

CMS Quality Measure Development Plan

**Technical Expert Panel
Meeting Summary
Appendices**

(MACRA Section 102)

Meeting Dates: May 2–3, 2018

Prepared by: Health Services Advisory Group, Inc.



APPENDIX A – TECHNICAL EXPERT PANEL CHARTER

Technical Expert Panel Charter

Project Title:

CMS Quality Measure Development Plan: Supporting the Transition to the Merit-based Incentive Payment System (MIPS) and Alternative Payment Models (APMs)

Project Technical Expert Panel (TEP) Dates:

March 2018–June 2019

Project Overview:

The Centers for Medicare & Medicaid Services (CMS) has contracted with Health Services Advisory Group, Inc. (HSAG) to develop and update the *CMS Quality Measure Development Plan: Supporting the Transition to the Merit-based Incentive Payment System (MIPS) and Alternative Payment Models (APMs)*. CMS initiated this project under the contract titled Impact Assessment of CMS Quality and Efficiency Measures. The contract number is #HHSM-500-2013-13007I; Task Order #HHSM-500-T0002. The *CMS Quality Measure Development Plan (MDP)* is mandated by the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA) and serves as a strategic framework for clinician quality measure development to support MIPS and Advanced APMs, known collectively as the Quality Payment Program. To meet the statutory requirements, CMS posted the draft MDP on December 18, 2015, and opened a public comment period through March 1, 2016. The revised MDP incorporates key themes and specific recommendations identified during review of the public comments. The plan was posted on the CMS.gov website on May 2, 2016, to be followed by updates as appropriate. An annual report chronicling the progress made in advancing quality measures for the Quality Payment Program is required to be posted on the CMS website. The first MDP Annual Report was posted in June 2017; the second on May 3, 2018.

HSAG is convening groups of stakeholders and experts to contribute direction and thoughtful input on the annual progress reports and updates of the MDP required under MACRA. HSAG convened a TEP from November 2016 through December 2017 that provided valuable expertise and input to prioritize measure subtopics for the clinical specialties identified in the MDP. The TEP convened in 2018 will continue the essential work to support the MDP in guiding and prioritizing measure development for a payment program that promotes measurable improvement in health outcomes, relieves clinicians' reporting burden, and includes measures that are meaningful to patients and clinicians.

Project Objectives:

The primary objectives of this project include:

- ◆ Assess the landscape of current measures, measurement gaps, and measure development priorities for the CMS Quality Payment Program, consisting of MIPS and advanced APMs.
- ◆ Identify a comprehensive list of variables to consider for inclusion in a quantitative approach to assess quality measures.
- ◆ Develop the mandated annual report on progress in developing quality measures for the Quality Payment Program.
- ◆ Propose and apply criteria to evaluate CMS progress on measure development for the Quality Payment Program.
- ◆ Support the continuing evolution of the MDP as a strategic framework for clinician quality measure development for the Quality Payment Program.
- ◆ Gather input about the most impactful and highest-priority quality improvement areas for all clinicians, including specialists, and what is important to patients, families, and caregivers to enhance the Meaningful Measures initiative.

TEP Objectives:

Convening the TEP is one important step in the measure development process that ensures transparency and provides an opportunity to obtain balanced input from multiple stakeholders. The TEP will assist

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the project team in refining concepts and evaluating potential specifications for the development of a framework to quantitatively assess quality measures. TEP members will also assist in gathering and evaluating information for the annual progress report on measure development for the Quality Payment Program and for future updates of the MDP. The project team will consider the recommendations of the TEP and convey members' feedback to CMS to ensure that policy decisions take stakeholders' interests into account.

Scope of Responsibilities:

Core duties of TEP members shall include the following:

- ◆ Provide input on information gathered by the project team, including the identification and potential operationalization of a comprehensive list of variables to consider for inclusion in a quantitative approach to assess quality measures.
- ◆ Provide input on information gathered by the project team, including gap analyses of clinician quality measures.
- ◆ Review the outline and content of the annual progress report and provide feedback.
- ◆ Recommend approaches to evaluate CMS progress in developing measures for the Quality Payment Program.

Provide input on the MDP and propose criteria for future updates to the MDP. TEP members are expected to commit to the anticipated time frame needed to perform the functions of the TEP. To participate fully in discussions, members should become familiar with the MDP and read briefing materials prepared for their review before meetings.

As a contractor for CMS, HSAG must ensure independence, objectivity, scientific rigor, and balance in project activities. Potential TEP members must disclose any current and past activities that may pose a potential conflict of interest for performing the tasks required of the TEP. If conflict of interest status changes at any time during service on this TEP, the member must notify HSAG and the TEP chair before participating in any subsequent meetings.

