

**Summary Report of Clinician Committee Meetings:
Development of a Diabetes Outcome Measure for the Merit-based
Incentive Payment System**

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Prepared by:

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(YNHHSC/CORE)

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Background

The Centers for Medicare & Medicaid Services (CMS) has contracted with Yale New Haven Health Services Corporation – Center for Outcomes Research and Evaluation (CORE) to develop outpatient outcome measures that can be used to assess the quality of care provided by clinicians who are eligible to participate in the Merit-based Incentive Payment System (MIPS). As part of this project, CORE is developing a measure to address short-term diabetes complications.

The MIPS short-term diabetes complications measure will be based on administrative claims data and will be risk-adjusted for patient demographic and clinical characteristics. The quality measure scores will be calculated using patient characteristics and outcomes documented on routinely submitted Medicare claims; therefore, the clinicians whose performance will be assessed by the quality measure will not need to submit any additional data directly to CMS.

As is standard with all measure development processes, CORE is obtaining stakeholder input on the measure. CORE has convened two stakeholder groups:

- 1) Technical Expert Panel (TEP): CORE has assembled a national TEP of clinicians, patient advocates, and other stakeholders. The TEP is providing input to help shape the measure concept and specifications.
- 2) Clinician Committee: In addition to the TEP, CORE has assembled a Clinician Committee to provide more detailed input during the measure development process. Specifically, CORE has convened a Clinician Committee of professional society representatives and front-line clinicians from rural and/or underserved communities. The Clinician Committee members collectively bring expertise in providing ambulatory care to people with diabetes nationally.

This report presents the measure development team and the Clinician Committee members, summarizes the issues discussed, and summarizes feedback and recommendations received from the Clinician Committee during its first meeting. CORE will update this report to include feedback and recommendations from future meetings as they occur.

Measure Development Team

The CORE measure development team consists of individuals with expertise in outcome measure development, health services research, clinical medicine, statistics, and measurement methodology. See [Table A1](#) in [Appendix A](#) for the full list of members of the CORE measure development team.

Faseeha K. Altaf, MPH, and Kasia J. Lipska, MD, MHS lead the MIPS short-term diabetes complications measure development team. Ms. Altaf has over six years of experience developing and re-evaluating quality measures for the ambulatory and hospital settings. Dr. Lipska is an endocrinologist at the Yale School of Medicine and a Clinical Investigator at CORE. Her research seeks to better understand the balance of benefits and harms of glucose-lowering therapy in older adults with type 2 diabetes.

Elizabeth Drye, MD, SM, Senior Director of Quality Measurement at CORE and a Research Scientist at the Yale School of Medicine, oversees the work.

The remainder of the CORE measure development team provides a range of expertise in outcome measure development, health services research, clinical medicine, statistics, and measurement methodology.

Vinitha Meyyur, PhD, the project's Contracting Officer Representative, and additional CMS staff overseeing the MIPS program, including Daniel Green, MD; Susan Arday, MHS, RN; Julie Johnson, MPH; and Sophia Sugumar provide ongoing input.

Clinician Committee Composition

CORE released a public call for nominations to convene the Clinician Committee. Potential Clinician Committee members were recruited via emails to individuals, professional societies, and organizations recommended by the MIPS short-term diabetes complications measure development team and stakeholder groups, email blasts sent to CMS email listservs, and through a posting on [CMS's website](#).

The Clinician Committee is composed of 15 members (see [Table 1](#) on pages 5-6). The Clinician Committee is comprised of front-line clinicians who provide ambulatory care to people with diabetes, including clinicians who practice in rural and/or underserved areas, as well as professional society representatives. The role of the Clinician Committee is to provide feedback to CORE on key methodological and clinical decisions for the MIPS short-term diabetes complications measure under development. The appointment term for the Clinician Committee is from October 2018 through July 2019.

