documented or Unable to Determine (UTD)		
ED Departure Date	Suggested Data Collection Question: What is the date the patient departed from the emergency department?							
	EDDEPARTDT	Date	10	1	(MM-DD-YYYY) Must be a valid date: MM (01-12) DD (01-31) YYYY (20xx)	User Entered (MM-DD-YYYY)	OP-18	
					UTD	Unable to Determine		

Hospital Outpatient Clinical Data XML File Layout v18.0								
Element Name	**XML Attribute/ question-cd**	**Data Type**	**Field Size**	**Occurs**	**Answer Code**	**Answer Value**	**Applicable Measure(s)**	**Programming Notes**
ED Departure Time	Suggested Data Collection Question: What is the time the patient departed from the emergency department?							
	EDDEPARTTM	Time	5	1	(HH:MM)	User Entered (HH:MM) (Military format with or without colon, HH:MM)	OP-18	
					UTD	Unable to Determine		
E/M Code	Suggested Data Collection Question: What was the E/M Code documented for this outpatient encounter?							
	EMCODE	Alphanumeric	5	1	E/M code	E/M code	OP-18, OP-23	Refer to Appendix A,
Last Known Well	Suggested Data Collection Question: Is there documentation that the date and time of last known well was witnessed or reported?							
	LSTKNWELL	Alphanumeric	1	1	Y	Yes	OP-23	
					N	No		
Physician 1	Suggested Data Collection Question: What is the first physician identifier?							
	PHYSICIAN_1	Character	50	1	Up to 50 letters, numbers, and/or special characters can be entered. Only the following special characters will be allowed: ~ ! @ # $ % ^ * ( ) _ + { } | : ? ' - = [ ] \ ; ` . , / and space	User Entered	Optional Data Element	

Hospital Outpatient Clinical Data XML File Layout v18.0								
Element Name	**XML Attribute/ question-cd**	**Data Type**	**Field Size**	**Occurs**	**Answer Code**	**Answer Value**	**Applicable Measure(s)**	**Programming Notes**
Physician 2	Suggested Data Collection Question: What is the second physician identifier?							
	PHYSICIAN_2	Character	50	1	Up to 50 letters, numbers, and/or special characters can be entered. Only the following special characters will be allowed: ~ ! @ # $ % ^ * ( ) _ + { } | : ? ' - = [ ] \ ; ` . , / and space	User Entered	Optional Data Element	
Payment Source	Suggested Data Collection Question: What is the patient's source of payment for this outpatient encounter?							
	PMTSRCE	Alphanumeric	1	1	1	Source of payment is Medicare.	All Records	
					2	Source of payment is Non-Medicare.		
ICD-10-CM Principal Diagnosis Code	Suggested Data Collection Question: What was the ICD-10-CM code selected as the principal diagnosis for this record?							
	PRINDX	Alphanumeric	8	1	ICD-10-CM Diagnosis code -without decimal point or dot	Any valid diagnosis code as per the CMS ICD-10-CM master code table (Code Descriptions in Tabular Order): https://www.cms.gov/Medicare/Coding/ICD10/index.html	OP-18, OP-23	Refer to Appendix A, ICD-10-CM and CPT Code Tables
Head CT or MRI Scan Order	Suggested Data Collection Question: Was a head CT or MRI scan ordered by the physician during the emergency department visit?							
	SCANORD	Alphanumeric	1	1	Y	Yes	OP-23	
					N	No		
Head CT or MRI Scan Interpretation Date	Suggested Data Collection Question: What is the date the earliest head CT or MRI scan interpretation was completed or reported?							
	SCANINTDT	Date	10	1	(MM-DD-YYYY) Must be a valid date: MM (01-12) DD (01-31) YYYY (20xx)	User Entered (MM-DD-YYYY)	OP-23	
					UTD	Unable to Determine		

Hospital Outpatient Clinical Data XML File Layout v18.0								
Element Name	**XML Attribute/ question-cd**	**Data Type**	**Field Size**	**Occurs**	**Answer Code**	**Answer Value**	**Applicable Measure(s)**	**Programming Notes**
Head CT or MRI Scan Interpretation Time	Suggested Data Collection Question: What is the time the earliest head CT or MRI scan interpretation was completed or reported?							
	SCANINTTM	Time	5	1	(HH:MM)	User Entered (HH:MM) (Military format with or without colon, HH:MM)	OP-23	
					UTD	Unable to Determine		
Time Last Known Well	Suggested Data Collection Question: At what time was the patient last known to be well or at his or her prior baseline state of health?							
	TMLSTKWNWELL	Time	5	1	(HH:MM)	User Entered (HH:MM) (Military format with or without colon, HH:MM)	OP-23	
					UTD	Unable to Determine		

Modified to include changes effective with 2025 ENCOUNTER DATES							
XML Element	**Attributes**	**Description**	**Data Element**	**Valid Values**	**Data Type**	**Field Size**	**Data Required**
A header is optional at the beginning of each XML file as follows: <?xml version="1.0" encoding="UTF-8" ?>							
<submission>	Opening tag is required.						
	type	Describes the setting for which data is being submitted.	N/A	OUTPATIENT	Character	20	Yes
	data	Describes the type of data being submitted.	N/A	CLINICAL	Character	20	Yes
	version	The version of the file layout.	N/A	1.0	Character	20	Yes
	action-code	Describes the intended action of the file being submitted	N/A	DELETE, ADD	Character	20	Yes
<file-audit-data> Sub-element of the submission data element	Opening tag for file audit data	**Note:** This tag and the entire <file-audit-data> section are optional in the XML document. If submitted, this tag contains no data. Required if sub-elements are included.					
<create-date> Sub-element of the file audit data element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<create-date>**05-10-2007**</create-date>**						
	None	The month, day, and year the file was created	N/A	(MM-DD-YYYY) Must be a valid date: MM (01-12) DD (01-31) YYYY (20xx)	Date	10	No
<create-time> Sub-element of the file audit data element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. Example with data: **<create-time>**23:01**</create-time>**						
	None	The hour and minutes representing the time the file was created.	N/A	HH:MM (Military format with or without colon)	Time	5	No
<create-by> Sub-element of the file audit data element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<create-by>**VendorA**</create-by>**						
	None	The entity who created the file	N/A	Up to 50 letters, numbers, and/or special characters can be entered. Only the following special characters will be allowed: ~ ! @ # $ % ^ * ( ) _ + { } | : ? ` - = [ ] \ ; ‘ . , / and space	Character	50	No
<version> Sub-element of the file audit data element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<version>**1.0**</version>**						
	None	The version of the file being submitted	N/A		Character	20	No
<create-by-tool> Sub-element of the file audit data element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<create-by-tool>**OPPS 1.3**</create-by-tool>**						
	None	Tool used to create the XML file	N/A	Up to 50 letters, numbers, and/or special characters can be entered. Only the following special characters will be allowed: ~ ! @ # $ % ^ * ( ) _ + { } | : ? ` - = [ ] \ ; ‘ . , / and space	Character	50	No
</file-audit-data>	Closing tag for file audit data	**Note:** This tag and the entire <file-audit-data> section are optional in the XML document, but if the opening tag of <file-audit-data> is provided, then this closing tag is required as well.					