Guiding Principles:

The MDP outlines the strategic vision for measure development for the Quality Payment Program. The MDP is built on the CMS quality priorities, as well as priorities and principles described in the CMS Measures Management System (MMS) Blueprint, CMS Guiding Principles for Measure Development, and National Quality Forum measure evaluation criteria. Together with the statutory requirements of MACRA section 102, this strategic vision will guide the efforts of the TEP to support the annual progress report and future updates of the MDP.

Participation on the TEP is voluntary. Potential members should understand that their input will be recorded for the purpose of preparing a meeting summary, which will highlight discussion points and document recommendations for consideration by the project team and CMS. If a participant discloses private, personal data by his or her own choice, then that material and those communications are not deemed to be covered by patient-provider confidentiality. Patient and family/caregiver participants may request to keep their names confidential in public reports related to the TEP.

Estimated Number and Frequency of Meetings:

- ◆ TEP members are expected to serve from March 2018 through June 2019.
- ◆ Members are expected to convene in person for the initial TEP meeting in Tampa, Florida, on May 2–3, 2018. The meeting will last 1 full day and 1 partial day.
- ◆ Up to four virtual conferences of 1 to 3 hours may also be scheduled through webinar and teleconference capability during the term of service. Dates for the webinar/teleconference meetings will be determined based on need and member availability.

Date Approved by TEP: May 2, 2018

TEP Membership: The TEP Membership List is attached.

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MDP TEP Membership:

**Designations of Consumer Perspective are limited to those who selected this as their primary perspective.*

Name, Credentials, Professional Role	Organizational Affiliation, City, State	Consumer Perspective*	Clinical Content	Performance Measurement	Coding and Informatics	Conflict of Interest Disclosure
Peter Aran, MD, Associate Dean for Clinical Affairs; Chief Medical Officer	University of Oklahoma School of Community Medicine, Tulsa, OK		X	X		None
Brandy Cunningham, MS Medical Informatics Manager	Muscogee Nation Department of Health Okmulgee, OK			X	X	None
Lindsay Erickson, MSPH Director, Value Based P4P Program	Integrated Healthcare Association Oakland, CA			X		None
Robert Fields, MD Senior Vice President/Chief Medical Officer for Population Health	Mount Sinai Health System New York, NY		X	X		None
Eliot Fishman, PhD Senior Director for Health Policy	Families USA Washington, DC	X		X		None
Jeremy Furniss, OTD, OTR/L, BCG Director of Quality	American Occupational Therapy Association Bethesda, MD		X	X		None
Lisa Gall, DNP, RN, FNP, LHIT-HP, Clinical Program Manager Family Nurse Practitioner (part-time)	Stratis Health Bloomington, MN CentraCare Health (rural hospital/urgent care center)		X	X	X	Lead author of the MIPS Estimator that Stratis Health developed for the Quality Payment Program.
Rachel Harrington, BA Predoctoral Fellow	University of Illinois at Chicago Chicago, IL	X		X		Full-time graduate student and caregiver previously employed in pharmaceutical industry.
Mark Huang, MD Psychiatrist, Chief Medical Information Officer	Shirley Ryan AbilityLab Chicago, IL		X	X	X	Nonremunerative position of influence at Cerner Corp. providing strategy and guidance regarding rehabilitation-related content.

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Name, Credentials, Professional Role	Organizational Affiliation, City, State	Consumer Perspective*	Clinical Content	Performance Measurement	Coding and Informatics	Conflict of Interest Disclosure
Kent Huston, MD Clinical Assistant Professor Rheumatologist	University of Missouri-Kansas City School of Medicine Kansas City Physician Partners Kansas City, MO		X	X		None
Joel Kaufman, MD, FAAN Clinical Professor, Department of Neurology Medical Director, Neurology Resident Clinic	Alpert Medical School of Brown University Rhode Island Hospital Providence, RI		X	X		None, but works with American Academy of Neurology on alternative payment models.
Erin Mackay, MPH Associate Director, Health Information Technology Policy and Programs	National Partnership for Women and Families Washington, DC	X		X	X	None
Scott Mash, MSLIT, CPHIMS, FHIMSS Director of Consulting Operations and Health Information Exchange Outreach	Ohio Health Information Partnership (CliniSync) Hilliard, Ohio			X	X	None
Giselle Mosnaim, MD, MS, FAAAAI, FACAAI Clinical Assistant Professor Research Scientist and Attending Physician	Pritzker School of Medicine, University of Chicago NorthShore University HealthSystem Evanston, IL		X	X		Scientific consultant to advisory boards for Boehringer Ingelheim, GlaxoSmithKline, electroCore, and AstraZeneca; principal investigator for clinical trials. Has stock options with electroCore.
Amy Mullins, MD, CPE, FAAFP Medical Director, Quality Improvement	American Academy of Family Physicians (AAFP), Leawood, KS		X	X		None

