Summary of Technical Expert Panel (TEP) Evaluation of Measure
Emergency Care Capacity and Quality Electronic Clinical Quality Measure (eCQM)

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Prepared by:

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Background

The Centers for Medicare & Medicaid Services (CMS) contracted with Yale New Haven Health Services Corporation – Center for Outcomes Research and Evaluation (Yale CORE) to develop a measure of emergency care capacity and quality. The measure will be an electronic clinical quality measure (eCQM), titled "Emergency Care Capacity and Quality Electronic Clinical Quality Measure" (ECCQ eCQM). This project's primary objective is to develop an emergency care capacity and quality measure that supports hospital quality improvement to reduce harm and improve outcomes for patients needing emergency care. The contract name is Measure & Instrument Development and Support (MIDS): Development, Reevaluation, and Implementation of Outcome/Efficiency Measures for Hospital and Eligible Clinicians, Option Period 4. The contract number is HHSM-75FCMC18D0042.

As part of this project, CORE assembled a national Technical Expert Panel (TEP) of stakeholders, experts, and consumer advocates who contributed their input through the measure design process. This TEP was convened to assemble a group with diverse perspectives and expertise to advise on conceptual, technical, and implementation considerations of the measure under development.

This report summarizes the feedback and recommendations received during the project's third TEP meeting held on July 30, 2024. During the third meeting, CORE presented the final measure specifications, testing results, and solicited face validity votes.

The TEP

In alignment with the CMS Measures Management System (MMS), Yale CORE held a 30-day public call for nominations and convened a TEP for the development of a measure of equity of emergency care capacity and quality. CORE solicited nominations for TEP members via a posting on CMS's website, emails to individuals and organizations identified by the CORE Measure Development Team, and email notifications sent to CMS physician and hospital email listservs. After reviewing the TEP nominations, CORE confirmed a TEP of 23 members (see Table 1 for members). The appointment term for the TEP was from August 2023 to August 2024.

CORE hosted the third meeting for the project on July 30, 2024, via webinar/teleconference. Eighteen TEP members attended the meeting on July 30, 2024. TEP meetings follow a structured format consisting of the presentation of key issues to discuss for measure development, followed by an open discussion of topics with TEP members.

Specific Responsibilities of the TEP Members

The role of the TEP is to provide feedback and recommendations on key methodological and clinical decisions. TEP members are required to:

- Complete and submit all nomination materials, including the TEP Nomination Form, statement of interest, and curriculum vitae;

- Review background materials provided by CORE prior to each TEP meeting;
- Attend and actively participate in TEP conference calls;
- Provide input on key clinical, methodological, and other decisions;
- Provide feedback on key policy or other non-technical issues;
- Review the TEP summary report prior to public release;
- Be available to discuss recommendations and perspectives following TEP meetings and public release of the TEP Summary Report to CMS.

Third TEP Meeting

TEP Meeting Overview

Prior to the TEP meeting, CORE provided TEP members with a packet of information, including the meeting agenda, updated measure specifications, and review of testing results.

During the TEP meeting, CORE solicited feedback from the panel on final measure specifications and testing results and standard face validity questions. The CORE staff who presented at the TEP meeting were Dr. Clarissa Myers, Ms. Leianna Dolce, Dr. Arjun Venkatesh, and Ms. Nicole Voll. Following the meeting, TEP members who were unable to join the primary meeting were provided with the meeting recording and the opportunity to provide written feedback.

Below we provide a high-level summary of what was presented and discussed during the TEP meeting, including the written responses of the TEP members unable to join.

Administrative

- Ms. Leianna Dolce opened the meeting and reviewed general housekeeping items including a confidentiality reminder, the project funding source, discussion decorum, the meeting agenda, goals for the meeting and re-introductions of the CORE team and TEP members. She concluded the administrative section with a review of the TEP role.

Measure Review and Updates

- Dr. Clarissa Myers reviewed the measure development timeline and accomplishments from the first two TEP meetings including progress made since the last official meeting. She reviewed the two programs the ECCQ measure is being developed for use within, the Hospital Outpatient Quality Reporting (HOQR) and Rural Emergency Hospital Quality Reporting (REHQR) programs. She concluded the section with review of the measure specifications including measure score calculation and reporting.