Modified to include changes effective with 2025 ENCOUNTER DATES							
XML Element	**Attributes**	**Description**	**Data Element**	**Valid Values**	**Data Type**	**Field Size**	**Data Required**
<abstraction-audit-data> Sub-element of the submission data element	Opening tag for abstraction audit data	**Note:** This tag and the entire <abstraction-audit-data> section are optional in the XML document. If submitted, this tag contains no data. Required if sub-elements are included.					
<abstraction-date> Sub-element of the abstraction audit data element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<abstraction-date>**05-10-2007**</abstraction-date>**						
	None	The month, day, and year the XML file was abstracted	N/A	(MM-DD-YYYY) Must be a valid date: MM (01-12) DD (01-31) YYYY (20xx)	Date	10	No
<abstractor-id> Sub-element of the abstraction audit data element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. Example with data: **<abstractor-id>**JSMITH**</abstractor-id>**						
	None	User id of who abstracted this encounter.	N/A	N/A	Character	20	No
<total-abstraction-time> Sub-element of the abstraction audit data element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<total-abstraction-time>**1125**</total-abstraction-time>**						
	None	Total time it took for the encounter to be abstracted.	N/A	Time in seconds	Number	22	No
<comment> Sub-element of the abstraction audit data element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<comment>**Information about the abstraction**</comment>**						
	None	Comments about the abstraction.	N/A	Text Up to 4000 letters, numbers, and/or special characters can be entered. Only the following special characters will be allowed: ~ ! @ # $ % ^ * ( ) _ + { } | : ? ` - = [ ] \ ; ‘ . , / and space	Character	4000	No
</abstraction-audit-data>	Closing tag for abstraction audit data	**Note:** This tag and the entire <abstraction-audit-data> section are optional in the XML document, but if the opening tag of <abstraction-audit-data> is provided, then this closing tag is required as well.					
<provider> Sub-element of the submission data element	Opening tag for provider	**Note:** This tag is required in the XML document, however, it contains no data.					
<provider-id> Sub-element of the provider element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<provider-id>**125789**</provider-id>**						
	None	Used to identify the provider	CMS Certification Number	Valid 6 character CMS Certification Number	Character	6	Yes
<npi> Sub-element of the provider element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<npi>**1257894658**</npi>**						
	None	National Provider Identifier as assigned by CMS	National Provider Identifier (NPI)	Valid 10 digit NPI Number	Character	10	No

Modified to include changes effective with 2025 ENCOUNTER DATES							
XML Element	**Attributes**	**Description**	**Data Element**	**Valid Values**	**Data Type**	**Field Size**	**Data Required**
<patient> Sub-element of the provider data element	Opening tag for patient	**Note:** This tag is required in the XML document, however, it contains no data.					
<first-name> Sub-element of the patient element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<first-name>**Ann**</first-name>**						
	None	The patient's first name	First Name	Patient's First Name Up to 30 letters, numbers, and/or special characters can be entered. Only the following special characters will be allowed: ~ ! @ # $ % ^ * ( ) _ + { } | : ? ` - = [ ] \ ; ' . , / and space	Character	30	No
<last-name> Sub-element of the patient element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<last-name>**Smith**</last-name>**						
	None	The patient's last name	Last Name	Patient's Last Name Up to 60 letters, numbers, and/or special characters can be entered. Only the following special characters will be allowed: ~ ! @ # $ % ^ * ( ) _ + { } | : ? ` - = [ ] \ ; ' . , / and space	Character	60	No
<birthdate> Sub-element of the patient element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<birthdate>**08-06-1964**</birthdate>**						
	None	The month, day, and year the patient was born	Birthdate	(MM-DD-YYYY) Must be a valid date: MM (01-12) DD (01-31) YYYY	Date	10	Yes
<sex-birth> Sub-element of the patient element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<sex-birth>**1**</sex-birth>**						
	None	The patient's biological sex assigned at birth. Collecting the sex that is assigned at birth is useful as basic demographic information when used with the Gender Identity data element.	Sex Assigned at Birth	1,2,3,4,5	Alphanumeric	1	Yes
<gender-identity> Sub-element of the patient element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<gender-identity>**1**</gender-identity>**						
	None	A multi-tiered question asking patients to describe their gender identity. Gender identity is useful as basic demographic information when used with the Sex Assigned at Birth data element.	Gender Identity	1,2,3,4,5,6	Alphanumeric	1	NO

Modified to include changes effective with 2025 ENCOUNTER DATES							
XML Element	**Attributes**	**Description**	**Data Element**	**Valid Values**	**Data Type**	**Field Size**	**Data Required**
<sexual-orientation> Sub-element of the patient element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<sexual-orientation>1</sexual-orientation>**						
	None	A multi-part question which describes the patient's sexual orientation including: **Identity:** A person's core internal sense of their sexuality. **Attraction:** A multidimensional concept that includes the gender(s) to which a person is attracted and the strength of this attraction, including whether a person feels attraction at all. **Behavior:** A multidimensional concept that includes the gender(s) of sexual partners, specific sexual activities, and frequency of activities. A person's sexual orientation does not always align with behavior or attraction. This data element is useful as basic demographic information.	Sexual Orientation	1,2,3,4,5,6	Alphanumeric	1	NO
<race> Sub-element of the patient element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<race>**2**</race>**						
	None	Documentation of the patient's race.	Race	1,2,3,4,5,7	Character	1	Yes
<ethnic> Sub-element of the patient element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<ethnic>**Y**</ethnic>**						
	None	Documentation that the patient is of Hispanic or Latino ethnicity	Hispanic Ethnicity	Y,N	Character	1	Yes
<postal-code> Sub-element of the patient element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<postal-code>**50266**</postal-code>**						
	None	The postal code of the patient's residence. For the United States zip codes the hyphen is implied. If the patient is determined to not have a permanent residence, then the patient is considered homeless.	Postal Code	(5 or 9 digit without hyphen, "homeless", or "Non-US")	Character	9	Yes

Modified to include changes effective with 2025 ENCOUNTER DATES							
XML Element	**Attributes**	**Description**	**Data Element**	**Valid Values**	**Data Type**	**Field Size**	**Data Required**
<encounter> Sub-element of the patient element	Opening tag for measure set	**Example with data:** **<encounter measure-set="ED-THROUGHPUT">**					
	measure-set	The code for the measure set submitted.	Measure Set	ED-THROUGHPUT STROKE	Character	22	Yes
<encounter-date> Sub-element of the encounter	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example:** **<encounter-date>**04-02-2008**</encounter-date>**						
	None	The month, day, and year the patient was seen in the hospital outpatient department.	Outpatient Encounter Date	(MM-DD-YYYY) Must be a valid date: MM (01-12) DD (01-31) YYYY (20xx)	Date	10	Yes
<arrival-time> Sub-element of the encounter	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example:** **<arrival-time>**15:14**</arrival-time>**						
	None	The earliest documented time (military time) the patient arrived at the outpatient or emergency department.	Arrival Time	HH:MM (Military format with or without colon or can equal UTD)	Time	5	Yes
<patient-id> Sub-element of the encounter	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<patient-id>**74185296374185296385**</patient-id>**						
	None	Identifier used to identify the patient at the hospital	Patient Identifier	Up to 40 letters, numbers, and/or characters. NOTE: The only characters that will be allowed are spaces, hyphens, dashes, and under-scores.	Character	Up to 40	Yes

Modified to include changes effective with 2025 ENCOUNTER DATES							
XML Element	**Attributes**	**Description**	**Data Element**	**Valid Values**	**Data Type**	**Field Size**	**Data Required**
<detail> Sub-element of the encounter	Since this is the opening element, the closing tag for this element will be at the end of the record. Attributes describe the element and are included within the opening and closing <> **Example of Yes/No question (refer to this workbook's Clinical Data Elements tab for valid answer codes):** For discharges 4/1/2008 and forward: **<detail** answer-code="Y" row-number="0" question-cd="LSTKNWELL">** Example of multiple choice question (refer to this workbook's Clinical Data Elements tab for valid answer codes):** **<detail** answer-code="4a" row-number="0" question-cd="DISCHGCODE">** Example of a user-entered code:** **<detail** answer-code="001.9" row-number="0" question-cd="OTHRDX#">**						
	answer-code	ID number of the answer	Not a data element itself; each possible answer has its own unique ID	**Refer to this workbook's Clinical Data Elements tab for valid values.**	Character	See specific element for field size limits	Yes
	question-cd	The field name of the question	Not a data element itself; each data element is a question code	**Refer to this workbook's Clinical Data Elements tab for valid values.**	Character	20	Yes
	row-number	Used to group answers together for multi-row, multi-column answers	Not a data element; used for grouping answers only	0-20 Depending on the number of rows allowed per question. i.e. Surgery Antibiotic Name would have row-number 0 for the first antibiotic, 1 for the second antibiotic, and so on.	Integer	2	Yes Default to 0. For mulitiple answer options, add 1 to the row number for each
<answer-value> Sub-element of detail	The answer value **Example**: <answer-value>No</answer-value>	The description of the answer-code	Not a data element itself; each answer has a value	Place the answer text here. Examples: Yes No 04-01-2008 23:00 **Note: All Dates & Times in this field should be formatted as MM-DD-YYYY and military format with or without colon for HH:MM.**	Character	2000	No
</detail>	Closing tag for detail	**Note:** This tag is required in the XML document, however, it contains no data.					
</encounter>	Closing tag for encounter	**Note:** This tag is required in the XML document, however, it contains no data.					
</patient>	Closing tag for patient	**Note:** This tag is required in the XML document, however, it contains no data.					
</provider>	Closing tag for provider	**Note:** This tag is required in the XML document, however, it contains no data.					
</submission>	Closing tag for submission	**Note:** This tag is required in the XML document, however, it contains no data.					