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Name, Credentials, Professional Role	Organizational Affiliation, City, State	Consumer Perspective*	Clinical Content	Performance Measurement	Coding and Informatics	Conflict of Interest Disclosure
Amy Nguyen Howell, MD, MBA, FAAFP, Chief Medical Officer	America's Physician Groups Los Angeles, CA		X	X		None
Michael Phelan, MD, JD, RDMS, FACEP Associate Staff, Department of Emergency Medicine Medical Director, Quality and Patient Safety Institute	Cleveland Clinic Health Systems Cleveland, Ohio		X	X		Received a CDC grant two years ago to study ED hemolysis and developed an eMeasure. Member of ACEP and chair of Quality and Performance Committee.
Kristin Rising, MD, MSHP, FACEP Associate Professor, Department of Emergency Medicine; Director of Acute Care Transitions	Sidney Kimmel Medical College at Thomas Jefferson University Philadelphia, PA		X	X		None
Lynn Rogut, MCRP Director, Quality Measurement and Care Transformation	Quality Institute, United Hospital Fund New York, NY			X		Works for a nonprofit organization with federal and state contracts and foundation grants. Work in quality has been funded by New York State Health Foundation.
Heather Smith, PT, MPH Director of Quality	American Physical Therapy Association Alexandria, VA		X	X		None
Lisa Gale Suter, MD Associate Professor, Department of Medicine (Rheumatology) Associate Director, Quality Measurement Program	Yale University School of Medicine New Haven, CT Yale Center for Outcomes Research and Evaluation (CORE)		X	X		Receives salary support from a CMS contract with Yale CORE, which develops quality measures for eligible clinicians.

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Name, Credentials, Professional Role	Organizational Affiliation, City, State	Consumer Perspective*	Clinical Content	Performance Measurement	Coding and Informatics	Conflict of Interest Disclosure
Samantha Tierney, MPH Director, Measure Development Operations	PCPI® Foundation Chicago, IL			X	X	Salary funded by PCPI®, which sometimes serves as a subcontractor on federal grants to develop performance measures.
Lindsey Wisham, MPA Director, Information Management	Telligen West Des Moines, IA	X		X	X	Telligen is a subcontractor that assists with CMS measure development and maintenance activities.

APPENDIX B – TEP AGENDA



Centers for Medicare & Medicaid Services (CMS)
Quality Measure Development Plan (MDP)



Technical Expert Panel Meeting

May 2, 2018, 8:30 a.m.–4:00 p.m. ET

May 3, 2018, 8:30 a.m.–2:30 p.m. ET

Objectives

- Discuss the role of the Technical Expert Panel (TEP) in terms of project background and objectives; ratify the TEP Charter.
- Consider the perspectives shared by patient and caregiver TEP members.
- Present the qualitative approach to identifying prioritized specialties.
- Review the methodology and findings of the MDP environmental scan.
- Prioritize measurement gap areas and review additional subtopics for the conceptual framework.
- Highlight the goal, methods, and findings of the Quality Measure Index environmental scan.
- Describe the Quality Measure Index and review development approach.

Agenda – May 2, 2018 (Day 1)

8:30 a.m.– 8:40 a.m. **Welcome and Opening Remarks** Kyle Campbell, PharmD
HSAG

8:40 a.m.– 9:00 a.m. **CMS Welcome and Update** Nidhi Singh Shah, MPH
Danielle Andrews, MHA
Maria Durham, MBA, MS
CMS Quality Measurement and Value-Based Incentives Group

9:00 a.m.– 9:15 a.m. **MACRA and Your Role in the CMS Quality Measure Development Plan** Kendra Hanley, MS
HSAG

9:15 a.m.– 9:35 a.m. **TEP Introductions and Ratification of the TEP Charter** Amy Mullins, MD
Michael Phelan, MD, JD
TEP Co-Chairs

9:35 a.m.– 10:05 a.m. **Patient and Caregiver Perspectives** Lindsey Wisham, MPA
Rachel Harrington, BA



Agenda – May 2, 2018 (Day 1)

10:05 a.m.– 10:30 a.m. **Identification of Priority Specialties** Anita Somplasky, RN
HSAG

10:30 a.m.– 10:45 a.m. **Networking Break #1**

10:45 a.m.– 11:30 a.m. **Overview of the Environmental Scan** Cherrishe Brown-Bickerstaff,
PhD, MPH
HSAG

11:30 a.m.– 12:00 p.m. **QCDR Measures and Measure Gaps** Kendra Hanley, MS
HSAG

12:00 p.m.– 1:00 p.m. **Networking Lunch**

1:00 a.m.– 1:45 p.m. **Overview of the Pre-Assessment Approach and Guide to Specialty-Specific Discussion** Carolyn Lockwood, MSN, RN
HSAG

1:45 p.m.– 2:45 p.m. **Discussion of Priority Subtopics by Specialty – Emergency Medicine** Kendra Hanley, MS
HSAG

2:45 p.m.– 3:00 p.m. **Networking Break #2**

3:00 p.m.– 3:45 p.m. **Discussion of Priority Subtopics by Specialty – Allergy/Immunology** Ann Clancy, MBA, RN
HSAG

