

CMS Quality Measure Development Plan
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Information Gathering Report (Summary Report of Environmental Scan and Empirical Analysis)

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CMS Quality Measure Development Plan

2022 Environmental Scan and Gap Analysis Report

For the Quality Payment Program

Prepared for the Centers for Medicare & Medicaid Services
by Health Services Advisory Group, Inc.

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EXECUTIVE SUMMARY

This environmental scan and gap analysis report fulfills a statutory requirement to identify new gaps in health care quality measurement in support of the *Centers for Medicare & Medicaid Services (CMS) Quality Measure Development Plan¹* and the transition to the Merit-based Incentive Payment System (MIPS) and Alternative Payment Models (APMs). The scan was designed specifically to inform further development of MIPS Value Pathways (MVPs) for eligible clinicians in six clinical areas: behavioral health, diabetes, HIV/AIDS, hypertension, kidney disease, and women’s health and maternal care.

The following are key components of the report:

- **Literature search of national reports and journal articles.** Information-gathering from peer-reviewed and grey literature, including recent reports by the National Quality Forum (NQF) and the Core Quality Measures Collaborative, assembled concepts for measurement reported to be lacking in the prioritized clinical areas.
- **Environmental scan of existing measures:** This scan comprehensively identified existing clinician-level measures through online databases and outreach to federal agencies, health care systems, and measure stewards. Measures were classified under topics and subtopics corresponding to the draft Meaningful Measures 2.0 goals and objectives.
- **Opportunities for adoption of existing measures:** Clinician measures from qualified clinical data registries (QCDRs) and from other federal agencies, in addition to those already used in the Quality Payment Program, represent prospects for potential adoption for MVPs after further testing or evaluation.
- **Gap analysis:** Identified measure concepts for which no measure was found were categorized where possible under Meaningful Measures 2.0 goals and objectives (e.g., Provider cultural competency with transplant patients, a subtopic under the topic Equitable Care). These gaps suggest opportunities for measure development to support the next cohort of MVPs.

Main Findings

168 measures applicable to the 6 prioritized clinical areas:

- | | | |
|--------------------------------------------|-----------|-------------------------------------------|
| • Behavioral health: | 58 | (18 MIPS, 28 QCDR, 12 from other sources) |
| • Diabetes: | 19 | (7 MIPS, 7 QCDR, 5 from other sources) |
| • HIV/AIDS: | 34 | (4 MIPS, 30 from other sources) |
| • Hypertension: | 5 | (3 MIPS, 2 from other sources) |
| • Kidney disease: | 14 | (1 MIPS, 10 QCDR, 3 from other sources) |
| • Women’s health and maternal care: | 38 | (18 MIPS, 8 QCDR, 12 from other sources) |

Collectively, these measures include:

- 51 (30%) endorsed by the consensus-based entity—currently NQF—of which 25 are currently MIPS measures.
- 45 (25.5%) outcome measures, which fulfill a high priority for the Quality Payment Program.

CHAPTER 1. INTRODUCTION

CMS implemented the Quality Payment Program in 2019 to promote high-quality health care for beneficiaries and value-based payment for those services. First physicians, then other eligible clinicians enrolled in MIPS and APMs, the two tracks established by section 102 of the Medicare Access and Children's Health Insurance Program (CHIP) Reauthorization Act of 2015 (MACRA). After listening to feedback from participants, CMS is preparing the launch next year of MVPs, a reporting mechanism designed to be simpler to navigate and provide more meaningful feedback than the original MIPS.

Anticipating full transition to MVPs by the end of 2027, CMS adopted seven inaugural MVPs by rule for performance year 2023.^{2(p. 65998-66031)} With a foundation of claims-based population health measures, each MVP bundles measures and activities across the four MIPS performance categories (quality, cost, improvement activities, and promoting interoperability). Each is specific to a clinical specialty, condition, care episode, or team-based care model, namely, rheumatology, stroke care and prevention, heart disease, chronic disease management, emergency medicine, lower extremity joint repair, anesthesia.

Concurrently, CMS is embedding measurement approaches to address health equity in this and other value-based payment programs as a way to motivate providers to target areas for quality improvement, enhance services, and focus on reducing disparities.³ MVPs will support person-centered care and sustain emphasis on the importance of health equity, patient outcomes, population health, interoperability, and reduced reporting burden for clinicians.