Responsibilities of Clinician Committee members include:

- Reviewing background materials provided by CORE prior to each meeting;
- Participating in Clinician Committee meetings held by webinar/teleconference or in person; and
- Providing input on key clinical and methodological decisions, including measure cohort and outcome definitions, risk adjustment, and attribution of outcomes to MIPS eligible clinicians.

Table 1. Clinician Committee roster -- member name, organization, society representation if applicable, and location

Name and credentials	Title (organization)	Society Clinician Committee is representing (if applicable)	Location
Amisha Wallia, MD, MS	Endocrinologist (Northwestern Medical Group); Assistant Professor (Northwestern Feinberg School of Medicine)	Endocrine Society	Chicago, IL
Amy Mullins, MD, CPE, FAAP	Medical Director for Quality Improvement (American Academy of Family Physicians)	American Academy of Family Physicians	Leawood, KS
Andrew J. Lee, MD, FACP	Regional Medical Director, Medical Director Population Health (Medstar Medical Group)	Not applicable (N/A)	Bowie, MD
Benjamin Prohaska, PA-C	Physician Assistant (Renown Health Medical Group)	American Academy of Physician Assistants	Reno, NV
Deidra Crews, MD, ScM	Nephrologist (Johns Hopkins Medicine); Associate Professor of Medicine/Nephrology (Johns Hopkins University School of Medicine)	N/A	Baltimore, MD
Emily Schroeder, MD, PhD	Endocrinologist (Colorado Permanente Medical Group, Kaiser Permanente Colorado); Investigator at Institute for Health Research (Kaiser Permanente Colorado); Associate Professor in Division of Endocrinology, Metabolism, and Diabetes (University of Colorado Denver School of Medicine)	American Heart Association	Aurora, CO
Lucia Novak, MSN, ANP-BC, BC-ADM, CDTc	Owner (Diabetes Consulting Services); Nurse Practitioner and Director (Riverside Diabetes Center)	N/A	Riverdale, MD
Matthew K. Pickering, PharmD	Director, Research Quality Strategies (Pharmacy Quality Alliance)	Pharmacy Quality Alliance	Alexandria, VA

Name and credentials	Title (organization)	Society Clinician Committee is representing (if applicable)	Location
Meggan Grant-Neirman, DO, MBA	Family Physician (First Street Family Health)	N/A	Poncha Springs, CO
Melissa Stroh, PA-C	Physician Assistant (Kiowa District Hospital)	N/A	Kiowa, KS
Michael Steinman, MD	Attending, Geriatrics Clinic (San Francisco Veterans Affairs Medical Center); Professor of Medicine (University of California at San Francisco School of Medicine)	American Geriatrics Society	San Francisco, CA
Nestoras Mathioudakis, MD, MHS	Attending Physician (Johns Hopkins Hospital); Core Faculty (Armstrong Institute for Patient Safety and Quality); Clinical Director, Endocrinology, Diabetes & Metabolism; Assistant Professor of Medicine (Johns Hopkins School of Medicine)	N/A	Baltimore, MD
Richard Hellman, MD	Clinical Endocrinologist (Hellman & Rosen Endocrine Association)	American Medical Association	North Kansas City, MO
Rodolfo Galindo, MD	Assistant Professor of Medicine at Emory University School of Medicine	American Association of Clinical Endocrinologists	Atlanta, GA
Vivian Fonseca, MD, FRCP	Endocrinologist (Tulane Medical Center); Past President (American Diabetes Association); Professor of Medicine and Pharmacology; Assistant Dean for Clinical Research; Tullis – Tulane Chair in Diabetes (Tulane University); Chief, Section of Endocrinology and Metabolism (Tulane University Health Sciences Center)	American Diabetes Association	New Orleans, LA

Clinician Committee Meetings

CORE held the first Clinician Committee meeting on December 10, 2018 (Clinician Committee Meeting 1). CORE anticipates holding additional meetings through July 2019 (see [Appendix B](#) for the Clinician Committee meeting schedule). This report contains a summary of Clinician Committee Meeting 1.