3:45 p.m.– 4:00 p.m. **Question and Answer / Wrap Up Day 1** Kyle Campbell, PharmD
Kendra Hanley, MS
HSAG

APPENDIX C – PRELIMINARY ENVIRONMENTAL SCAN AND GAP ANALYSIS CONCEPTUAL FRAMEWORK FOR TEP PRE-ASSESSMENT

Table C-1: Conceptual Framework With Counts of Existing Measures by Meaningful Measures Priority, Topic Area, and Specialty¹

Meaningful Measures Priority/ MACRA Domain	Meaningful Measure Area	Specialty					
		Crosscutting	Allergy/ Immunology	Emergency Medicine	Neurology	Physical Medicine and Rehabilitation	Rheumatology
Effective Prevention and Treatment/ Clinical Care ²	Preventive Care	Immunization (4; 2 MIPS, 2 other) Screening (2; 2 MIPS)	No subtopics identified	Immunization (1; 1 MIPS) Screening (1; 1 QCDR)	No subtopics identified	No subtopics identified	No subtopics identified
	Management of Chronic Conditions	Early diagnosis and appropriate treatment (0) Effective interventions to decrease disparities in chronic conditions (0) Secondary prevention (1) - Immunizations (1; 1 QCDR) Symptom management (4) - Pain (3; 3 other) - Dyspnea (1; 1 other) Telehealth monitoring (0)	Treatment outcomes (1) - Asthma (1; 1 MIPS) Treatment processes (6) - Allergies (1; 1 QCDR) - Asthma (5; 4 QCDR, 1 other)	Treatment outcomes (0) Treatment Processes (1) - Asthma (1; 1 QCDR)	Symptom management (4) - Migraines (1; 1 QCDR) - Muscle spasticity (3; 3 QCDR) Treatment outcomes (1) - Giant cell arteritis (1; 1 QCDR) Treatment processes (14) - Alzheimer’s disease (0) - Dementia (6; 5 MIPS, 1 QCDR) - Distal symmetric polyneuropathy (1; 1 QCDR) - Epilepsy (2; 1 MIPS, 1 QCDR) - Multiple sclerosis (2; 2 QCDR) - Muscular dystrophy (0) - Parkinson’s disease (2; 2 MIPS) - Spine care (1; 1 QCDR)	Complex conditions (0) Symptom management (4) - Bowel care (2; 1 QCDR, 1 other) - Muscle spasticity (2; 2 QCDR) Treatment outcomes (0)	Early diagnosis and appropriate treatment (0) - Rheumatoid arthritis (0) Treatment outcomes (4) - Ankylosing spondylitis (2; 2 QCDR) - Gout (2; 1 QCDR, 1 other) Treatment processes (11) - Gout (1; 1 other) - Inflammatory arthritis (10; 4 MIPS, 3 QCDR, 3 other)

¹ QCDR measures were not assessed for availability for MIPS eligible clinicians who are not subscribers of a particular QCDR.

² Domain includes measures of screening, prevention, and primary care.

Meaningful Measures Priority/ MACRA Domain	Meaningful Measure Area	Specialty					
		Crosscutting	Allergy/ Immunology	Emergency Medicine	Neurology	Physical Medicine and Rehabilitation	Rheumatology
Effective Prevention and Treatment/ Clinical Care	Prevention, Treatment, and Management of Mental Health	Behavioral and psych screening (1) - Anxiety/ Depression (1; 1 MIPS & QCDR) Referral or follow-up (0) - Depression (0)	No subtopics identified	Behavioral and psych screening (0) - Anxiety/ Depression (0) Referral or follow-up (1; 1 other)	Behavioral and psych screening (6; 1 MIPS, 5 QCDR) - Anxiety/Depression (2; 2 QCDR) - General (4; 1 MIPS, 3 QCDR)	Behavioral and psych screening (2) - Anxiety/Depression (2; 2 QCDR)	No subtopics identified
	Prevention and Treatment of Opioid and Substance Use Disorders (SUD)	Care plan (1; 1 MIPS) Opioid prescribing (0) Referral or follow-up (1) - Opiate/SUD (1) Screening/ intervention (7) - Alcohol (1; 1 MIPS) - Opioid/SUD (4; 1 MIPS, 2 QCDR, 1 other) - Tobacco (2; 1 MIPS, 1 MIPS & QCDR)	No subtopics identified	Opioid prescribing (4; 4 in QCDR) Referral or follow-up (1) - Opioid/SUD (1; 1 other) Screening/ intervention (1) - Opioid/SUD (1; 1 QCDR)	Opioid prescribing (1) - Chronic headaches (1; 1 QCDR) Screening/intervention (2) - Alcohol (1; 1 QCDR) - Opioid/SUD (1; 1 QCDR)	Care plan (1; 1 QCDR) Opioid prescribing (5; 5 QCDR) Screening/ intervention (3) - Opioid/SUD (3; 3 QCDR)	No subtopics identified
	Risk-Adjusted Mortality	No subtopics identified	No subtopics identified	Severe trauma (2; 2 QCDR)	Stroke (0)	No subtopics identified	No subtopics identified
Making Care Safer/Safety	Healthcare-Associated Infections	No subtopics identified	No subtopics identified	No subtopics identified	No subtopics identified	No subtopics identified	No subtopics identified