CMS tasked Health Services Advisory Group Inc. (HSAG) to identify existing clinician quality measures and potential measurement gaps to assist in further development of MVPs. Since 2015, CMS has contracted with HSAG to develop and maintain the CMS Quality Measure Development Plan for the Quality Program, known as the MDP, and to fulfill certain other requirements of MACRA. Previous environmental scans, annual reports, and other documents produced under this contract are posted on the CMS website at [Quality Payment Program measure development](#).

The 2022 MDP Environmental Scan and Gap Analysis Report identifies measures available for use in MVPs and gap areas for potential measure development, focused on the six clinical areas that CMS and U.S. Department of Health and Human Services (HHS) leadership prioritized for the next phase of MVP development: behavioral health, diabetes, HIV/AIDS, hypertension, kidney disease, and women's health and maternal care. In keeping with CMS' commitment to achieving equityⁱ in health care outcomes, these condition-specific areas are among the most impactful to underserved populations.⁵⁻¹⁰

Systemic and preventable health inequities contribute to higher rates of chronic disease and premature death among racial and ethnic minority populations. Among Medicare beneficiaries in nearly every state and U.S. territory, Blacks, Hispanics, Asian/Pacific Islanders, American

ⁱ Presidential Executive Order 13985 defines equity as "the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities who have been denied such treatment, such as Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders, and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality."^{2(p. 65383),4}

Indians, and Alaska Natives experience higher prevalence of hypertension, diabetes, and kidney disease than do non-Hispanic Whites.¹¹ Living in rural areas may compound health disparities by exposing racial and ethnic minorities to social conditions associated with inadequate health care.¹²

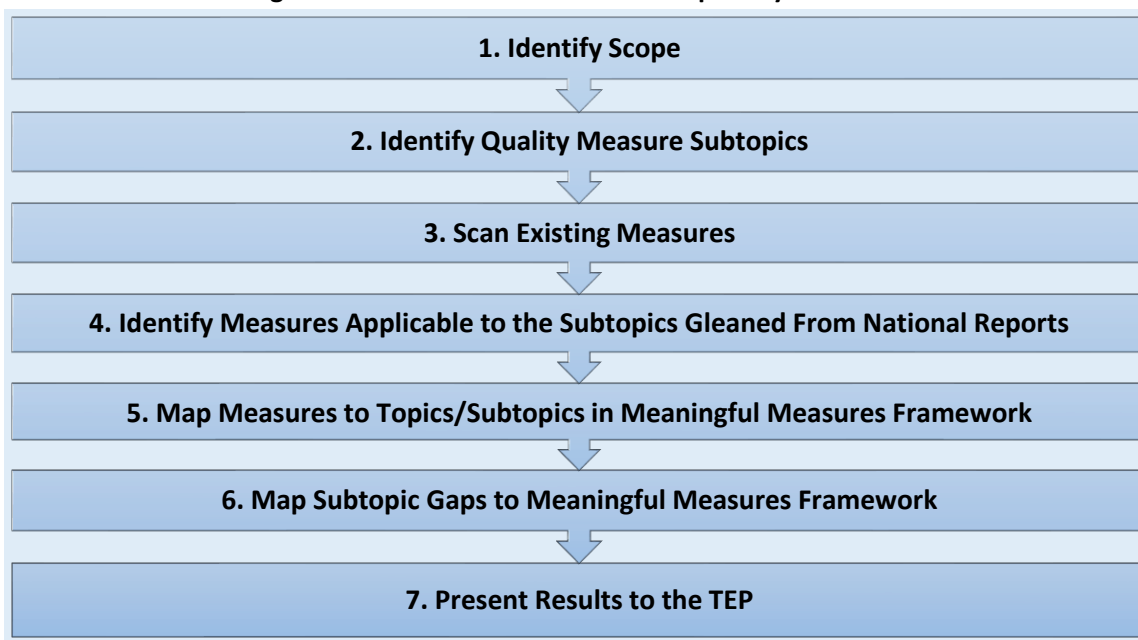
The *2021 National Impact Assessment of the CMS Quality Measures Report*¹³ examined measures stratified by variables including race/ethnicity, income, dual eligibility for Medicare and Medicaid, and urban/rural location. Disparities between population groups were evident in 2013–2018 performance trends.¹³ Social risk factors such as race and ethnicity, gender, socioeconomic position, and social and community context are associated with higher resource use and worse results on patient experience, safety, and outcome measures for affected Medicare beneficiaries. These health and health care disparities persist across care settings, measure types, and programs¹⁴ and have been magnified lately as the coronavirus disease 2019 (COVID-19) public health emergency disproportionately afflicted racial and ethnic minority groups.¹⁵

