Measure Information Form: Hospital Harm: Postoperative Respiratory Failure

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Version 2

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Submitted To

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Project

Patient Safety Measure Development and Maintenance
Contract Number: 75FCMC18D0027

Task & Deliverable

Chapter 3 Information Gathering
Deliverable 3-3 Measure Information Form (MIF)

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1. Overview

1.1 Project Title

Patient Safety Measure Development and Maintenance Project

1.2 Date

Information included is current on August 5, 2022.

1.3 Project Overview

The Centers for Medicare & Medicaid Services (CMS) has contracted American Institutes for Research (AIR) to develop, maintain, reevaluate, and implement patient safety measures for CMS' hospital-level quality reporting programs. The contract name is Patient Safety Measure Development and Maintenance. The contract number is 75FCMC18D0027 (Task Order: 75FCMC19F0001).

2. Measure Name

Hospital Harm – Postoperative Respiratory Failure

3. Descriptive Information

3.1 Measure Type

Outcome

3.2 Measure Description

This electronic clinical quality measure (eCQM) assesses the proportion of inpatient hospitalizations for elective procedures with postoperative respiratory failure (PRF), defined as (1) intubation occurring any time within 30 days after the conclusion of the first operation or (2) cumulative time of mechanical ventilation more than 48 hours within 30 days after the conclusion of the first operation, among postoperative patients ages 18 years and older with PRF not present on admission (NPOA).

The detailed specifications for this measure are still in development and this measure has not gone through the testing process. The measure has also not yet been submitted for public comment.

3.3 If Paired or Grouped

Not Applicable

4. Measure Specifications

4.1 Measure-Specific Web Page

Not applicable

4.2 HQMF Specifications (eCQM)

See attachment

4.3 Data Dictionary, Code, Table, or Value Sets

See attachment

4.4 Instrument-Based Measure

Not applicable

4.5 Endorsement Maintenance

Not applicable. This is a *de novo* measure.

4.6 Numerator Statement

Elective inpatient hospitalizations for patients with postoperative respiratory failure (PRF). PRF is defined as (1) intubation that occurs any time within 30 days after the conclusion of the first OR procedure and during the same encounter, or (2) cumulative time of mechanical ventilation (i.e., invasive positive pressure ventilation) for more than 48 hours within 30 days after the conclusion of the first OR procedure and during the same encounter.

The detailed specifications for this measure are still in development and this measure has not gone through the testing process. The measure has also not yet been submitted for public comment. The numerator includes: (1) intubation that occurs any time within 30 days after the conclusion of the first operation (if based on EHR field, consider excluding 1-hour time windows before start of any subsequent OR procedures); or (2) cumulative time of mechanical ventilation (i.e., invasive positive pressure ventilation) more than 48 hours within 30 days after the first OR procedure.

4.7 Numerator Details

This is an eCQM, and therefore uses electronic health record data to calculate the measure score. The time period for data collection is during an inpatient hospitalization, beginning and hospital arrival (whether through emergency department, observation stay, or directly admitted as inpatient).

Cumulative time of mechanical ventilation will be calculated from available times of onset and offset of mechanical ventilation and start and end times of OR procedures. For the 30-day time frame beginning with the end of the first OR procedure, the cumulative time of mechanical

ventilation will be calculated as the sum of the periods of mechanical ventilation minus the sum of the periods during which the patient was undergoing an OR procedure.

Additional details of the specifications for this measure are still in development.

4.8 Numerator Exclusion Statement

Not applicable

4.9 Numerator Exclusion Details

Not applicable

4.10 Denominator Statement

Elective inpatient hospitalizations that end during the measurement period, where the patient is 18 years of age or older at the start of the encounter, and at least one surgical procedure was performed within the first 3 days of the encounter.

The detailed specifications for this measure are still in development and this measure has not gone through the testing process. The measure has also not yet been submitted for public comment.

4.11 Denominator Details

This measure includes all patients aged 18 years and older at the time of admission, and all payers. Measurement period is one year.

The measure is at the hospital admission level; only one numerator event is counted per encounter.

The detailed specifications for this measure are still in development.

4.12 Denominator Exclusions

Exclude inpatient hospitalizations for patients:

- Who have undergone mechanical ventilation for more than one hour duration prior to the start of the first OR procedure
- With arterial blood gas with arterial partial pressure of oxygen (P_aO_2)<50 mmHg during the 72 hours prior to the start of the first OR procedure
- With arterial partial pressure of carbon dioxide (P_aCO_2)>50 mmHg combined with an arterial pH<7.30 during the 72 hours prior to the start of the first OR procedure
- With a principal diagnosis (or secondary diagnosis present on admission) for acute respiratory failure
- With any diagnosis code present on admission for the existence of a tracheostomy
- Where the only procedure during the encounter is tracheostomy

- Where a procedure for tracheostomy occurs before the first OR procedure
- With any diagnosis for neuromuscular disorder or degenerative neurological disorder
- With any listed procedure for laryngeal or pharyngeal, nose, mouth, pharynx or facial surgery involving significant risk of airway compromise

4.13 Denominator Exclusion Details

TBD. The detailed specifications for this measure are still in development.

4.14 Stratification Details and Variables

Not applicable

4.15 Risk Adjustment Type

Not applicable

4.16 Type of Score

Rate/proportion

4.17 Interpretation of Score

A lower score is indicative of better quality.

4.18 Calculation Algorithm and Measure Logic

TBD. The detailed specifications for this measure are still in development.

4.19 Sampling

Not Applicable

4.20 Survey/Patient-Reported Data

Not applicable

4.21 Data Source

Electronic clinical health record data

4.22 Data Source or Collection Instrument

Hospitals collect EHR data using certified electronic health record technology (CEHRT). The MAT output, which includes the human readable and XML artifacts of the clinical quality language (CQL) for the measure are contained in the eCQM specifications attached. No additional tools are used for data collection for eCQMs.

4.23 Data Source or Collection Instrument Reference

No data collection instrument is used.

4.24 Level of Analysis

Facility

4.25 Care Setting

- Emergency Department
- Hospital
- Hospital: Critical Care
- Hospital: Acute Care Facility

4.26 Composite Performance Score

Not applicable