Meaningful Measures Priority/ MACRA Domain	Meaningful Measure Area	Specialty					
		Crosscutting	Allergy/ Immunology	Emergency Medicine	Neurology	Physical Medicine and Rehabilitation	Rheumatology
Making Care Safer/Safety	Preventable Health Care Harm	Adverse medication events (0) - Medication errors (0) Diagnostic accuracy (0) Falls (1; 1 MIPS) Medical errors (1; 1 other) Potentially avoidable complications (1; 1 other) Unintended consequences of treatment (0)	Penicillin allergy testing (1; 1 QCDR)	Adverse medication events (0) Antibiotic use (0) - Overuse (0) - Appropriate use (0) Diagnostic accuracy (2; 1 MIPS, 1 QCDR) Potentially harmful drug-drug interactions (0)	Adverse medication events (1; 1 other) Falls (2; 2 QCDR) Potentially avoidable complications (1; 1 QCDR) Potentially harmful drug-drug interactions (1; 1 QCDR) Unintended consequences (0) - Alzheimer's (0) - Dementia (0) - Parkinson's disease (0) - Multiple sclerosis (0) - Muscular dystrophy (0)	Infection control practices (1; 1 QCDR) Potentially avoidable complications (1; 1 QCDR) Potentially harmful drug-drug interactions (2; 2 QCDR)	No subtopics identified No subtopics identified
Communication and Coordination/ Care Coordination	Medication Management	Comorbid condition prescribing (0) High-risk medications (1; 1 MIPS) Medication management/ reconciliation (2; 2 MIPS) Medication persistence monitoring (0)	Medication persistence monitoring (1; 1 MIPS) Treat to target (appropriate dosing) (1; 1 QCDR)	Medication management/ reconciliation (0)	No subtopics identified	High-risk medications (3; 3 QCDR)	Treat to target (appropriate dosing) (0)

Meaningful Measures Priority/ MACRA Domain	Meaningful Measure Area	Specialty					
		Crosscutting	Allergy/ Immunology	Emergency Medicine	Neurology	Physical Medicine and Rehabilitation	Rheumatology
Communication and Coordination/ Care Coordination	Admissions and Readmissions to Hospitals	Admission (0) - Multiple chronic conditions (0) Attendance at first post-discharge appointment (0) Readmission (0) - All-cause (0) - Multiple chronic conditions (0)	No subtopics identified	Return to ED (1; 1 QCDR) Severe trauma (0)	No subtopics identified	Admissions (1; 1 QCDR) Severe trauma (0)	No subtopics identified
	Transfer of Health Information and Inter-operability	Communication between patient and provider (0) - Communication of results to patient/family (0) Interprovider communication and/or collaboration (1) - Transitions of care from provider to provider (0) - Transfer of referral report (1; 1 MIPS) Patient access to records (0) Timely transition of specified EHR data elements (0)	Communication between patient and provider (0) - Communication of results to patient/family (0)	Collaborative ED care plans for frequent users (0) ED visit information available via HIE (0) EMS information included in transfer of care summary (0) Timely transition of specified data elements to next level of care (0)	No subtopics identified	No subtopics identified	No subtopics identified

Meaningful Measures Priority/ MACRA Domain	Meaningful Measure Area	Specialty					
		Crosscutting	Allergy/ Immunology	Emergency Medicine	Neurology	Physical Medicine and Rehabilitation	Rheumatology
Person and Family Engagement/ Patient and Caregiver Experience	Care Is Personalized and Aligned With Patient's Goals	Adherence to follow-up instructions (0) - Med adherence (0) - Missed appointments (0) - Tests ordered but not complete (0) - Self-management (0) Patient education/health literacy (0) Patient engagement and activation (1; 1 other) Patient's goals, values and preference incorporated in plan of care (1; 1 QCDR) Patient's preferences are included in transition of care (0)	No subtopics identified	Patient's goals, values and preference incorporated in plan of care (0) Patient's preferences are included in transition of care (0)	Patient education/health literacy (1; 1 QCDR) Self-management (1; 1 QCDR)	Patient education/health literacy (1; 1 QCDR)	No subtopics identified
	End-of-Life Care According to Preferences	Advance care plan (3; 1 MIPS, 1 QCDR, 1 other) Care delivered according to preferences (0)	No subtopics identified	Care delivered according to preferences (0)	Advance care plan (1; 1 MIPS)	No subtopics identified	No subtopics identified