Measure Testing Results

- Ms. Nicole Voll reviewed measure testing results beginning with details of the three data sets used for HOQR testing. She continued by reviewing patient characteristics, measure score methods and results, and numerator components analyses methods and results.

- Dr. Arjun Venkatesh presented additional HOQR results beginning with the volume relationship observed with testing data, methods and results of data standardization, reliability methods and results, and construct validity methods and results utilizing the Star Ratings measure for comparison.
- The floor was opened for any questions regarding the testing results shown for the HOQR program.
    - TEP members inquired about the measure specifications, specifically how to define the first numerator component; there was consensus among members that a solution would be a detailed implementation guide to define exactly what a private treatment space is.
        - Another TEP member supported this point by stating that changing private treatment space in the ED may show improvement on one component of the measure, but if the hospital reduces the number of inpatient beds, it will impact multiple components of the numerator which lays beyond the control of the ED.
        - TEP members support more testing of this component and capturing of the data element once a wider dataset is available in national testing.
    - One TEP member inquired about construct validity, and that future consideration would be how the measure correlates with patient satisfaction, experience, and staff burnout.
    - TEP members discussed how critical the volume adjustment is for this measure and raised concerns about whether it is sufficient to account for differences between hospitals and ensure validity of the measure.
    - One TEP member inquired if the measure adjusts for differences in trauma levels between hospitals, which it does not.
- After reviewing the REHQR measure specifications, Dr. Venkatesh elaborated on the definition and importance of transfer boarding. Beginning with the testing approach, Dr. Venkatesh reviewed rural vs non-rural hospital transfer characteristics and HOQR measure scores, measure score components of rural sites utilizing the HOQR components versus the REHQR components, and the proportion of admitted and transferred encounters in rural emergency departments (EDs).
- Ms. Dolce paused to solicit TEP member input on any concerns about the transfer component of the REHQR measure and any suggested measure modifications.
    - Several TEP members agreed that transfers should be captured by the measure, but REHs should not be held fully accountable for such impacts; they inquired about an REHs ability to improve contractual agreements (transfer agreements, contracts with emergency medical

services (EMS)) to better support transferring of patients. This data needs to be captured otherwise it is a missed opportunity to address a serious quality issue.
        - One TEP member opposed this idea stating that transfer agreements carry little weight and resolving delayed transfers is a system-wide issue.
    - Several TEP members agreed with measuring transfers but do not feel it is appropriate to hold REHs accountable.
    - One TEP member suggested measuring urban transfer acceptance rates instead of rural transfer boarding.
    - Several TEP members agreed to vote on face validity of the measure, with exceptions or changes to how transfers are addressed.
    - One TEP member expressed they would support the measure with removal of component #3 (transfer boarding) from the REHQR measure and inclusion in component #4 (total ED LOS) for the REHQR measure.
    - Several TEP members agreed with excluding transfers from any version of the REHQR measure, but others agree with including it depending on attribution.
- Additionally, TEP members offered general comments about the measures overall:
    - One TEP member hoped the measure can address morbidity, mortality, and patient and staff experience in the future.
    - One TEP member supported the structure of the numerator; including an encounter if any one of the numerator criteria are met.
    - Another TEP member was concerned that this is an efficiency and speed measure and does not directly attend to quality of care for patients.
    - A general discussion was raised by CORE: TEP members offered insight into potential hurdles or challenges the measure may face as it moves into implementation. Primary concerns revolve around what data can be collected by this electronic clinical quality measure, how an electronic health record can accurately capture the data elements, and how to best define a private treatment space to minimize gaming.