Clinician Committee meetings follow a structured format. CORE presents key issues identified during measure development and a proposed approach to addressing them, and Clinician Committee members review, discuss, and advise on the issues.

Key Issues Discussed During Clinician Committee Meeting 1

Prior to Clinician Committee Meeting 1, CORE provided the Clinician Committee members with materials for review. Materials prepared for the meeting included:

- The slide deck for the meeting.
 - The slide deck included CMS MIPS program policy relevant to the project, an introduction to the measure, and topics for Clinician Committee review.
- The meeting agenda.
- The environmental scan/literature review for the MIPS short-term diabetes complications measure.

During the meeting, CORE solicited feedback from the Clinician Committee about the technical challenges for the measure, including how to attribute the short-term complication outcomes to individual clinicians (or groups of clinicians).

In addition to providing input on the measure's technical challenges, Clinician Committee members also provided input on cohort exclusions, outcome definition, risk-adjustment variables, and approaches to attribution for the measure.

Following the meeting, Clinician Committee members provided additional feedback on the International Classification of Diseases, Ninth Revision (ICD-9) and International Classification of Diseases, Tenth Revision (ICD-10) diagnosis codes that define the cohort of patients with diabetes, and those that define the two outcomes (hypoglycemia and hyperglycemia).

Executive Summary of Clinician Committee Meeting 1

Overview of Information Presented by CORE

CORE reviewed:

- Goals of the meeting.
- Introduction to quality measurement.
- The development of the MIPS short-term diabetes complications measure:
 - Project overview and timeline,

- Measure background, and
- Measure specifications: cohort, outcome, and risk adjustment.
- Potential technical challenges in measure design.

Overview of Clinician Committee Feedback

Feedback from the Clinician Committee included the following:

- Members were generally supportive of the short-term complication outcomes as targets for quality measurement, although some preferred a focus on the long-term complications of diabetes.
- Clinicians underscored the importance of capturing outcomes with the right set of codes and ensuring that the codes have been validated. They noted regional differences in coding practices and potential for gaming the measure (for example, by coding a symptom rather than hypoglycemia).
- Several members expressed support for a broad cohort that includes all patients with diabetes. However, one member preferred exclusion of steroid-induced and gestational diabetes from the measure cohort.
- Clinician Committee members discussed the importance of adequate risk adjustment to ensure the measure is fair. Beyond usual medical comorbidities, members underscored the importance of cognitive impairment and depression, patient resources, education, income, access to technologies (such as continuous glucose monitoring systems), prescription coverage (which affects selection of specific drugs for diabetes), and access to specialty care (endocrinology) as factors that may impact measure outcomes.
- Clinician Committee members suggested several potential approaches to attribution, which included attribution based on which clinician is prescribing diabetes medications, which clinician is ordering A1C tests, which clinician is billing for services the most, as well as shared attribution between primary care providers and endocrinologists.

Detailed Summary of Clinician Committee Meeting 1

Welcoming Remarks

- The CORE team and CMS welcomed the Clinician Committee members to the meeting to discuss the development of outpatient outcome measures for MIPS. The CORE team reviewed the confidentiality agreement and the funding source for the project.
- CORE conducted roll-call of meeting participants; 11 of 15 Clinician Committee members were in attendance.

Introduction to Quality Measurement

CORE Presentation to the Clinician Committee

- CORE reviewed the types of quality measures including structural, process, and outcome measures.

- CORE discussed outcome measures, noting that outcome measures reflect the impact of the health service or intervention on the health status of patients.
- CORE reviewed the components of outcome measures: the cohort or the group of patients included in the measure; the outcome, which is the result of care or what happens to the patient; and risk adjustment, which is the process that helps to account for differences in patient mix so that variation in performance reflects differences in care quality and not differences in patient mix.
- CORE provided an overview of the meeting's goals.