Meaningful Measures Priority/ MACRA Domain	Meaningful Measure Area	Specialty					
		Crosscutting	Allergy/ Immunology	Emergency Medicine	Neurology	Physical Medicine and Rehabilitation	Rheumatology
Person and Family Engagement/ Patient and Caregiver Experience	End-of-Life Care According to Preferences	Unnecessary care at the end of life (0)	No subtopics identified			No subtopics identified	No subtopics identified
	Patient's Experience of Care	Convenience of receiving needed care (0) Cultural and linguistic appropriateness (0) Patient adherence to care plan (0) Patient experience (12) - Access (1; 1 MIPS & QCDR) - Communication (2; 2 MIPS & QCDR) - Coordination (1; 1 MIPS & QCDR) - Courteous (1; 1 MIPS & QCDR) - Health promotion (1; 1 MIPS & QCDR) - Medications (1; 1 MIPS & QCDR) - Provider rating (1; 1 MIPS & QCDR) - Shared decision-making (1; 1 MIPS & QCDR)	No subtopics identified	No subtopics identified	No subtopics identified	Patient experience (1) - Improvement over time (1; 1 QCDR)	No subtopics identified

Meaningful Measures Priority/ MACRA Domain	Meaningful Measure Area	Specialty					
		Crosscutting	Allergy/ Immunology	Emergency Medicine	Neurology	Physical Medicine and Rehabilitation	Rheumatology
Person and Family Engagement/ Patient and Caregiver Experience	Patient's Experience of Care	<ul style="list-style-type: none"> - Status (1; 1 MIPS & QCDR) - Stewardship (1; 1 MIPS & QCDR) - Timeliness (1; 1 MIPS & QCDR) Patient-reported patient safety (0) Perception of cost of care (0)	No subtopics identified	No subtopics identified	No subtopics identified		No subtopics identified
	Patient-Reported Functional Outcomes	Functional status assessment (0) - Baseline (0) - Change over time (0) Meeting expected outcomes (0) Health-related QOL (0) - Multiple chronic conditions (0) Symptom assessment (1) - Pain (1; 1 MIPS & QCDR)	Treatment outcomes (1) - Asthma (1; 1 QCDR)	No subtopics identified	Functional status assessment (1) - Change over time (1; 1 QCDR) Health-related QOL (4) - Alzheimer's (0) - Epilepsy (1; 1 QCDR) - General (1; 1 QCDR) - Headache (1; 1 QCDR) - Multiple sclerosis (0) - Muscular dystrophy (0) - Parkinson's disease (0) - Stroke (1; 1 QCDR) Meeting expected outcomes (0) - Proxy allowed to report (Alzheimer's) (0) Symptom assessment (1) - Parkinson's disease (1; 1 QCDR)	Functional status assessment (26) - Change over time (26; 5 MIPS, 16 QCDR, 3 MIPS and QCDR, 2 other) Health-related QOL (2) - Pain (1; 1 QCDR) - Spine care (1; 1 QCDR) Multiple chronic conditions (0)	Functional status assessment (2) - Rheumatoid arthritis (2; 1 MIPS, 1 other) Health-related QOL (0) - Rheumatoid arthritis (0)

Meaningful Measures Priority/ MACRA Domain	Meaningful Measure Area	Specialty					
		Crosscutting	Allergy/ Immunology	Emergency Medicine	Neurology	Physical Medicine and Rehabilitation	Rheumatology
Healthy Living/ Population Health and Prevention	Equity of Care	Access to care (0) Cultural competence (0) Implement interventions to reduce disparities (0) Outcomes of intervention to reduce disparities (0)	No subtopics identified	Access to care (0)	Disparities data on disease and treatment to inform care (0)	No subtopics identified	No subtopics identified
	Community Engagement	Collaboration across health and non-health sectors to improve equity of care (0) Home and community-based services (0) Referral to community resources as appropriate (0)	No subtopics identified	Identification of community supports and services (0)	Home and community-based services (Alzheimer's) (0)	No subtopics identified	No subtopics identified

Meaningful Measures Priority/ MACRA Domain	Meaningful Measure Area	Specialty					
		Crosscutting	Allergy/ Immunology	Emergency Medicine	Neurology	Physical Medicine and Rehabilitation	Rheumatology
Affordable Care	Appropriate Use of Health Care	Balancing measures to avoid unintended consequences (0) Tests and services (0) - Imaging (0) - Labs (0)	Medications (1; 1 QCDR) Tests and services (1) - Labs (1; 1 QCDR)	Medications (1; 1 MIPS) Procedures (4; 4 QCDR) Tests and services (10) - Imaging (6; 2 MIPS, 4 QCDR) - Labs (3; 1 MIPS, 2 QCDR) - Telemetry (1; 1 QCDR)	Medications (2; 2 QCDR) Tests and services (3) - Imaging (3; 1 MIPS, 2 QCDR)	Procedures (3; 3 QCDR) Tests and services (3) - Imaging (3; 3 QCDR)	No subtopics identified
	Patient-Focused Episode of Care	Condition specific episode-based cost measures (0)	No subtopics identified	No subtopics identified	Condition specific episode-based cost measures (1) - Stroke (1; 1 other)	No subtopics identified	Cost to outcome ratio (0) - RA control to biologic medication cost ratio (0)
	Risk-Adjusted Total Cost of Care	Total cost of care per beneficiary (0)	No subtopics identified	No subtopics identified	No subtopics identified	No subtopics identified	No subtopics identified