This report describes the methods used to perform the environmental scan of existing measures and gap analysis. HSAG will convene the 2022–2024 CMS Quality Measure Development Plan/Quality Measure Index Technical Expert Panel (TEP) to review results and provide input on measures applicable to the six prioritized clinical areas for potential inclusion in MVPs. The MDP/QMI TEP will consider how measure selection and strategies to address measurement gaps can support CMS' efforts to advance health equity and address social determinants of health within the Quality Payment Program.

CHAPTER 2. APPROACH

Figure 2-1 outlines the methods the HSAG project team (“the team”) used to conduct this environmental scan, which align with guidance published in *The Blueprint for the CMS Measures Management System Version 17.0*¹⁶ for similar activities by measure developers.

Figure 2-1: Environmental Scan and Gap Analysis Process



1. **Identify scope.** Measures pertaining to behavioral health, diabetes, HIV/AIDS, hypertension, kidney disease, and women’s health and maternal care are the focus.
2. **Identify quality measure subtopics reported as gaps.** Appendix A lists the sources used to identify high-priority subtopic gaps. Appendix B documents the search strings used for information gathering from peer-reviewed literature.
3. **Scan existing measures.** A comprehensive scan of databases and other sources identified existing condition-specific measures applicable to the health care quality domains and associated topics/subtopics.
4. **Identify condition-specific measures applicable to the subtopics gleaned from key national reports.** Appendix C documents the keyword searches performed on measure titles and descriptions for each condition to narrow the results.
5. **Map clinician-level measures to health care quality domains and associated topics/subtopics to identify potential measures for use in MVPs.** Appendix D contains the mapped measure scan results.
6. **List measure subtopics identified as gaps for each clinical area.** Appendix E contains the subtopics for which no measure was identified, corresponding to health care quality domains and associated measure topics.
7. **Present results to the TEP.** A meeting of the TEP is planned for summer 2022.

CHAPTER 3. IDENTIFYING AND MAPPING MEASURE SUBTOPICS

Alignment With Meaningful Measures

In 2021 CMS launched a Quality Measurement Action Plan with five primary goals¹⁷:

- Use the Meaningful Measures framework to streamline and align measures.
- Leverage measures to drive improvement through their use in CMS programs.
- Create a more efficient reporting system through the increased use of digital measures.
- Empower consumers through patient-centered measures and public transparency.
- Leverage quality measures to promote equity and close gaps in care.

The Meaningful Measures Initiative established a framework to align quality measures and initiatives with CMS' strategic goals for achieving high-quality health care and better outcomes for patients. This environmental scan employed the framework depicted in Figure 3-1 to identify specialty-specific measures and measure subtopics supporting those health care quality domains: Affordability and Efficiency, Behavioral Health, Chronic Conditions, Equity, Person-Centered Care, Safety, Seamless Care Coordination, and Wellness and Prevention.

Figure 3-1: Meaningful Measures Framework



Identification of Quality Measure Subtopics

To identify high-interest quality measurement gaps within the six prioritized clinical areas, the team reviewed a range of peer-reviewed and grey literature published from January 1, 2019, to January 31, 2022.

Peer-Reviewed Literature

The team searched the PubMed database separately for each of five clinical areas to capture relevant literature pertaining to measurement gaps. The expansive field of behavioral health was broken into eight subsearches to produce targeted literature results on mental health conditions of interest (i.e., anxiety, bipolar disorder, dementia, depression, general behavioral health, illicit drug use, schizophrenia, suicide). The detailed Medical Subject Headings (MeSH) search strings used can be viewed in Appendix B.

Inclusion criteria: Sources were included if they discussed gaps in quality measurement pertaining to any of the six clinical conditions and if the gaps mentioned could conceivably be assessed in a clinician-level outcome, process, or structural measure.

Exclusion criteria: Sources were excluded if they focused on a non-U.S. health care system, did not discuss quality measurement gaps, or referenced only gaps outside the scope of this work, such as insurance coverage).