Modified to include changes effective with 2025 ENCOUNTER DATES OQR v18.0							
XML Element	**Attributes**	**Description**	**Data Element**	**Valid Values**	**Data Type**	**Field Size**	**Data Required**
A header is optional at the beginning of each XML file as follows: <?xml version="1.0" encoding="UTF-8" ?>							
<submission>	Opening tag						
	type	Describes the setting for which data is being submitted.	N/A	OUTPATIENT	Character	20	Yes
	data	Describes the type of data being submitted.	N/A	POPULATION	Character	20	Yes
	version	The version of the file layout.	N/A	1.0	Character	20	Yes
	action-code	Describes the intended action of the file being submitted	N/A	ADD	Character	20	Yes
<file-audit-data> Sub-element of the submission data element	Opening tag for file data	**Note:** This tag and the entire <file-audit-data> section are optional in the XML document. If submitted, this tag contains no data.					
<create-date> Sub-element of the file-audit-data element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<create-date>**04-13-2007**</create-date>**						
	None	The month, day, and year the file was created	N/A	MM-DD-YYYY (Must be a valid date) MM (01-12) DD (01-31) YYYY (20xx)	Date	10	No
<create-time> Sub-element of the file-audit-data element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<create-time>**23:01**</create-time>**						
	None	The hour and minutes representing the time the file was created.	N/A	HH:MM (Military format with or without colon	Time	5	No
<create-by> Sub-element of the file-audit-data element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<create-by>**jsmith**</create-by>**						

Modified to include changes effective with 2025 ENCOUNTER DATES OQR v18.0							
XML Element	**Attributes**	**Description**	**Data Element**	**Valid Values**	**Data Type**	**Field Size**	**Data Required**
	None	The entity who created the file	N/A	Up to 50 leters, numbers, and/or special characters can be entered. Only the following special characters will be allowed: ~ ! @ # $ % ^ * ( ) _ + { } l : ? ' - = [ ] \ ; ` . , / and space	Character	50	No
<version> Sub-element of the file-audit-data element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<version>**1.0**</version>**						
	None	The version of the file being submitted	N/A		Character	20	No
<create-by-tool> Sub-element of the file-audit-data element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<create-by-tool>**Tool A**</create-by-tool>**						
	None	Tool used to create the file	N/A	Up to 50 leters, numbers, and/or special characters can be entered. Only the following special characters will be allowed: ~ ! @ # $ % ^ * ( ) _ + { } l : ? ' - = [ ] \ ; ` . , / and space	Character	50	No
</file-audit-data>	Closing tag for file data	**Note:** This tag and the entire <file-audit-data> section are optional in the XML document, but if the opening tag of <file-audit-data> is provided, then this closing tag is required as well.					
<provider> Sub-element of the submission data element	Opening tag for provider	**Note:** This tag is required in the XML document, however, it contains no data.					

Modified to include changes effective with 2025 ENCOUNTER DATES OQR v18.0							
XML Element	**Attributes**	**Description**	**Data Element**	**Valid Values**	**Data Type**	**Field Size**	**Data Required**
<provider-id> Sub-element of the provider element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<provider-id>**125789**</provider-id>**						
	None	Used to identify the provider	CMS Certification Number	Valid 6 character CMS Certification Number	Character	6	Yes
<npi> Sub-element of the provider element	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<npi>**1257894658**</npi>**						
	None	National Provider Identifier as assigned by CMS	National Provider Identifier (NPI)	Valid 10 digit NPI Number	Character	10	No
<time-period> Sub-element of the provider data element	**Example with data:** <time-period start date="04-01-2007" end-date="04-30-2007">						
	start-date	The starting month, day, and year for the encounters associated with the submitted data	Not a data element	MM-DD-YYYY (Must be a valid date) Must be start date of month	Date	10	Yes
	end-date	The ending month, day, and year for the encounters associated with the submitted data	Not a data element	MM-DD-YYYY (Must be a valid date) Must be end date of the month corresponding to the start-date	Date	10	Yes
<encounter> Sub-element of the time-period element	**Example with data:** **<encounter measure-set ="STROKE">**						
	measure-set	Used to identify which of the measure sets the case was abstracted for	Measure Set	ED-THROUGHPUT STROKE	Character	22	Yes
<population-size> Sub-element of the encounter	Opening tag for population size	**Sampling determination**					

Modified to include changes effective with 2025 ENCOUNTER DATES OQR v18.0							
XML Element	**Attributes**	**Description**	**Data Element**	**Valid Values**	**Data Type**	**Field Size**	**Data Required**
<medicare> Sub-element of the population-size	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<medicare>**200**</medicare>**						
	None	Number of medicare submissions	Outpatient Population Size - Medicare only	0-**999999**	Numeric	**6**	Yes
<non-medicare> Sub-element of the population-size	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<non-medicare>**175**</non-medicare>**						
	None	Number of non-medicare submissions	Outpatient Population Size - Non-Medicare only	0-**999999**	Numeric	**6**	Yes
</population-size>	Closing tag for population size						
<sampling-frequency> Sub-element of the encounter	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<sampling-frequency>**1**</sampling-frequency>**						
	None	Sampling determination	Outpatient Sampling Frequency	1- Sampling 2 - Not Sampling 3 - N/A, submission of patient-level data is not required	Character	1	Yes
<sample-size> Sub-element of the encounter	Opening tag for sample size	**Note:** This tag is required in the XML document, however, it contains no data.					
<medicare> Sub-element of the sample-size	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<medicare>**175**</medicare>**						

Modified to include changes effective with 2025 ENCOUNTER DATES OQR v18.0							
XML Element	**Attributes**	**Description**	**Data Element**	**Valid Values**	**Data Type**	**Field Size**	**Data Required**
	None	Number of medicare submissions in sample	Outpatient Sample size-Medicare Only	0-**999999**	Numeric	**6**	Yes
<non-medicare> Sub-element of the sample-size	Each element must have a closing tag that is the same as the opening tag but with a forward slash. **Example with data:** **<non-medicare>**150**</non-medicare>**						
	None	Number of non-medicare submissions in sample	Outpatient Sample size-Non-Medicare Only	0-**999999**	Numeric	**6**	Yes
</sample-size>	Closing tag for sample size	**Note:** This tag is required in the XML document, however, it contains no data.					
</encounter>	Closing tag for measure-set	**Note:** This tag is required in the XML document, however, it contains no data.					
</time-period>	Closing tag for time-period	**Note:** This tag is required in the XML document, however, it contains no data.					
</provider>	Closing tag for provider	**Note:** This tag is required in the XML document, however, it contains no data.					
</submission>	Closing tag for submission	**Note:** This tag is required in the XML document, however, it contains no data.					