APPENDIX D – TEP PRE-ASSESSMENT RATINGS OF MEASURE SUBTOPICS

Table D-2: Pre-Assessment Ratings of Emergency Medicine Subtopics Identified in the Environmental Scan (n = 19)

Emergency Medicine			
Meaningful Measure Area	Measure Subtopic	Median	Avg Deviation From Median
Equity of Care	Access to care	9.00	0.5
Transfer of Health Information and Interoperability	Care visit information available via health information exchange	9.00	0.7
Transfer of Health Information and Interoperability	Timely transition of ED-specific data elements to the next level of care	8.50	0.9
Preventable Health Care Harm	Potentially harmful drug-drug interactions	8.50	1.1
Preventable Health Care Harm	Adverse medication events	8.00	0.8
Preventable Health Care Harm	Antibiotic use: Appropriate use	8.00	1.1
End of Life According to Preferences	Care delivered according to preferences	8.00	1.2
Transfer of Health Information and Interoperability	Collaborative care plans for frequent users	8.00	1.2
Medication Management	Medication management/reconciliation	8.00	1.2
Preventable Health Care Harm	Antibiotic use: Overuse	8.00	1.3
Transfer of Health Information and Interoperability	EMS information included in transfer of care summary	8.00	1.5
Preventable Health Care Harm	Antibiotic use	8.00	1.6
Prevention, Treatment, Management of Mental Health	Behavioral and psych screening: Anxiety/ depression	7.00	1.0
Community Engagement	Identification of community supports and services	7.00	1.1
Care is Personalized and Aligned with Patient's Goals	Patient's preferences are included in transition of care	7.00	1.1
Prevention, Treatment, Management of Mental Health	Behavioral and psych screening	7.00	1.2
Care is Personalized and Aligned with Patient's Goals	Patient's goals, values, and preferences are incorporated in plan of care	7.00	1.2
Admissions and Readmissions to Hospitals	Severe trauma	6.00	1.6
Management of Chronic Conditions	Treatment outcomes	5.00	1.8

Table D-3: Pre-Assessment Ratings of Allergy/Immunology Subtopics Identified in the Environmental Scan (n = 2)

Allergy/Immunology			
Meaningful Measure Area	Measure Subtopic	Median	Avg Deviation From Median
Transfer of Health Information and Interoperability	Communication between patient and provider	9.00	0.6
Transfer of Health Information and Interoperability	Communication of results to patient/family	9.00	0.8

Table D-4: Pre-Assessment Ratings of Neurology Subtopics Identified in the Environmental Scan (n = 16)

Neurology			
Meaningful Measure Area	Measure Subtopic	Median	Avg Deviation From Median
Patient-Reported Functional Outcomes	Health-related quality of life: Multiple sclerosis	8.00	0.8
Patient-Reported Functional Outcomes	Health-related quality of life: Parkinson's disease	8.00	0.8
Patient-Reported Functional Outcomes	Health-related quality of life: Muscular dystrophy	8.00	0.9
Preventable Health Care Harm	Unintended consequences: Dementia	8.00	0.9
Risk-Adjusted Mortality	Stroke	8.00	1.0
Patient-Reported Functional Outcomes	Health-related quality of life: Alzheimer's disease	8.00	1.1
Patient-Reported Functional Outcomes	Meeting expected outcomes	8.00	1.1
Patient-Reported Functional Outcomes	Meeting expected outcomes: Meeting expected outcomes with proxy allowed to report (Alzheimer's disease)	8.00	1.1
Community Engagement	Home and community-based services (Alzheimer's disease)	7.50	1.1
Equity of Care	Disparities data on disease and treatment to inform care	7.50	1.3
Preventable Health Care Harm	Unintended consequences: Parkinson's disease	7.00	0.9
Preventable Health Care Harm	Unintended consequences: Alzheimer's disease	7.00	1.0
Preventable Health Care Harm	Unintended consequences: Multiple sclerosis	7.00	1.0
Management of Chronic Conditions	Treatment processes: Muscular dystrophy	7.00	1.1
Preventable Health Care Harm	Unintended consequences: Muscular dystrophy	7.00	1.1
Management of Chronic Conditions	Treatment processes: Alzheimer's disease	7.00	1.3

