# Equity of Emergency Care Capacity and Quality (ECCQ) Electronic Clinical Quality Measure (eCQM) Upcoming Testing Analysis

# (April 2024)

# Study Objective

The Centers for Medicare & Medicaid Services (CMS) has contracted with Yale New Haven Health Services Corporation (YNHHS) – Center for Outcomes Research and Evaluation (CORE) to develop a comprehensive measure focused on assessing equitable access to emergency care. The Equity of Emergency Care Capacity and Quality Electronic Clinical Quality Measure (ECCQ eCQM). The ECCQ eCQM is proposed to be an intermediate outcome measure for patients of all ages visiting an emergency department (ED).

# Timeline

CORE began testing in April 2024 and anticipates concluding beta testing by August 15, 2024. Updated testing data and results in support of this Measures Under Consideration (MUC) list submission are anticipated to be submitted by August 15, 2024, due to the extended timeline of the measure testing phase of development.

# Data Collection Methodology

## Beta Testing Development Dataset

CORE will contract with qualified vendor(s) or multiple healthcare facilities to test the electronic specification measure logic to ensure it meets the measure intent. Data will be collected from at least two different electronic health record (EHR) systems and a sufficient number of facilities with patient data to support reliability and validity analyses. Beta testing will align with Consensus-Based Entity (CBE) requirements for measure endorsement.

# Sampling Methods

CORE will use convenience samples for measure development from a diverse set of facilities as logistics allow. CORE plans to sample one to two years of ED data derived from EHRs from multiple facilities for beta testing.

# Analytical Methods Planned and Description of Test Statistics

## Importance

Analyses will identify opportunities for improvement such as reducing variability in comparison groups or disparities in health care related to social risk variables (pending available data).

CORE will examine measure score variation between EDs. CORE will also examine performance across different sub-groups, related to both providers (e.g., teaching status, geographic location) and patients (e.g., age, gender, race, mental health diagnoses, payer), dependent on having sufficient data available for each sub-group.

## Scientific Acceptability

### Reliability

CORE will conduct reliability testing on two levels: data element reliability and measure score reliability.

#### Data Element Reliability

CORE will ensure that the critical data elements are complete by examining:

* Distribution and completeness of the data elements.
* Variation of distribution and completeness of data elements across different hospitals.

#### Measure Score Reliability

CORE will perform the following analyses (tests) for the reliability of the measure score: signal-to-noise analysis, to describe how well the measure can distinguish the performance of one facility from another.

### Validity

CORE will conduct both data element validity and face validity testing for this measure during beta testing.

#### Data Element Validity

As part of the measure goals, patient/encounter level testing of data elements will be derived from feasible (routinely available), structured data fields to reduce provider burden. Depending on budget and data restrictions, CORE will work with our data partner to evaluate the accuracy of the electronically extracted EHR data elements compared with manually chart abstracted data elements from the same patients, which is considered the “gold standard”. The planned test statistic used to assess this will be percent agreement, the threshold for time difference between minutes from the EHR data element and the manually abstracted data element, and we will describe these results including the lowest critical data element, if possible. This analysis will be dependent on our data partner. Data elements previously shown to be valid or used in other CMS eCQMs may not require additional data element validity testing.

#### Face Validity

CORE will develop this measure in consultation with national guidelines for intermediate outcome measures, in collaboration with a diverse expert work group, a patient work group, and with the public. A systematic assessment will be conducted to measure face validity by a Technical Expert Panel (TEP) of national experts, patients, and stakeholder organizations with final measure performance results by August 15, 2024.

### Measure Performance

CORE will report final measure performance scores, as a proportion, and will include distribution of scores across the mean, median, standard deviation, tenth and ninetieth percentile scores, and passing scores, as testing allows.

## Feasibility

Though EHR systems are widely implemented, as a first step, CORE will ensure to secure accurate and reliable data for the measure. We plan to test feasibility via an EHR “walkthrough” to thoroughly assess where, how, and when data elements are stored in the EHR based on clinical workflow. This EHR walkthrough will assist with the completion of the PQM Feasibility Scorecard. We will also aim to test the feasibility of extracting the necessary data elements to specify the ECCQ eCQM accurately from EHRs as described above in beta testing. Only data elements supporting emergency care quality indicators that can be extracted feasibly will be included in the final measure.