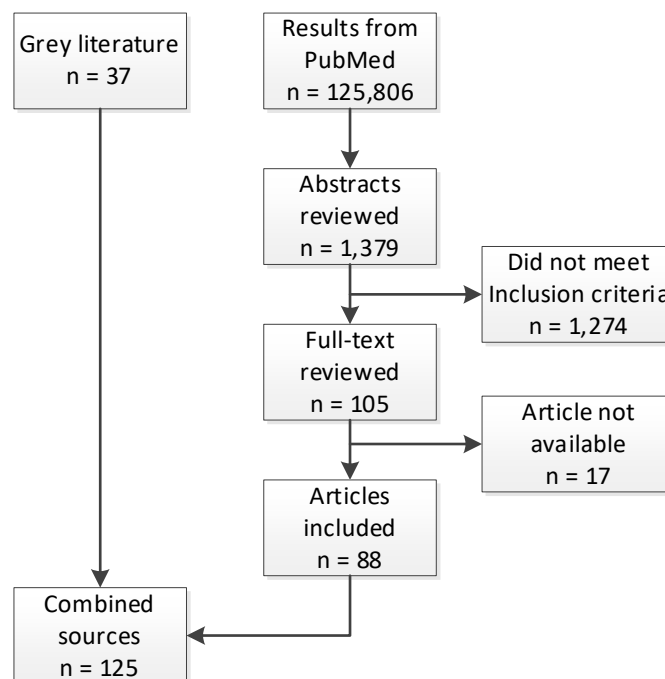
Grey Literature

The team reviewed industry reports such as publications by the Core Quality Measures Collaborative and the National Quality Forum (NQF), which currently serves HHS as the consensus-based entity (CBE) for performance measurement, to identify grey literature pertaining to measurement gaps in the six prioritized clinical areas.

Results

Within the PubMed literature searches, the first 200 abstracts for each clinical area were sorted by relevance and reviewed for potential full-text review. For behavioral health only, the team conducted separate searches for eight mental health topics and, after sorting by relevance, assessed the first 50 abstracts in each search. Figure 3-2 depicts the process that narrowed the search results to articles from 125 sources.

Figure 3-2: Number of Sources Identified, Included, and Excluded



Source material was divided among four members of the team with expertise in quality measures for initial abstraction of the subtopics. Together the team members then reviewed the subtopics identified across various sources as gaps and reconciled variations in wording to ensure consistency and avoid duplication. The team review of key sources identified 116 unique subtopics of interest applicable to the six clinical areas.

CHAPTER 4. MEASURE SEARCH STRATEGY AND SOURCES SCANNED

To gain insight into the landscape of quality measurement for the prioritized clinical areas, the team conducted a comprehensive environmental scan using quality measure databases and contacts with CMS quality programs, federal agencies, health care systems, and other organizations. Seeking quality measures applicable to the subtopics identified in Chapter 3, the team applied the following inclusion criteria for measures that are:

- Specified at an individual clinician or group/practice level of analysis.
- Assessing care attributable to the clinician who provided it.
- Fully developed with accessible information, including measure description, numerator, denominator, and steward.

Using the sources identified below, the search strategy yielded an initial measure count of 2,050 measures. Excluding duplicates (i.e., identical measures located in more than one source), the final count totaled 741 unique measures.

CMS Public Reporting Programs and Other Federal Agencies

CMS quality programs – The team reviewed the 2022 PFS final rule² published in the *Federal Register*¹⁸ to identify measures attributed to MIPS. The team also reviewed the Quality Payment Program website¹⁹ to identify a comprehensive list of measures in use for MIPS CQMs and MIPS qualified clinical data registries (QCDRs).^{20,21}

Other federal agencies – The team contacted eight federal agencies/offices for assistance. The five indicated by an asterisk were able to provide a list of measures they use in time for inclusion in this environmental scan.

- *Agency for Healthcare Research & Quality (AHRQ)
- *Center for Medicare & Medicaid Innovation (CMS Innovation Center)
- Defense Health Agency (DHA)
- *Health Resources and Services Administration (HRSA)
- *Indian Health Service (IHS)
- Office of Minority Health (OMH)
- *Substance Abuse and Mental Health Services Administration (SAMHSA)
- Veterans Health Administration (VHA)

Major Measure Databases

CMS Measure Inventory Tool – The CMS Measures Inventory Tool (CMIT) is an interactive repository of measures used by CMS in various quality, reporting, and payment programs.²² To identify applicable measures, the team selected “Reporting Status,” “Active,” and “Merit-Based Incentive Payment System (MIPS) Program.” As most of the search results duplicated the measures found in the federal rule, those findings were attributed to the prior review.