Project Overview

CORE Presentation to the Clinician Committee

- CORE is developing an outcome measure for MIPS which will focus on patients with diabetes, measure short-term complications of care, be risk-adjusted, and evaluate quality of care provided by clinicians or groups of clinicians. It will be completed in July 2019.
- CORE noted the measure is still in early stages of development and that CORE has been focused on defining the cohort and outcomes as well as the preliminary attribution approach.
- CORE summarized approaches to getting stakeholder input during development noting the input of the TEP as well as the Clinician Committee.

Development of Diabetes Short-Term Complications Measure

CORE Presentation to the Clinician Committee

- CORE summarized its preliminary approach to the MIPS short-term diabetes complications measure.
 - The data sources for measure development include Medicare Fee-for-Service (FFS) administrative claims data (Part A, Part B, Part D) from years 2013-2015.
 - The cohort is currently defined as: Medicare FFS beneficiaries aged 65+ with a diabetes diagnosis (based on Healthcare Effectiveness Data and Information Set [HEDIS] criteria using claims data from up to 2 years prior to the measurement period) who are enrolled in Part A and B during, and 1 year prior to, the measurement period.
 - The outcome is defined as:
 - A *hyperglycemic* or *hypoglycemic* event that leads to healthcare utilization (hospital admission, emergency department [ED] visit, or observation stay) and is identified as a primary/principal discharge diagnosis from the ED or hospital, based on claims.

- CORE provided preliminary thoughts about the risk-adjustment model. The goal of risk adjustment is to account for differences in case-mix across MIPS eligible clinicians so the measure score illuminates variation in performance. The two outcomes of interest are relatively rare; therefore, it may be necessary to restrict the measure to larger clinician groups to be able to reliably measure the outcome rates across providers.
- CORE asked Clinician Committee members if they had any clarifying questions about the measure concept or any of the material.
- CORE reviewed the technical challenges, which were determining whether to include a broad group of patients with diabetes in the cohort or restrict to patients using high-risk medications. In addition, CORE pointed out the challenges associated with a relatively low outcome rate and the inability to account for hypoglycemic events occurring outside of the ED or hospital, such as those treated and released by emergency medical service (EMS) providers or those treated by family or caregivers at home.
- CORE led the Clinician Committee members in a “round robin” to solicit thoughts about ways to address the measure technical challenges as well as other technical challenges they may foresee.

Clinician Committee Feedback

Measure Concept

- One member expressed that the focus of this measure is too much on short-term complications. While short-term complications are vital to the health of the patient, long-term complications tend to be of greater priority. The member noted clinicians are seeing fewer admissions for short-term complications (aside from diabetic ketoacidosis). In contrast, the member noted gaps in diabetes management to reduce the risk of long-term complications and recommended the use of appropriate surrogates to focus in on these longer-term outcomes.
- One member agreed long-term complications are important as they comprise two-thirds of the costs and much of the misery for the patients. The member highlighted that validity of hyperglycemia and hypoglycemia outcomes is the key issue.

Cohort

- Clinician Committee members generally supported the use of a broad cohort.
 - Four members supported the use of a broad cohort, while the others did not specifically comment on cohort.
 - One member noted the use of a broad cohort would help to reflect many of the decisions that go into the choice of medication to treat diabetes.
 - One member is developing a measure for health plan-level accountability that captures hypoglycemic events only, and the measure also has a broad cohort. The hypoglycemia rates for the health plan measure were similar to rates reported by CORE.

- One member suggested adding two exclusions for 1) steroid-induced diabetes and 2) gestational diabetes. The member noted that these are self-limiting and exceptional diagnoses that should be excluded.
 - Another member disagreed with this and added that a patient can have steroid-induced hyperglycemia on top of preexisting diabetes that is caused by medications (for example, glucocorticoids) prescribed by other clinicians such as ophthalmologists, orthopedists, or rheumatologists.