Face Validity

- Dr. Myers began the face validity section by summarizing the importance, reliability, and validity of the ECCQ measure.
- Ms. Dolce reviewed the face validity process including an open forum for initial thoughts about the ECCQ eCQM for either program with an official vote via survey to be sent after the meeting concluded.
- Beginning the discussion, Ms. Dolce asked members if they had any questions

or concerns they would like to resolve prior to answering the questions on measure importance. Specifically, if they agreed that the measure, as specified, could differentiate the quality of care between hospital EDs.
    - One TEP member agreed with the measure but would exclude transfers for numerator component number 3 in REHQR but would include transfers for component number 4 in REHQR.
    - One TEP member agreed with including transfers somewhere.
    - One TEP member agreed with the statement that the measure can differentiate between the quality of care, though would like to see additional metrics included such as the effects on patient mortality and the effect on staff.
    - One TEP member responded that they liked the measure overall, however, would alter the title to reflect more that this is a system issue rather than an ED issue.
    - A TEP member agreed with the statement that the measure can differentiate between the quality of care and asked whether numerator component number 3 could include transfers for only specific conditions, excluding conditions where transfer agreements might not be as impactful.
    - One TEP member agreed with the previous comments and reiterated a concern about bed privacy and a request for inclusion of patient satisfaction in the future.
    - A TEP member responded that they support the measures in the original form excluding transfers from both versions.
    - A TEP member noted a request for more of a quality than process measure and a concern about possible gaming.
    - Five TEP members agreed with the statements.
    - Three TEP members were supportive of the transfer alterations.
    - Two TEP members agreed with the idea of the measure but had concerns voting for a measure that would penalize the level one EDs without making accommodations or allowances for their special needs.
    - One TEP member noted a request for further testing.
- Thanking members for a rich discussion, Ms. Dolce reminded TEP members they will be voting on the following statements in a survey to be sent after the meeting is completed separately for each program: ECCQ eCQM is meaningful and produces information that is valuable in making care decisions and ECCQ eCQM could differentiate good from poor hospital quality care among facilities.
- The poll results are as follows for the first statement for the **HOQR** measure: The Emergency Care Capacity and Quality Electronic Clinical Quality Measure is

meaningful and produces information that is valuable in making care decisions.
    - 8 (50.0 %) members voted for “strongly agree”
    - 4 (25.0%) members voted for “agree”
    - 4 (25.0%) member voted for “disagree”
    - 0 (0%) members voted for “strongly disagree”
- The poll results are as follows for the second question for the **HOQR** measure: The Emergency Care Capacity and Quality Electronic Clinical Quality Measure could differentiate good from poor quality of care among facilities.
    - 8 (50.0%) members voted for “strongly agree”
    - 4 (25.0%) members voted for “agree”
    - 4 (25.0%) members voted for “disagree”
    - 0 (0%) members voted for “strongly disagree”
- Members in agreement commented that the measure shows good face validity and construct validity, the data and results presented support the scientific acceptability of the measure, with clear importance and with scores demonstrating room for quality improvement; the measure accounts for components of timely, accessible care critical to improving hospital flow and improve crowding in EDs. They believe this is directionally great for patients and is valuable information for decision making.
- Members who disagreed are concerned about the definition of private treatment space, want the measure to account for differences between trauma level hospitals, and believe it is a time and efficiency measure and does not truly reflect quality outcomes.
- The poll results are as follows for the first statement for the **REHQR** measure: The Emergency Care Capacity and Quality Electronic Clinical Quality Measure is meaningful and produces information that is valuable in making care decisions.
    - 4 (25.0%) members voted for “strongly agree”
    - 7 (43.8%) members voted for “agree”
    - 4 (25.0%) members voted for “disagree”
    - 1 (6.3%) member voted for “strongly disagree”
- The poll results are as follows for the second question for the **REHQR** measure: The Emergency Care Capacity and Quality Electronic Clinical Quality Measure could differentiate good from poor quality of care among facilities.
    - 6 (37.5%) members voted for “strongly agree”
    - 7 (43.8%) members voted for “agree”
    - 2 (12.5%) members voted for “disagree”
    - 1 (6.3%) member voted for “strongly disagree”
- Members in agreement commented that the measure shows good face validity and construct validity, the data and results presented support the scientific acceptability of the measure, with clear importance and with scores demonstrating room for quality improvement; they support measuring transfers for various reasons, including allowing an REH to create efficient transfer networks, that the measure will capture data to address a clear quality gap for rural emergency care, and will ultimately inform hospitals and systems how to improve capacity and efficiency.
- Members did agree with excluding transfers entirely, or from numerator component #3

(transfer boarding) while including them in component #4 (ED LOS).
- One member strongly disagreed with the REHQR measure as transfer acceptance is out of control of an REH.