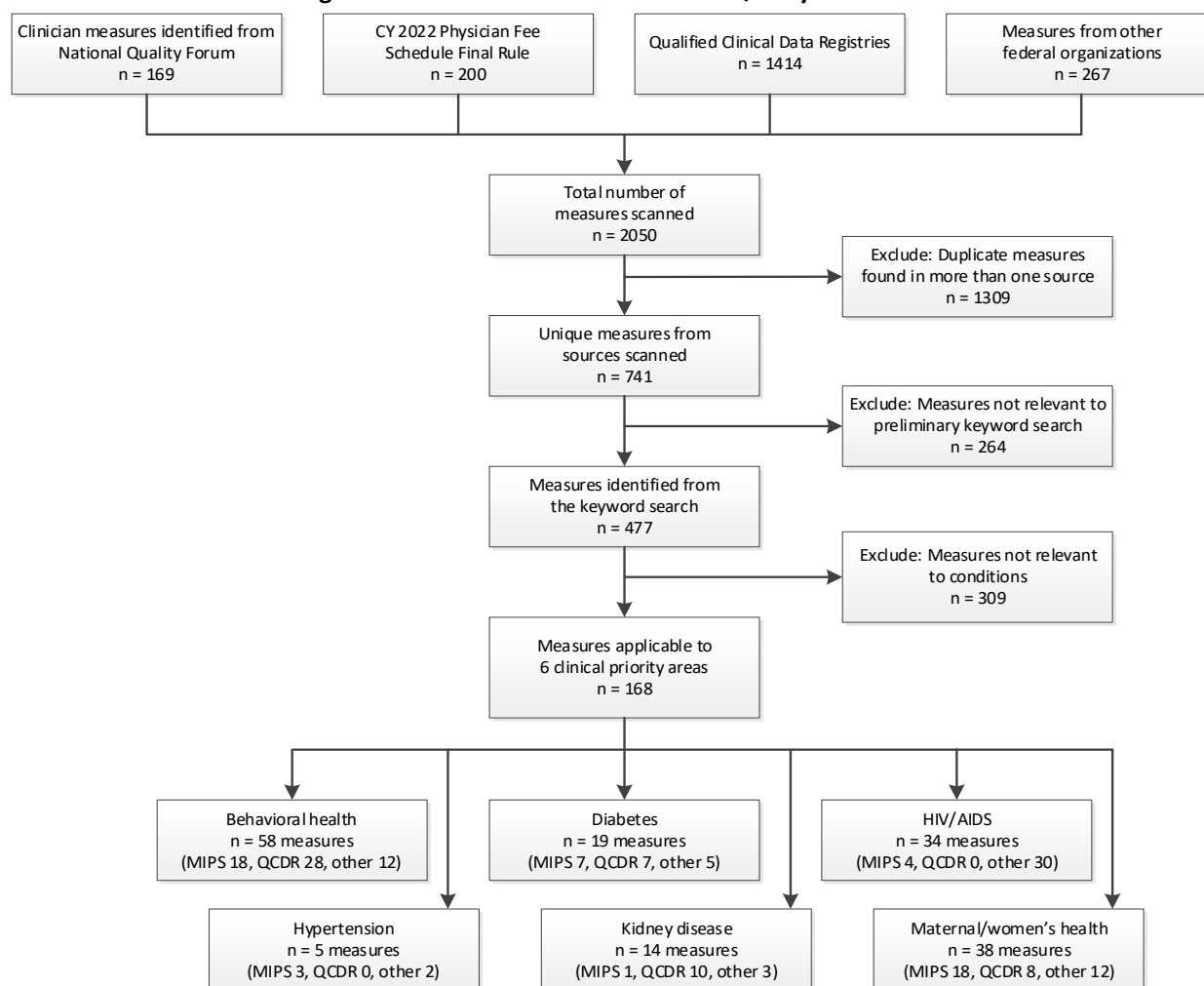
NQF Quality Positioning System (QPS)/NQF Website – The team searched the NQF QPS database²³ by selecting status “Endorsed,” “Endorsed with Reserve Status,” or “eMeasure Approved for Trial Use” and a level of analysis inclusive of individual clinicians, practices, and groups. The team also reviewed the NQF website for projects related to clinician quality measures.^{24,25}

CHAPTER 5. MEASURE SCAN AND GAP ANALYSIS RESULTS

After removal of duplicate measures, the team assessed the relevance of the 741 unique measure titles and descriptions derived from the scan, using search terms for each prioritized clinical area, such as A1c, amputation, and blindness as keywords associated with diabetes (Appendix B). Measures deemed appropriate were assigned to only one clinical area to avoid duplicate results.