Alphabetical Tools and Resources List

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Hospital OQR Program Arrival Time: Guidelines

The guidelines are to be applied when abstracting all measures included in the Hospital OQR Program (OP-18, and OP-23):

Remember, the definition of *Arrival Time* is ***"the earliest documented time (military time) the patient arrived at the outpatient or emergency department.***"

- If the time of the arrival is unable to be determined from medical record documentation, select "UTD."
- Review the only acceptable sources to determine the earliest time the patient arrived at the ED or observation. Documentation outside of the only acceptable sources list should **not** be referenced (such as ambulance record, physician office record, or H&P).
- "Emergency department record" includes any documentation from the time period that the patient was an ED patient, e.g., ED face sheet, ED consent/authorization for treatment forms, ED/outpatient registration/sign-in forms, triage record, ED physician orders, ECG reports, telemetry rhythm strips, laboratory reports, x-ray reports, etc.
- If the time on the face/registration sheet is not labeled "arrival," "registration," or "admit" time, or is labeled simply "time," then the time can be considered a nondescript time and should **not** be used as *Arrival Time*.
- *Arrival Time* can be the time the patient first sees triage, registration, or the volunteer who puts her/his name on a page with a time. It does **not** have to be a professional who documents the arrival time.
- **Do not** use a time stamp unless it is clear that it is used specifically for patient arrival time.
- **Do not** use pre-printed times on a vital sign graphic record.
- **Do not** use a stamp or label that has a consistent time on every page.

Note the following frequently asked questions:

Question: If the patient enters the ED, is signed in by a volunteer at 1950, and then sits in the waiting room until called by triage at 2012, what is the correct *Arrival Time*?

Answer: The earliest documented time the patient arrived in the ED: 1950.

Question: The patient arrives by ambulance and has an ECG, IV, and O2 that are all recorded as 1300. A nurse note documents 1255. A note in the ambulance run sheet indicates that the patient arrived at 1240. What is the correct *Arrival Time*?

Answer: The earliest documented time the patient arrived in the ED: 1255. You cannot use the ambulance run sheet as a time of arrival; you may only use the run sheet (if you must) to substantiate that the patient was not in the ED at 1240.

Question: The record indicates a non-labeled/non-descript time of 1840 on the registration sheet; the time is not labeled "Admit" or "Registered;" there is a time of 1850 on the triage note; an ECG time of 1845 is noted; and a lab collection time of 0000 is noted. What is the *Arrival Time*?

Answer: The earliest documented time the patient arrived in the ED: 1845. Unless there is other documentation to substantiate that the patient was present at 0000, ignore that time and use the next earliest time: 1845. The 1840 time is not valid to use since it was not labeled "arrival," registration," or "admit."

Hospital OQR ED Departure Time: Guidelines

When abstracting *ED Departure Time* for OP-18 (Median Time from ED Arrival to ED Departure for Discharged ED Patients), remember the intent of abstraction *"…is to capture the latest time at which the patient was receiving care in the emergency department, under the care of emergency department services, or awaiting transport to service/care."*

Source: Alphabetical Data Element List and Data Dictionary, *ED Departure Time* data element, and General Abstraction Guidelines, *Medical Record Documentation*

- **Do use** the later departure time if two departure/discharge times are noted.
- **Do use** the time of the observation order written by the physician/advanced practice nurse (APN)/ physician's assistant (PA) for patients who are placed into observation.
- **Do <u>not</u> use:**
  - Coding Summary
  - Physician's Discharge Summary
  - ED record released from holding time
  - Chart closed time
  - Off the tracking board time
  - Report called time
  - Disposition time
  - Discharge instruction time
- **Do <u>not</u> use** any time that cannot be substantiated in the medical record as direct patient care being provided. For example, if there is a departure time of 2015 and a note from the physician or nurse written at 2200 with no other information available that the patient was still in the facility, the departure time would be 2015.
- **Do <u>not</u> use** note times or late entries for medication administration or vital signs if they are later than the *ED Departure Time*.
- **Do <u>not</u> use** the time the discharge order was written because it may not represent the actual time of departure.
- **Do use:**
  - Discharge time (if it is listed on the disposition sheet)
  - Release time
  - Out time
  - Gone time
  - Checkout time
  - Transport documented time
  - Event log, registration sheet, transfer record, etc. (if a discharge time is noted and the document is part of the permanent medical record)
  - Transfer time
  - Order for observation status time
  - Any other synonym that can easily be understood to mean "Departure" or "Discharge"

Note the following frequently asked questions:

Question: The patient was admitted to "Observation" from the ED. The nurse documents that the patient physically left the ED at 1440. The order for "Observation" was written at 1700. What time should be abstracted for *ED Departure Time*?

Answer: If the order for "Observation" is written after the patient departed the ED, select the time the patient physically left the ED. In this example, abstract 1440 as the *ED Departure Time.*

Question: *ED Discharge Time* is documented on the face sheet at 1400. A nursing note is documented as, "EMS at bedside" at 1422 and medication administration noted at 1428. What would be the appropriate *ED Departure Time*?

Answer: Because there is substantial documentation to support that the patient was in the ED after the documented *Discharge Time* and there is no additional documented time of ED departure, it cannot be determined when the patient physically left the ED. Enter "UTD" for *ED Departure Time.* Medication administration times are not acceptable for establishing the *ED Departure Time*.

Question: A nurse's note indicates when the patient was discharged from the ED. No other care is documented beyond that time. There is also an electronic time entered after the documented *ED Departure Time* that states "patient removed from the system." Which documentation should be used for abstracting the *ED Departure Time*?

Answer: The intent is to capture the latest time the patient was receiving care in the emergency department. In this example, there is a documented discharge time. The documented discharge time from the nurse's note would be used to abstract *ED Departure Time.* Documentation that the patient was removed from system is insufficient for abstracting *ED Departure Time* because it does not provide substantial documentation that the patient physically departed the ED.

Template for Collecting OP-29 Data

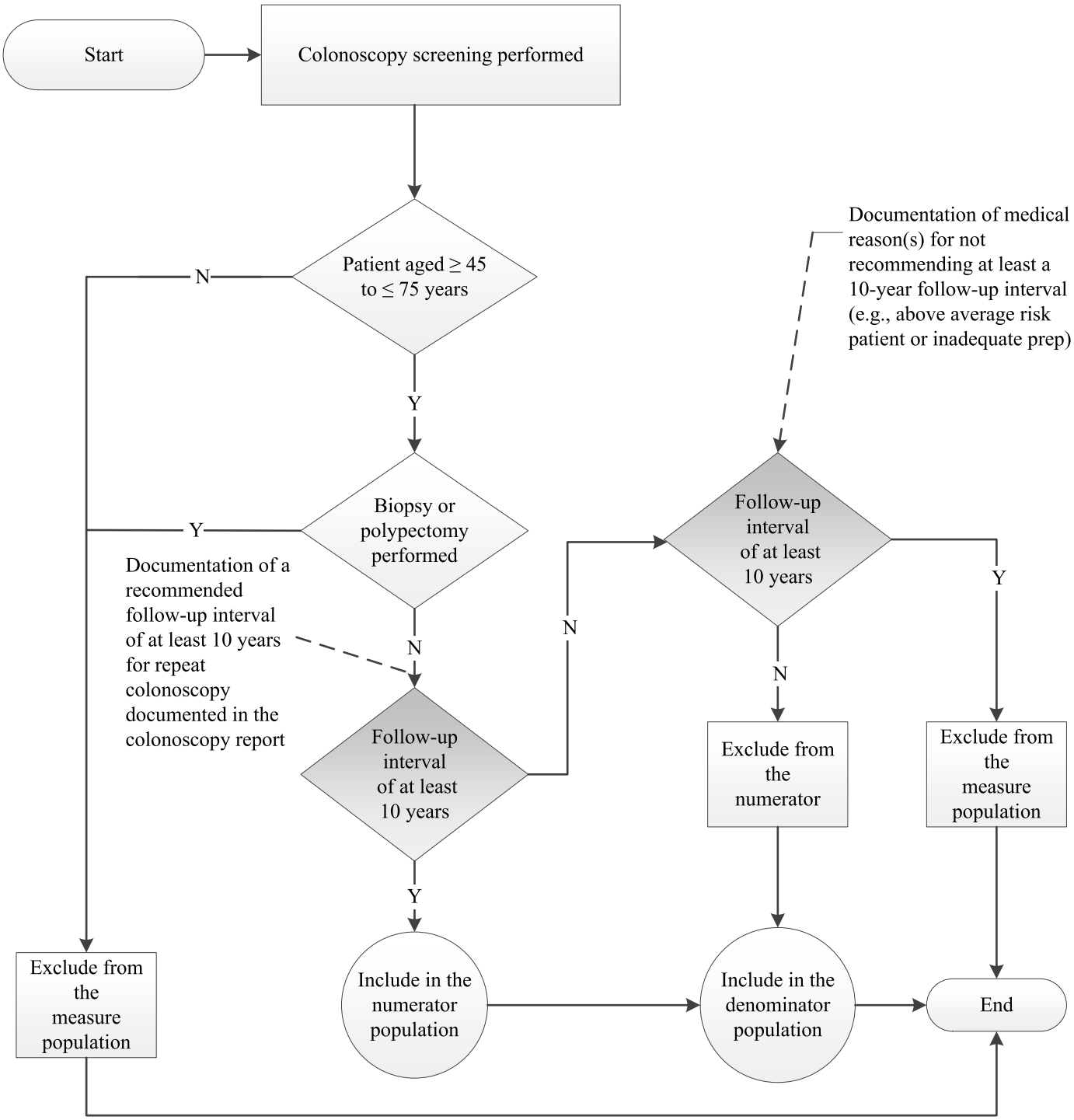
Answer the questions in the table below to determine whether colonoscopy patients fall into the OP-29 measure, keeping in mind that OP-29 looks forward to recommendations for future care.