Outcome

- One member asked about the ICD-9 codes for hypoglycemia. The member noted that in the literature, there is a narrow set of ICD-9 coding for hypoglycemia, but it is more expansive in other algorithms. The member preferred keeping the outcome definition narrow but specific.
 - CORE noted they would share the ICD-9 and -10 codes used to define the outcomes to the Clinician Committee for review and feedback.
- Two members brought up variation in coding and the importance of validation of the capture of the outcome. They noted there is a significant amount of variation in coding practices. There is also variation from the outpatient to the inpatient setting. In the outpatient setting, hypoglycemia may be coded as a sign or symptom, rather than as “hypoglycemia.” They asked if the measure would include hypoglycemia based on laboratory values (for example, a glucose level of 43 milligrams per deciliter [mg/dl]).
- One member raised concerns about regional variation in EMS transport rates for hypoglycemia as an issue. The member also raised concerns that the measure could potentially lead to perverse counseling of patients to avoid being transported by EMS to the emergency room for hypoglycemia.
- One member foresaw challenges with reliability testing based on her/his own health plan-level measure. The member added that although the health plan-level measure of accountability is broad, its reliability may not be high. The models that for the health plan-level measure may not converge to adequately show health plan-level accountability. This issue extends into risk adjustment, because the sample may not be large enough to adequately test a risk-adjusted model. The member noted that these may or may not be concerns for CORE’s MIPS measure.
- One member noted CORE is more interested in a subset of hypoglycemia and suggested CORE note this explicitly.
- One member suggested hypoglycemia is not frequently addressed by EMS, but by family members. If family members do call EMS, they do not want to pay the ambulance bill and they may negotiate to keep the patient at home. This will not be captured in the measure.

Attribution

- Several Clinician Committee members suggested attributing the outcome of short-term diabetes complications to the provider who prescribed glucose-lowering medication.
 - One member suggested if a clinician belongs to an entire health system then it would be the health system that should be attributed, as there may be multiple providers who are managing several of these medications.
 - One member suggested the provider who is most often billing for the care of the patient could be held accountable.
 - One member noted sometimes providers are forced to use the wrong medication – for example, a sulfonylurea (which increases the risk of hypoglycemia) – because of the patient's insurance status. The member added it is important to examine if the patient was denied other medications that may not have led to the hypoglycemia.
- Three members suggested a multiple provider attribution approach in which both the endocrinologist and the primary care provider would be held accountable.
 - One member pointed out that in rural/remote communities, patients may drive 2 hours to see an endocrinologist once a year. The member noted the primary care provider is involved with the day-to-day management, while the endocrinologist may provide recommendations for how treatment may need to be tailored. The member suggested using billing for drawing the A1C to discern who is the most responsible. The member also suggested that if patients experience a complication, both the endocrinologist and the primary care provider could be alerted, which would encourage more communication and collaboration between the two providers who would be sharing responsibility for the patient.
 - Another member agreed with this approach, as it would encourage collaboration. The member highlighted that it would be very challenging to identify who owns the patient in a health system based on A1C draws. Epic is used in the member's practice, and patients can have an A1C drawn by the primary care provider at one visit and by the endocrinologist at the next visit. The member asked if the patient would potentially appear on two different clinician's lists in this scenario. In the member's own experience, the goals of the endocrinologist may differ from those of the primary care provider and there are often discordant guidelines between the American College of Physicians (ACP) and the American Diabetes Association (ADA) with respect to glycemic targets. The member asked how to account for what a clinician's actual target is for a given patient.
- Two Clinician Committee members questioned whether providers should be responsible for short-term complications.
 - A member noted that hyperglycemia and hypoglycemia are very short-term complications. The member said that patients with type 1 diabetes commonly

experience fluctuations in their blood glucose levels daily, and that there are many factors contributing. The member added that while a provider is responsible for her/his patient, the patient should also be held responsible for themselves. The member questioned why providers should be considered “responsible.”