Of the 741 unique measures, 264 contained no applicable keywords in either the title or the description. A measure-by-measure review of the remaining 477 unique measures excluded 309 measures as not applicable to a prioritized clinical area. Figure 5-1 depicts the exclusion process by which the measure scan identified 168 measures as applicable to the six clinical areas.

Figure 5-1: Results of Scan for Clinical Quality Measures



The team then mapped each of those measures to a topic and subtopic. Subtopics previously identified through peer-reviewed and grey literature were compared with the topics and subtopics under which the 168 measures were mapped. This exercise identified measurement gaps where no existing quality measures fit under a listed subtopic, as well as candidate measures to adopt for the Quality Payment Program and measures already in the program.

For each prioritized clinical area, a measure list and a summary graphic indicate high-priority outcome measures and current inclusion in MIPS or QCDRs. CMS invites vendors to self-nominate registries and measures to expand reporting options for MIPS eligible clinicians. QCDR measures, which constitute 53 of the 168 measures identified in this report (32%), may need further development or adaptation to meet Quality Payment Program requirements. The CY 2022 PFS final rule established that a QCDR measure must be fully tested for reliability and validity at the clinician level to be considered for an MVP.^{2(p. 65407)}

Each section that follows describes how the measures applicable to a clinical area support CMS' strategic goals by aligning with the Meaningful Measures framework. No clinical area has measures that address all eight CMS health care quality domains mentioned in Chapter 3. Behavioral health is itself designated as one, and the other five clinical areas are each representative of two to six health care quality domains and associated measure topics.

In support of an government-wide agenda to identify and eliminate social and health disparities, the HHS Assistant Secretary for Planning and Evaluation (ASPE) recommends quality measures that incorporate equity-specific provisions such as collecting direct social risk factor data (e.g., housing status, food insecurity, language barriers), requiring culturally appropriate care, and reporting stratified results to allow for reliable distinctions in performance between providers.³

Across the six clinical areas that are the focus of this environmental scan, the team identified one QCDR measure specific to Behavioral Health (*Consideration of Cultural-Linguistic and Demographic Factors in Cognitive Assessment*) that could also directly address the CMS quality domain of Equity.²⁶ Some other measures identified in the following sections and Appendix D—for example, measures of home-based care—peripherally address health disparities by seeking to reduce barriers to access.

Condition-specific measurement gaps are listed by clinical area in Appendix E. Such measure subtopics as screening for intimate partner violence and referral to community-based social support services suggest opportunities for CMS to develop equity measures that address modifiable social determinants of health.

Behavioral Health

Table 5-1 describes the 58 measures (13 outcome and 45 process) that met inclusion criteria for behavioral health, which is both the clinical area of focus and the applicable CMS health care quality domain; a measure list, organized by measure topic and subtopic, follows. For detailed measure information, see the Excel file *Measure Scan Results*, Appendix D.

Table 5-1: Behavioral Health Measure Counts by Topic, Subtopic, Source, and Type

Measure Topic/Subtopic	Count	MIPS	QCDR	Other Source
Mental Health Disorders				
Anxiety	2		1 outcome 1 process	
Assessment and recovery	2		1 outcome 1 process	
Attention-deficit/ hyperactivity disorder	3	1 process	2 outcome	
Bipolar	1			1 process
Dementia/Alzheimer's/ Altered mental state	11	5 process	5 process	1 process
Depression	11	1 outcome 4 process		3 outcome 3 process
Follow-up after hospitalization	1	1 process		
Posttraumatic stress disorder	1		1 outcome	
Psychosis	1		1 process	
Psychosocial disorder	3		2 outcome	1 process
Schizophrenia	1	1 process		
Opioid Use and Disorders				
Opioid prescribing/provider	11	1 process	9 process	1 process
Substance Use Disorders				
Alcohol, tobacco, and illicit drug use	8	4 process	1 outcome 1 process	2 process
Suicide Prevention				
Suicidality prevention and treatment	2		1 outcome 1 process	
Total	58	1 outcome 17 process	9 outcome 19 process	3 outcome 9 process