OP-29: Appropriate Follow-up Interval for Normal Colonoscopy in Average Risk Patients		
Measure Criteria	**Circle One**	**Denominator/Numerator Determination**
1. Patient had a screening colonoscopy, without biopsy or polypectomy, **and** is ≥ 45 to ≤ 75 years of age on date of encounter	Yes → No →	Include in ***denominator*** population, continue to 1(a) Exclude from ***denominator*** population
a) Documentation of medical reason(s) for not recommending at least a 10-year follow-up interval (e.g., above average risk patient or inadequate prep or if age is documented as a medical reason)	Yes → No →	Exclude from ***denominator*** population Continue to Question 2
2. Recommended follow-up interval of at least 10 years for repeat colonoscopy is documented in colonoscopy report	Yes → No →	Include in ***numerator*** population Exclude from ***numerator*** population

OP-29: Appropriate Follow-Up Interval for Normal Colonoscopy in Average Risk Patients

Numerator Statement: Patients who had a recommended follow-up interval of at least 10 years for repeat colonoscopy documented in their colonoscopy report

Denominator Statement: All patients ≥ 45 to ≤ 75 years of age receiving screening colonoscopy without biopsy or polypectomy



Adapted from algorithm provided by clinical services group/HCA; January 2020

For use with encounter dates 010125-123125;
Specifications Manual version 18.0

Measure OP-29: Appropriate Follow-Up Interval for Normal Colonoscopy in Average Risk Patients

Denominator Codes
The following codes are derived from the OP-29 Measure Information Form (MIF) in the Specifications Manual on QualityNet at www.qualitynet.cms.gov.

Denominator criteria always include both:

- Patients aged ≥ 45 and ≤ 75 on date of encounter
- **Z12.11**: Colonoscopy screen with anesthesia

and one of the following:

- **44388**: Colonoscopy through stoma; diagnostic
- **45378**: Diagnostic colonoscopy/screening colonoscopy for non-Medicare patients
- **G0121**: Screening colonoscopy for other Medicare patients

without any of the following modifiers:

- **52**: **Reduced Services**—Under certain circumstances a service or procedure is partially reduced or eliminated at the physician's discretion
- **53**: **Discontinued Procedure**—Under certain circumstances, the physician may elect to terminate a surgical or diagnostic procedure
- **73**: **Discontinued Out-Patient Hospital/Ambulatory Surgery Center (ASC) Procedure Prior to the Administration of Anesthesia**—Due to extenuating circumstances or those that threaten the well-being of the patient
- **74**: **Discontinued Out-Patient Hospital/Ambulatory Surgery Center (ASC) Procedure After Administration of Anesthesia**—Due to extenuating circumstances or those that threaten the well-being of the patient

- **Z83.710**: Family history of adenomatous and serrated polyps
- **Z83.711**: Family history of hyperplastic colon polyps
- **Z83.718**: Other family history of colon polyps
- **Z83.719**: Family history of colon polyps, unspecified
- **Z86.010**: Personal history of colonic polyps
- **Z80.0**: Family history of malignant neoplasm of gastrointestinal tract
- **Z85.038**: Personal history of malignant neoplasm of large intestine

Measure OP-29: Appropriate Follow-Up Interval for Normal Colonoscopy in Average Risk Patients Fact Sheet

Measure Description: Percentage of patients aged 45 to 75 years of age receiving a screening colonoscopy without biopsy or polypectomy who had a recommended follow-up interval of at least 10 years for repeat colonoscopy documented in their colonoscopy report.

Denominator Statement: All patients aged 45 to 75 years of age receiving screening colonoscopy without biopsy or polypectomy.

Numerator Statement: Patients who had a recommended follow-up interval of at least 10 years for repeat colonoscopy documented in their colonoscopy report.

For the purposes of determining this measure, **do**:

- Use the final colonoscopy report only to abstract the recommended follow-up interval. If your facility utilizes another report that is equivalent to or contains the final colonoscopy report, utilize this report for abstraction.
- Use any medical reason, such as a diagnosis, symptom, or condition that is documented in the medical record, to exclude a case from the denominator population **only** when the recommended follow-up interval is less than 10 years. Please note that you must have **both** an interval of less than 10 years and the medical reason documented in order to use this as an exclusion from the denominator. The following are some examples:
  - Above average risk patient
  - Inadequate prep
  - Family history of colon cancer
  - Diverticulitis documented in the medical record

  Note: Please remember that there is no comprehensive list of medical reasons.
- Exclude a case if there is documentation indicating no follow-up colonoscopy is needed or recommended **and** patient's age is ≥66 years old, or life expectancy <10 years.

For the purposes of determining this measure, **do not**:

- Use records with CPT/HCPCS modifiers 52, 53, 73, or 74.
- Use time frames, such as "5–10 years," "many," "prn," or "when symptomatic," since they are not acceptable terms for the recommended follow-up interval of at least 10 years.

Appendix A: ICD-10-CM Diagnosis and CPT® Code Tables

Codes for October 1, 2024, through September 30, 2025, encounters will be published to this manual by December 31, 2024.

Appendix B: Glossary of Terms

accuracy (of data) The extent to which data are free of identifiable errors.

administrative/billing data (data source) Data that reflect the content of discharge abstracts (for example, demographic information on patients such as age, sex, ZIP code; information about the episode of care such as admission source, length of stay, charges, discharge status; and diagnostic and procedural codes). Namely, the Uniform Hospital Discharge Data Set and the Uniform Bill of the Health Care Financing Administration (UB-04) provide specifications for the abstraction of administrative/billing data.

algorithm An ordered sequence of data element retrieval and aggregation through which numerator and denominator events or continuous variable values are identified by a measure. The algorithms are depicted using flowcharting symbols.

allowable values A list of acceptable responses for a data element.