- One member noted other providers who may not be treating diabetes can prescribe medications, which in turn affect blood sugars. For example, ophthalmologists, orthopedists, or rheumatologists often prescribe medications they do not think will affect blood sugars. The member found out about these medications after a complication already occurred. This means clinicians must focus on education to other providers and to patients to prevent another complication from happening.

Risk Adjustment

- One member asked about risk adjustment, specifically, the ability to examine and include social risk factors. The member noted that if a provider uses the various medical problems that a patient has, the provider would miss factors that drive outcomes and are related to education level and/or income level.
- One member highlighted the importance of comorbidities. For example, patients with chronic kidney disease have an increased risk of hypoglycemia when prescribed sulfonylureas. The member also noted the presence of cognitive dysfunction, depression and lack of resources in this population. These factors are important to consider because hypoglycemia risk may be reduced with the use of Continuous Glucose Monitoring Systems (CGMs), which provide alarms when blood glucose levels go down.
- One member pointed out that differences in insurance coverage may drive selection of glucose-lowering drugs, and that this in turn will affect hypoglycemia outcome.

Summary

- Cohort: The Clinician Committee generally supported the use of the broad cohort and suggested cohort exclusion criteria.
- Outcome: Clinician Committee members discussed several concerns pertaining to the outcome, which included the codes to be used, variation in coding practices, inability to capture events that do not end up in the ED, regional variation in EMS practices with respect to transporting patients to the ED for hypoglycemia, and the possibility of issues with reliability testing.
- Attribution: Clinician Committee members suggested several potential approaches to attribution including attribution based on which clinician is prescribing diabetes medications, which clinician is ordering A1C tests, which clinician is billing for services the most, as well as shared attribution between primary care and endocrinology.
- Risk adjustment: Clinician Committee members discussed the importance of adequate risk adjustment to ensure the measure is fair. Beyond usual medical comorbidities, members underscored the importance of cognitive impairment and depression, patient resources, education, income, access to technologies (such as CGMs), prescription

coverage (which affects selection of specific drugs for diabetes), and access to specialty care (endocrinology) as factors that may impact measure outcomes.

Wrap-Up

CORE Presentation to the Clinician Committee

- CORE thanked the Clinician Committee members for their valuable feedback and, reviewed the next steps for the project. CORE will distribute a summary of the meeting, develop an approach to attribution, and hold the next Clinician Committee meeting in February 2019 in person.
- CORE invited Clinician Committee members to reach out via email with any additional input.

Appendix A. CORE Measure Development Team

Table A1. Center for Outcomes Research and Evaluation (CORE) team members for MIPS short-term diabetes complications measure development

Name	Team Role
Faseeha K. Altaf, MPH	Project Co-Lead
Kasia J. Lipska, MD, MHS	Project Co-Lead
Mariana L. Henry, MPH	Project Coordinator
Craig S. Parzynski, MS	Lead Statistical Analyst
Haikun Bao, PhD	Senior Statistical Analyst
Zhenqiu Lin, PhD	Analytic Director
Julia McMahon, BS	Research Assistant
Jeph Herrin, PhD	Statistical Consultant
Megan LoDolce, MA	Project Manager
Harlan M. Krumholz, MD, SM	Principal Investigator
Elizabeth E. Drye, MD, SM	Project Director

Appendix B. Clinician Committee Meeting Schedule

Clinician Committee feedback on CORE's approach to measure development will inform the MIPS short-term diabetes complication measure's specifications. CORE will engage and seek input from the Clinician Committee as they develop the measure through email communication and at least three meetings:

1. **Clinician Committee Meeting 1:** Monday, December 10, 2018; 6:00 PM – 7:30 EST (Location: teleconference/webinar).
2. **Clinician Committee Meeting 2:** February 28, 2019 (Location: in-person in Baltimore/Washington D.C. area).
3. **Clinician Committee Meeting 3:** June 2019 (Location: teleconference/webinar).
4. Additional meetings to be determined.