Behavioral Health Quality Measures – Clinician/Clinician Group Level (n = 58)

Behavioral Health

Mental health disorders

Anxiety

- *Anxiety Response at 6 months*^{*·q}
- *Use of Anxiety Severity Measure*^q

Assessment and recovery

- *Improvement or Maintenance in Recovery for Individuals with a Mental Health and/or Substance Use Disorder*^{*·q}
- *Measurement-based Care Processes: Index Assessment, Monitoring and Care Plan Review*^q

Attention-deficit/hyperactivity disorder

- *Follow-Up Care for Children Prescribed ADHD Medication (ADD) (CBE #0108)*^m
- *Outcome monitoring of ADHD functional impairment in children and youth*^{*·q}
- *Symptom Improvement in adults with ADHD*^{*·q}

Bipolar – medication adherence

- *Adherence to Mood Stabilizers for Individuals with Bipolar I Disorder (CBE #1880)*

^{*}outcome measure

^qQCDR measure

^mMIPS measure for 2022 performance period

Behavioral Health Quality Measures – Clinician/Clinician Group Level (cont.)

Dementia/Alzheimer's/Altered mental state

- Cognitive Assessment with Counseling on Safety and Potential Risk^q
- Comprehensive Cognitive Assessment Assists with Differential Diagnosis^q
- Consideration of Cultural-Linguistic and Demographic Factors in Cognitive Assessment^q
- Dementia Associated Behavioral and Psychiatric Symptoms Screening and Management^m
- Dementia: Cognitive Assessment (CBE #2872)^m
- Dementia: Education and Support of Caregivers for Patients with Dementia^m
- Dementia: Functional Status Assessment^m
- Dementia: Safety Concern Screening and Follow-Up for Patients with Dementia^m
- Evaluation of Cognitive Function for Home-Based Primary Care and Palliative Care Patients (CBE #3500)
- Improved Efficiency: Time Interval for reporting results of cognitive assessment^q
- Provision of Feedback Following a Cognitive or Mental Status Assessment with Documentation of Understanding of Test Results and Subsequent Healthcare Plan^q

Depression

- Adult Major Depressive Disorder (MDD): Comprehensive Depression Evaluation: Diagnosis and Severity (CBE #0103)
- Adult Major Depressive Disorder (MDD): Suicide Risk Assessment (CBE #0104)^m
- Anti-Depressant Medication Management^m
- Child and Adolescent Major Depressive Disorder (MDD): Suicide Risk Assessment (CBE #1365)^m
- Depression
- Depression Assessment with PHQ-9/PHQ-9M (CBE #0712)
- Depression Remission at Six Months (CBE #0711)*
- Depression Remission at Twelve Months (CBE #0710)*^m
- Depression Response at Six Months – Progress Towards Remission (CBE #1884)*
- Depression Response at Twelve Months – Progress Towards Remission (CBE #1885)*

*outcome measure

^mMIPS measure for 2022 performance period

^qQCDR measure

- Preventive Care and Screening: Screening for Depression and Follow-Up Plan (CBE #0418)^m

Follow-up after hospitalization

- Follow-Up After Hospitalization for Mental Illness (FUH) (CBE #0576)^m

Posttraumatic stress disorder

- Posttraumatic Stress Disorder (PTSD) Outcome Assessment for Adults and Children*^q

Psychosis

- Appropriate Treatment of Psychosis and Agitation in the Emergency Department^q

Psychosocial disorder

- Monitoring for psychosocial problems among children and youth*^q
- Psychosocial Screening Using the Pediatric Symptom Checklist-Tool (PSC-Tool) (CBE #3332)
- Social Role Functioning Assessment utilizing PROMIS Adult Ability to Participate in Social Roles and Activities*^q

Schizophrenia – medication adherence

- Adherence to Antipsychotic Medications for Individuals with Schizophrenia (CBE #1879)^m

Opioid use disorders

Opioid prescribing/Provider

- Avoidance of Long-Acting (LA) or Extended Release (ER) Opiate Prescriptions and Opiate Prescriptions for Greater Than 3 Days Duration for Acute Pain^q
- Avoidance of Opiates for Low Back Pain or Migraines^q
- Avoidance of Opioid Prescriptions for Closure and Reconstruction After Skin Cancer Resection^q
- Avoidance of Opioid therapy for dental pain^q
- Continuity of Pharmacotherapy for Opioid Use Disorder (CBE #3175)^m
- Discharge Prescription of Naloxone after Opioid Poisoning or Overdose^q
- Limit quantity of opioids prescribed for pain management in patients following Mohs micrographic surgery^q
- Opioid Withdrawal: Initiation of Medication-Assisted Treatment (MAT) and Referral to Outpatient Opioid Treatment^q

Behavioral Health Quality Measures – Clinician/Clinician Group Level (cont.)