ANSI X12 The American National Standards Institute's standard for transmitting data electronically, or electronic data interchange (EDI).

binary outcome Events or conditions that occur in one or two possible states often labeled 0 or 1. Such data are frequently encountered in medical research. Common examples include dead or alive, and improved or not improved.

central tendency A property of the distribution of a variable, usually measured by statistics such as the mean, median, and mode.

clinical measures Measures designed to evaluate the processes or outcomes of care associated with the delivery of clinical services; allow for intra- and inter-organizational comparisons to be used to continuously improve patient health outcomes; may focus on the appropriateness of clinical decision-making and implementation of these decisions; must be condition-specific, procedure-specific, or address important functions of patient care.

continuous variable An aggregate data measure in which the value of each measurement can fall anywhere along a continuous scale (e.g., the time in minutes from emergency department arrival to administration of fibrinolytics).

continuous variable data elements Those data elements required to construct the measure as stated in the section labeled "Continuous Variable Statement."

contraindication A factor or condition that may render the administration of a drug or agent or the performance of a procedure or other practice inadvisable, improper, and/or undesirable.

Current Procedural Terminology (CPT®) code A listing of descriptive terms and identifying codes for reporting medical services and procedures performed by physicians.

critical access hospital (CAH) Hospitals that offer limited services to include round-the-clock emergency

care services and are, by definition, located more than 35 miles from a hospital or another critical access hospital, or are certified by the state as being a necessary provider of healthcare services to residents in the area. They maintain no more than 25 beds for acute (hospital-level) inpatient care and are subject to a 96-hour average length of stay for acute care patients. For CAHs with swing bed agreements, any of its beds may be used to furnish either inpatient acute care or swing bed services. Hospitals certified by the Secretary of the Department of Health and Human Services (HHS) as critical access hospitals are eligible for cost-based reimbursement from Medicare if they meet a specific set of federal Conditions of Participation (COPs).

data collection The act or process of capturing raw or primary data from a single or number of sources; also called "data gathering."

data collection effort The availability and accessibility of the required data elements, the relative effort required, and associated cost of abstracting or collecting the data.

data editing The process of correcting erroneous or incomplete existing data, exclusive of data entry input edits.

data element A discrete piece of data, such as patient birthdate or principal diagnosis. See also denominator data elements, numerator data elements, and continuous variable data elements.

data entry The process by which data are transcribed or transferred into an electronic format.

data point The representation of a value for a set of observations or measurements at a specific time interval (e.g., perioperative mortality rate for the month of June 2019).

data quality The accuracy and completeness of measure data on performance in the context of the analytic purposes for which they will be used.

data sources The primary source document(s) used for data collection (for example, billing or administrative data, encounter form, enrollment forms, and medical record). See also administrative data, clinical survey, medical record, patient survey, provider data, and registry/log data.

data transmission The process by which data are electronically sent from one organization to another.

denominator The lower part of a fraction used to calculate a rate, proportion, or ratio. Also, the population for a rate-based measure.

denominator data elements Those data elements required to construct the denominator.

discrete variable See rate-based measure.

electronic data interchange (EDI) An instance of data being sent electronically between parties, normally according to predefined industry standards.

electrocardiogram (ECG) A graphic tracing of the heart's electrical impulses.

emergency department A department that provides care for emergency medical conditions on an urgent basis without requiring a previously scheduled appointment.

episode of care (EOC) A patient or case-level record submitted to the database.

Evaluation and Management (E/M) codes Codes used to report evaluation and management services provided in the physician's office, or in an outpatient or other ambulatory facility.

excluded populations Detailed information describing the populations that should not be included in the indicator. For example, specific age groups, ICD-10-CM procedure or diagnostic codes, or certain time periods could be excluded from the general population drawn upon by the indicator.

fibrinolytic therapy Administration of a pharmacological agent intended to cause lysis of a thrombus (destruction or dissolution of a blood clot). Refer to Appendix C, Table 1.3 for a listing of fibrinolytic agents.

format Specifies the character length of a specific data element; the type of information the data element contains numeric, decimal number, date, time, or alphanumeric; and the frequency with which the data element occurs.

general data elements Data elements that must be collected by hospitals for each patient record. These data are patient demographic data, hospital identifiers, and patient identifiers.

healthcare organization (HCO) The business entity which is participating in a performance measurement system (e.g., healthcare organization level data describes information about the business entity).

hospital An institution primarily engaged in providing, by or under the supervision of physicians, inpatient diagnostic and therapeutic services or rehabilitation services.

hospitalist A doctor who primarily takes care of patients when they are in the hospital. This doctor will take over your care from your primary doctor when you are in the hospital, keep your primary doctor informed about your progress, and will return you to the care of your primary doctor when you leave the hospital.

ICD-10-CM codes A two-part classification system in current use for coding patient medical information used in abstracting systems and for classifying patients into diagnosis-related groups (DRGs). The first part is a comprehensive list of diseases with corresponding codes compatible with the World Health Organization's list of disease codes. The second part contains procedure codes independent of the disease codes.

included populations Detailed information describing the population(s) that the indicator intends to measure. Details could include such information as specific age groups, diagnoses, ICD-10-CM diagnostic and procedure codes, CPT® codes, enrollment periods, insurance and health plan groups, etc.

Inpatient Prospective Payment System (IPPS) Rule Section 1886(d) of the Social Security Act (the Act) sets forth a system of payment for the operating costs of acute care hospital inpatient stays under Medicare Part A (Hospital Insurance) based on prospectively set rates. This payment system is referred to as the inpatient prospective payment system (IPPS). Under the IPPS, each case is categorized into a diagnosis-related group (DRG). Each DRG has a payment weight assigned to it, based on the average resources used to treat Medicare patients in that DRG.

invalid data The data element value falls outside of the range of defined allowable values. Refer to the Missing and Invalid Data section for further information.

mean A measure of central tendency for a continuous variable measure. The mean is the sum of the values divided by the number of observations.

measure information form Tool to provide specific clinical and technical information on a measure. The information contained includes performance measure name, description, rationale, numerator/denominator/continuous variable statements, included populations, excluded populations, data elements, risk adjustment, sampling, data accuracy, and selected references.

measure-related feedback Measure-related information on performance that is available, on a timely basis, to organizations actively participating in the performance measurement system for use in the organization's ongoing efforts to improve patient care and organizational performance. Feedback can be reflective of information within individual organizations (intra-organizational) and/or across organizations (inter-organizational).

measure-specific data elements Data elements used by one specific measure or several measures in one specific measure set.

median The value in a group of ranked observations that divides the data into two equal parts.

missing data No values present for one or more data elements that are required for calculating and/or risk adjusting a national hospital quality measure. Refer to the Missing and Invalid Data section for further information.

mode The most frequently occurring response for that data element.

module A set of measures under a common group/topic area (e.g., fibrinolytic module).

monthly data point The representation of a value for a set of observations or measurements for a calendar month.

multivariate analysis The analysis of the simultaneous relationships among variables.

national quality measure A standardized performance measure that meets the Centers for Medicare & Medicaid Services (CMS) evaluation criteria, has precisely defined specifications, can be uniformly embedded in extant systems, and has standardized data collection protocols to permit uniform implementation by healthcare organizations and permit comparisons of healthcare organization performance over time through the establishment of a national comparative database.

nosocomial infection An infection acquired by a patient in a healthcare organization, especially a hospital. This infection is not present or incubating before admission to a hospital.

numerator The upper portion of a fraction used to calculate a rate, proportion, or ratio.

numerator data elements The upper portion of a fraction used to calculate a rate, proportion, or ratio. For the Hospital Outpatient Quality Reporting (OQR) Program, it represents the portion of the denominator that satisfies the conditions of the performance measure.

observed rate The observed rate is the measure rate that is based on a hospital's aggregated data for the

reporting period. This is calculated as the number of measure numerator cases for the reporting period divided by the number of denominator cases. Observed rates are used to measure hospital performances.