Conclusion

The TEP provided valuable verbal support and constructive feedback on both measure versions, and final testing results. They had few concerns about the reliability, validity, and approach to measurement of emergency care capacity and quality; certain concerns have persisted throughout measure development, as this measure challenges the improvement of timely emergency care nationally. TEP members continued to support the measure specifications, with the same persistent implementation concerns around accurately capturing time to place a patient in a private treatment space. While they support measuring transfers of emergency patients, as this is a quality gap that is critical to timely care, particularly in rural settings, the recommended approaches to measuring this differ. The final votes on measure importance support that the measures can differentiate good from poor quality of care and produce meaningful information that is valuable in making care decisions.

Next Steps

The TEP will be reconvened as needed as measure development continues.

Appendix A. List of all TEP Members and Information

Table 1: TEP Member Name, Affiliation and Location

Name	Organization (title); clinical specialty, if applicable	Location
JohnMarc Alban, MS, RN, CPHIMS	The Joint Commission (Associate Director, Quality Measurement & Informatics)	Oakbrook Terrace, IL
David Andrews	Patient/Caregiver Representative	Aiken, SC
Kelly Bookman, MD	University of Colorado School of Medicine, UC Health (Professor and Vice Chair of Operations, Senior Medical Director of Informatics)	Boulder, CO
Joey Braggs	Patient/Caregiver Representative	Detroit, MI
Howard Bregman, MD, MS, FAAP	Epic Systems Corporation (Director, Clinical Informatics)	Verona, WI
Teresa M. Breslin DeLellis, PharmD, BCPS, BCGP	American Geriatrics Society (Pharmacist)	Fort Wayne, IN
Isbelia Briceno, CSPO	Oracle Cerner (Senior Product Manager, EHR Vendor)	Kansas City, MO
Lynn Ferguson	Patient/Caregiver Representative	Nashville, TN
Mustafa Mark Hamed, MD, MBA, FAAFP, FAEMS	American Academy of Family Physicians (AAFP) (Board Certified Family Physician and Emergency Medical Services Physician)	Novi, MI
Jennifer Hoffmann, MD, MS	Northwestern University and Lurie Children's Hospital of Chicago (Assistant Professor of Pediatrics)	Chicago, IL
Charleen Hsuan, JD, PhD	Pennsylvania State University (Assistant Professor)	University Park, PA
David Levine, MD, FACEP	Vizient, Inc. (Group Senior Vice President, Advanced Analytics and Data Science)	Chicago, IL
Kelly McGuire, MD, MPA	EmblemHealth (Medical Director, Behavioral Health)	Katonah, NY
Sofie Morgan	University of Arkansas for Medical Sciences (Patient Experience Professional, Emergency Physician)	Little Rock, AR
Deepti Pandita, MD, FACP, FAMIA	University of California, Irvine (Associate Professor of Medicine, Chief Medical Information Officer)	Laguna Niguel, CA
Anne-Marie Podgorski Dunn, MBA, BSN, RN	Oracle Health (Senior Product Manager, Quality Reporting)	West Chester, PA
Rupinder K Sandhu, BSN, MBA, MSHSA	UC Davis Medical Center (Executive Director, Emergency Services)	Sacramento, CA
Nathaniel Schlicher, MD, JD, MBA, FACEP	Physician and Administrative Leader	Gig Harbor, WA
Jodi A. Schmidt, MBA	University of Kansas Health System (Executive Director, UKHS Care Collaborative Patient Safety Organization)	Westwood, KS
Jeremiah Schuur, MD, MHS	Physician and Measure Developer	Cambridge, MA
David P Sklar	Arizona State University College of Health Solutions (Physician)	Phoenix AZ
Anne Sugrue	Patient/Caregiver Representative	Gaithersburg, MD
Benjamin Sun, MD, MPP, FACEP, FACHE	University of Pennsylvania (Perelman Professor and Chair, Department of Emergency Medicine)	Philadelphia, PA