Table D-5: Pre-Assessment Ratings of Physical Medicine and Rehabilitation Subtopics Identified in the Environmental Scan (n = 4)

Physical Medicine and Rehabilitation			
Meaningful Measure Area	Measure Subtopic	Median	Avg Deviation From Median
Management of Chronic Conditions	Treatment outcomes	8.00	0.6
Patient-Reported Functional Outcomes	Multiple chronic conditions	8.00	0.8
Admissions and Readmissions to Hospital	Severe trauma	7.00	1.1
Management of Chronic Conditions	Complex conditions	7.00	1.2

Table D-6: Pre-Assessment Ratings of Rheumatology Subtopics Identified in the Environmental Scan (n = 7)

Rheumatology			
Meaningful Measure Area	Measure Subtopic	Median	Avg Deviation From Median
Management of Chronic Conditions	Early diagnosis and appropriate treatment	8.00	0.8
Management of Chronic Conditions	Early diagnosis and appropriate treatment: Rheumatoid arthritis	8.00	0.8
Patient-Reported Functional Outcomes	Health-related quality of life	8.00	0.8
Patient-Reported Functional Outcomes	Health-related quality of life: Rheumatoid arthritis	8.00	0.9
Medication Management	Treat to target (appropriate dosing)	8.00	1.1
Patient-Focused Episode of Care	Medication cost to patient outcome ratio	8.00	1.5
Patient-Focused Episode of Care	Cost to outcome ratio: RA control to biologic medication cost ratio	6.50	1.9

APPENDIX E – SUBTOPICS RECOMMENDED BY THE TEP TO BE CONSIDERED AS CROSSCUTTING

Table E-1: Subtopics to Be Considered as Crosscutting (n = 45)

Meaningful Measure Area	Measure Subtopic
Emergency Medicine (n = 14)	
Care is Personalized and Aligned with Patient's Goals	Patient's goals, values, and preferences are incorporated in plan of care
Care is Personalized and Aligned with Patient's Goals	Patient's preferences are included in transition of care
Community Engagement	Identification of community supports and services
End of Life According to Preferences	Care delivered according to preferences
Equity of Care	Access to care
Medication Management	Medication management/reconciliation
Patient-Focused Episode of Care	Medication cost to patient outcome ratio
Patient-Reported Functional Outcomes	Meeting expected outcomes
Preventable Health Care Harm	Antibiotic use
Preventable Health Care Harm	Antibiotic use: Appropriate use
Preventable Health Care Harm	Antibiotic use: Overuse
Preventable Health Care Harm	Potentially harmful drug-drug interactions
Transfer of Health Information and Interoperability	Care visit information available via health information exchange
Transfer of Health Information and Interoperability	Collaborative care plans for frequent users
Allergy/Immunology (n = 2)	
Transfer of Health Information and Interoperability	Communication between patient and provider
Transfer of Health Information and Interoperability	Communication of results to patient/family
Neurology (n = 6)	
Medication Management	High-risk medications
Patient Experience of Care	Clearly communicate diagnosis and management of condition
Patient Experience of Care	Symptom management/functional outcomes
Patient-Reported Functional Outcomes	Meeting expected outcomes
Patient-Reported Functional Outcomes	Meeting expected outcomes: Meeting expected outcomes with proxy allowed to report
Preventive Care	Stroke risk factors screening
Physical Medicine and Rehabilitation (n = 5)	
Community Engagement	Identification of community supports and services
Management of Chronic Conditions	Treatment outcomes
Patient-Focused Episode of Care	Medication cost to patient-outcome ratio
Prevention, Treatment, and Management of Mental Health	Longitudinal follow-up
Transfer of Health Information and Interoperability	Communication of patient progress available online

Meaningful Measure Area	Measure Subtopic
Rheumatology (n = 18)	
Admissions and Readmissions	Admission: Medication-related side effects
Appropriate Use of Health Care	Tests and services
Care Is Personalized and Aligned With Patient's Goals	Patient education/health literacy
Care Is Personalized and Aligned With Patient's Goals	Functional goal development through shared decision-making and progress monitoring
Care Is Personalized and Aligned With Patient's Goals	Patient's goals, values, and preference incorporated in plan of care
Community Engagement	Identification of community supports and services
Management of Chronic Conditions	Early diagnosis and appropriate treatment
Management of Chronic Conditions	Referral for rehabilitation services
Medication Management	High-risk medications
Patient's Experience of Care	Improvement over time
Patient's Experience of Care	Patient experience
Patient-Focused Episode of Care	Medication cost to patient outcome ratio
Patient-Reported Functional Outcomes	Health-related quality of life
Patient-Reported Functional Outcomes	Symptom assessment
Preventable Health Care Harm	Adverse medication events
Preventable Health Care Harm	Diagnostic accuracy
Prevention and Treatment of Opioid and Substance Use Disorders	Care plan
Preventive Care	Immunizations