Outpatient Prospective Payment System (OPPS) Rule A prospective payment system (PPS) under Medicare for hospital outpatient services, certain Part B services furnished to hospital inpatients that have no Part A coverage, and partial hospitalization services furnished by community mental health centers. All services paid under the PPS are classified into groups called Ambulatory Payment Classifications or APCs. A payment rate is established for each APC. Depending on the services provided, hospitals may be paid for more than one APC for an encounter.

outpatient record (data source) Data obtained from the records or documentation maintained on a patient in the hospital outpatient department setting (for example, hospital-based outpatient surgery, hospital-based clinic, emergency department). Includes automated and paper medical record systems.

parenteral Not through the alimentary canal but by injection through some other route, such as subcutaneous, intramuscular, intraorbital, intracapsular, intraspinal, intrasternal, intravenous, etc.

patient factor A variable describing some characteristic of individual patients that may influence healthcare-related outcomes. Patient factors can include:

- **complications** Conditions arising after the beginning of healthcare observation and treatment that modifies the course of the patient's health or illness and the intervention/care required.
- **co-morbidities** Pre-existing diseases or conditions.
- **severity of illness classifications** Seriousness or stage of illness at the time of the beginning of healthcare observation or treatment (for example, AJCC staging for oncology patients, NYHA class for cardiovascular patients).
- **functional status** Factors related to health status including physical functioning, role disability due to physical-health problems, bodily pain, general health perceptions, vitality, social functioning, role disability due to emotional problems, and general mental health.
- **patient demographics** Age, ethnicity, gender, location, etc.

patient-level data Collection of data elements that depict the healthcare services provided to an individual (patient). Patient-level data are aggregated to generate hospital-level data and comparison group data.

percentile A value on a scale of 100 that indicates the percentage of a distribution that is equal to or below it.

performance measure A quantitative tool (for example, rate, ratio, index, percentage) that provides an indication of an organization's performance in relation to a specified process or outcome. See the process measure and the outcome measure.

performance measurement system An entity consisting of an automated database(s) that facilitates performance improvement in healthcare organizations through the collection and dissemination of process and/or outcome measures of performance. Measurement systems must be able to generate internal comparisons of organization performance over time, and external comparisons of performance among participating organizations at comparable times.

performance measure-related feedback See measure-related feedback.

predicted value The statistically expected response or outcome for a patient after the risk adjustment model has been applied and the patient's unique set of risk factors have been considered.

process A measure used to assess a goal directed, interrelated series of actions, events, mechanisms, or steps, such as measure of performance that describes what is done to, for, or by patients, as in performance of a procedure.

provider data (data source) Data obtained from other provider-generated records that are not necessarily contained in the medical record (e.g., pharmacy patient medication profiles, nursing care plans).

randomization A technique for selecting or assigning cases such that each case has an equal probability of being selected or assigned. It is done to stimulate chance distribution, reduce the effects of confounding factors, and produce unbiased statistical data.

range A measure of the spread of a data set; the difference between the smallest and largest observation.

ratio A relationship between two counted sets of data, which may have a value of zero or greater. In a ratio, the numerator is not necessarily a subset of the denominator (e.g., pints of blood transfused to number of patients discharged).

registry/log data (data source) Data obtained from local, regional, or national disease or procedure-related registries, data obtained from the healthcare organization's daily recordings (logs). Examples of such data include tumor, trauma, and cardiology registries. Examples of log data include infusion therapy, central line infection, and labor and delivery logs.

regression coefficients Synonym for regression weight which is derived from statistical modeling and expresses the change in a patient's response or outcome corresponding to a unit of change in the appropriate explanatory variable (i.e., patient risk factor).

relevance The applicability and/or pertinence of the indicator to its users and customers.

reliability The ability of the indicator to identify the events accurately and consistently it was designed to identify across multiple healthcare settings.

reporting period The defined time period which describes the patient's end-of-service.

reperfusion Re-establishing blood flow in an obstructed coronary artery. It may be accomplished with thrombolytic therapy or percutaneous coronary intervention.

risk-adjusted rate A rate that considers differences in case mix to allow for more valid comparisons between groups.

sampling frequency If a hospital chooses to sample, they may sample data on either a monthly or quarterly basis. Refer to the "Sample Size Requirements" discussion in the Population and Sampling Specifications section for further information.

sampling method Describes the process used to select a sample. Sampling approaches for national hospital quality measures are simple random sampling and systematic sampling. Refer to the "Sampling Approaches" discussion in the Population and Sampling Specifications section for further information.

sample size The number of individuals or patients included in a study, usually chosen so that the study has a particular statistical power of detecting an effect of a particular size. Refer to the "Sample Size Requirements" discussion in the Population and Sampling Specifications section for further information.

score A rating, usually expressed as a number, and based on the degree to which certain qualities or attributes are present (e.g., Glasgow coma, ASA scores).

severity The degree of biomedical risk or mortality of medical treatment.

simple random sample A process in which a sample of data is selected from the total population in such a way that every case has the same chance of being selected and that the sample size is met. Refer to the "Sampling Approaches" discussion in the Population and Sampling Specifications section for further information.

standard deviation A measure of variability that indicates the dispersion, spread, or variation in a distribution.

strata See stratified measure.

stratification A form of risk adjustment, which involves classifying data into strata based on one or more characteristics, variables, or other categories.

stratification-based approach for risk adjustment The process of dividing or classifying subgroups known as strata to facilitate more valid comparisons. For example, a measure's outcome may be divided into type of surgery-specific categories or strata.

stratified measure A performance measure that is classified into a number of strata to assist in analysis and interpretation. The overall or un-stratified measure evaluates all the strata together. The stratified measure or each stratum consists of a subset of the overall measure.

stratum See stratified measure.

structure measure A measure that assesses whether organizational resources and arrangements are in place to deliver healthcare, such as the number, type, and distribution of medical personnel, equipment, and facilities.

systematic random sampling A process in which the starting case is selected randomly, and the next cases are selected according to a fixed interval that is based upon the number of cases in the population. For example, the starting case is the second patient that arrives at the hospital. This patient and every subsequent fifth patient becomes part of the random sample until the sample size is reached. Refer to the "Sampling Approaches" discussion in the Population and Sampling Specifications section for further information.

test cases Fictitious patient-level data composed of clinical data elements that yield an expected result for a specific core measure algorithm.

thrombolytic therapy See fibrinolytic therapy.

transmission schedule The schedule of dates on which data are expected to be transmitted.

unable to be determined (UTD) Each data element that is applicable per the algorithm for each of the measures within a topic must be "touched" by the abstractor. While there is an expectation that all data elements are collected, it is recognized that in certain situations information may not be available (i.e., dates, times, codes, etc.). If, after due diligence, the abstractor determines that a value is not documented or is not able to determine the answer value, the abstractor must select "Unable to Determine (UTD)" as the answer.

validation The process by which the integrity and correctness of data are established. Validation processes can occur immediately after a data item is collected or after a complete set of data are collected. CMS chart-level validation will validate the data at several levels. There are consistency and internal edit checks to assure the integrity of the submitted data, there are external edit checks to verify expectations about the volume of the data received, and there will be chart-level audits to assure the reliability of the submitted data. Information on these procedures is available on http://www.qualitynet.org.

validity Ability to identify opportunities for improvement in the quality of care, demonstration that the indicator uses results in improvements in outcomes and/or quality of care.

variance Equal to the square of the standard deviation.

verification The process used to ensure consistent implementation of core measure algorithms specified in this manual across disparate measurement systems.

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Appendix C: Patient-Reported Outcome-Based Performance Measures (PRO-PMs)

Performance Measure Name: Risk-Standardized Patient-Reported Outcome-Based Performance Measure (PRO–PM) Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA) in the HOPD Setting (THA/TKA PRO–PM)

This measure reports the facility-level risk-standardized improvement rate (RSIR) in patient reported outcomes following elective primary THA/TKA for Medicare FFS beneficiaries aged 65 years and older who were enrolled in Medicare FFS Part A and B for the 12 months prior to the date of the procedure and in Medicare Part A and B during the procedure. The measure includes only elective primary outpatient THA/TKA procedures (patients with fractures and revisions are not included) performed in the hospital outpatient setting and does not include any inpatient procedures. The measure excludes patients with staged procedures (multiple elective primary THA or TKA procedures performed on the same patient during distinct encounter) that occur during the measurement period and excludes procedures that were started but not completed.

Measure Calculation:

The hospital-level THA/TKA PRO–PM results are calculated by aggregating all patient-level results across the facility. This measure is calculated and presented as a RSIR, producing a performance measure per facility which accounts for patient case mix, addresses potential non-response bias, and represents a measure of quality of care following elective primary outpatient THA/TKA. Response rates for PRO data are calculated as the percentage of elective primary THA or TKA procedures performed at hospital outpatient departments.

Improvement is measured from the preoperative assessment (data collected 90 to 0 days before surgery) to the postoperative assessment (data collected 300 to 425 days following surgery). Improvement scores are risk-adjusted to account for differences in patient case mix.

Data Sources: The measure uses four sources of data for the calculation: (1) PRO data; (2) claims data; (3) Medicare enrollment and beneficiary data; and (4) U.S. Census Bureau survey data.

PRO data are collected with the PRO instruments, including two joint-specific PRO instruments—the HOOS, JR for completion by THA recipients and the KOOS, JR for completion by TKA recipients. Scores are used to assess substantial clinical improvement. For risk-adjustment by pre-operative mental health score, hospitals submit one of two additional PRO instruments: (1) Patient-Reported Outcomes Measurement Information System (PROMIS)-Global Mental Health subscale; or (2) Veterans RAND 12-Item Health Survey (VR–12) Mental Health subscale. The risk model also includes a one-question patient-reported assessment of health literacy—the Single Item Literacy Screener questionnaire.

Hospitals submit the following variables collected pre-operatively between 90 and zero days prior to the THA/TKA procedure for each patient:

- Medicare provider number;
- Medicare health insurance claim (HIC) number/Medicare beneficiary identifier (MBI);
- Date of birth;
- Date of procedure;

- Date of PRO data collection;
- Procedure type;
- Mode of collection;
- Person completing the survey;
- Facility admission date;
- Patient reported outcome measure version;
- PROMIS Global (mental health subscale items) or VR–12 (mental health subscale items); HOOS, JR (for THA patients) or KOOS, JR (for TKA patients);
- Single Item Health Literacy Screening (SILS2) questionnaire;
- BMI or weight (kg)/height (cm); chronic (≥90 day) narcotic use; total painful joint count (patient reported in non-operative lower extremity joint);
- quantified spinal pain (patient-reported back pain, Oswestry index question.379 380)

Hospitals would also submit the following variables collected post-operatively between 300 and 425 days following the THA/TKA procedure for each patient:

- Medicare provider number;
- Medicare HIC number/MBI;
- date of birth;
- procedure date,
- date of PRO data collection;
- procedure type;
- mode of collection;
- person completing the survey;
- facility admission date;
- KOOS, JR (TKA patients) or HOOS, JR (THA patients).

Included CPT codes:

- 27130: Arthroplasty, acetabular and proximal femoral prosthetic replacement (total hip arthroplasty), with or without autograft or allograft
- 27447: Arthroplasty, knee, condyle and plateau; medial AND lateral compartments with or without patella resurfacing (total knee arthroplasty)

Data Submission: Hospitals, or their contracted vendor, will submit the data via the Hospital Quality Reporting (HQR) system in CSV or XML file format.

Voluntary reporting begins with the CY 2025 reporting period and continue through the CY 2027 reporting period. Mandatory reporting begins with the CY 2028 reporting period for CY 2031 payment determination.

The data submission period for the THA/TKA PRO–PM also serves as the review and correction period. Data corrections cannot be completed or accepted after the submission deadline.

More information on the adoption of this measure for the Hospital OQR Program can be found in the Calendar Year (CY) 2024 Medicare Hospital Outpatient Prospective Payment System (OPPS) and Ambulatory Surgical Center (ASC) Payment System Final Rule, beginning on page 81979, on the website of the Office of the *Federal Register*.

Appendix D: Hospital Outpatient Electronic Clinical Quality Measures (eCQMs)

Performance Measure Name: ST- Segment Elevation Myocardial Infarction eCQM (STEMI eCQM)

This measure captures the percentage of emergency department (ED) encounters for patients 18 years and older with a diagnosis of a STEMI that received appropriate treatment, defined as fibrinolytic therapy within 30 minutes of ED arrival, percutaneous coronary intervention (PCI) within 90 minutes of ED arrival, or transfer within 45 minutes of ED arrival.

Measure Calculation: The STEMI eCQM is calculated by the hospital's CEHRT using patient-level data.

A higher score indicates higher quality.

Data Sources: The STEMI eCQM uses data routinely collected through the EHR and is designed to be calculated by the hospitals' CEHRT using patient-level data submitted to CMS.

Data Submission: Hospitals, or their contracted vendor, will submit the data via the Hospital Quality Reporting (HQR) system in QRDA I format.

The data submission period also serves as the review and correction period. Data corrections cannot be completed or accepted after the submission deadline.

Mandatory reporting began with the CY 2024 reporting period for CY 2026 payment determination.

More information on the adoption of this measure for the Hospital OQR Program can be found in the Calendar Year (CY) 2022 Medicare Hospital Outpatient Prospective Payment System (OPPS) and Ambulatory Surgical Center (ASC) Payment System Final Rule (86 FR 42244) on the website of the Office of the *Federal Register*.

For additional Specifications, Data Elements, and value sets for the STEMI eCQM, visit the official eCQI site, at: https://ecqi.healthit.gov/ecqm/oqr/2023/cms996v3#quicktabs-tab-tabs_oqr_measure-1.

Getting Started with eCQMs: https://ecqi.healthit.gov/ecqms;
Hospital OQR Program eCQM Resources: https://ecqi.healthit.gov/oqr?qt-tabs_oqr=ecqm-resources&globalyearfilter=2024&global_measure_group=3716.

Performance Measure Name: Excessive Radiation Dose or Inadequate Image Quality for Diagnostic Computed Tomography (CT) in Adults (Hospital Level—Outpatient) (Excessive Radiation eCQM)

This measure provides a standardized method for monitoring the performance of diagnostic CT to discourage unnecessarily high radiation doses, a risk factor for cancer, while preserving image quality. It is expressed as a percentage of CT exams that are out-of-range based on having either excessive radiation dose or inadequate image quality relative to evidence-based thresholds based on the clinical indication for the exam. All diagnostic CT exams of specified anatomic sites performed in hospital outpatient care settings (including emergency settings) are eligible.

Measure Calculation: The Excessive Radiation eCQM is calculated by the hospital's CEHRT using patient-level data. Medical imaging information such as Radiation Dose Structured Reports and image pixel data are stored according to the universally adopted Digital Imaging and Communications in Medicine (DICOM) standard. Currently, eCQMs cannot access and process data elements in their original DICOM formats. Hospitals may choose to use any available software that performs the necessary functions to comply with measure requirements. One such example is the Alara Imaging software, which is available to all reporting entities free of charge and accessible by creating a secure account through the measure steward's website.

A lower score indicates higher quality.

Data Sources: The Excessive Radiation eCQM uses data collected from structured fields within the EHR and the radiology electronic clinical data systems, including the Radiology information System (RIS) and the Picture Archiving and Communication System (PACS).

Data Submission: Hospitals, or their contracted vendor, will submit the data via the Hospital Quality Reporting (HQR) system in QRDA 1 format.

The data submission period also serves as the review and correction period. Data corrections cannot be completed or accepted after the submission deadline.

Voluntary reporting begins with the CY 2025 through CY 2026 reporting period, and mandatory reporting begins with the CY 2027 through CY 2028 reporting period for CY 2029 payment determination.

More information on the adoption of this measure for the Hospital OQR Program can be found in the Calendar Year (CY) 2024 Medicare Hospital Outpatient Prospective Payment System (OPPS) and Ambulatory Surgical Center (ASC) Payment System Final Rule (88 FR 81986) on the website of the Office of the *Federal Register*.

Getting Started with eCQMs: https://ecqi.healthit.gov/ecqms
Hospital OQR Program eCQM Resources: https://ecqi.healthit.gov/oqr?qt-tabs_oqr=ecqm-resources&globalyearfilter=2024&global_measure_group=3716