Opioid prescribing/Provider (cont.)

- Prescription or administration of pharmacotherapy to treat opioid use disorder (OUD) (CBE #3589)
- Safe Opioid Prescribing Practices^q
- Use of a “PEG Test” to Manage Patients Receiving Opioids^q

Substance use disorders

Alcohol, tobacco and illicit drug use

- Alcohol Use Disorder Outcome Response^{*,q}
- Children Who Are Exposed To Secondhand Smoke Inside Home (CBE #1346)
- Initiation and Engagement of Alcohol and Other Drug Dependence Treatment^m
- Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention (CBE #0028)^m
- Preventive Care and Screening: Unhealthy Alcohol Use: Screening & Brief Counseling (CBE #2152)^m

- Substance Use Screening and Intervention Composite (CBE #2597)
- Tobacco Use and Help with Quitting Among Adolescents^m
- Tobacco Use: Screening and Cessation Intervention for Patients with Asthma and COPD^q

Suicide prevention

Suicidality prevention and treatment

- Reduction in Suicidal Ideation or Behavior Symptoms^{*,q}
- Utilization and Review of Suicide Safety Plan for Individuals with Suicidal Ideation, Behavior or Suicide Risk^q

*outcome measure

^mMIPS measure for 2022 performance period

^qQCDR measure

Gaps for Potential Measure Development

Through peer-reviewed and grey literature, the team identified 29 relevant subtopics for which no measure was located (Appendix E), including several under the broader topics of emergency department utilization, opioid use and other substance use disorders, and pain. Additional subtopics are specific to schizophrenia, bipolar disorder, and suicide. The team will present subtopics to the TEP for consideration.

Diabetes

Table 5-1 describes the 19 measures (six outcome and 13 process) that met the inclusion criteria for this clinical focus. The measure list that follows is organized under five applicable health care quality domains and associated measure topics and subtopics. For detailed measure information, see the Excel file *Measure Scan Results*, Appendix D.

Table 5-2: Diabetes Measure Counts by Health Care Quality Domain, Topic, Subtopic, Source, and Type

Measure Topic/Subtopic	Count	MIPS	QCDR	Other Source
Affordability and Efficiency				
Hyperbaric oxygen therapy	1		1 process	
Chronic Conditions				
Blood sugar control	2	1 outcome	1 process	
Diabetes care	3	1 process		2 outcome
Diabetic kidney disease	2	1 process		1 process
Foot and ankle	4	2 process	1 outcome	1 process
Prediabetes	1		1 process	
Vision	3	1 process	1 outcome	1 process
Person-Centered Care				
Vision	1		1 outcome	
Safety				
Amputation prevention	1		1 process	
Seamless Care				
Ensuring follow up care	1	1 process		
Total	19	1 outcome 6 process	3 outcome 4 process	2 outcome 3 process

Diabetes Quality Measures – Clinician/Clinician Group Level (n = 19)

Affordability and Efficiency

Disease-/condition-specific overuse or underuse of resources

Hyperbaric oxygen therapy

- Appropriate use of hyperbaric oxygen therapy for patients with diabetic foot ulcers^q

Chronic Conditions

Adherence to evidence/Disease-specific outcomes

Blood sugar control

- Ambulatory Glucose Management^q
- Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Poor Control (> 9.0%) (CBE #0059)*.^m

Diabetes care

- Comprehensive Diabetes Care: Blood Pressure Control (< 140/90 mm Hg) (CBE #0061)*

*outcome measure

^mMIPS measure for 2022 performance period

^qQCDR measure

- Coronary Artery Disease (CAD):Angiotensin Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy – Diabetes or Left Ventricular Systolic Dysfunction (LVEF < 40%) (CBE #0066)^m
- Optimal Diabetes Care (CBE #0729)*
- Diabetic kidney disease
 - Comprehensive Diabetes Care: Medical Attention for Nephropathy (CBE #0062)^m
 - Kidney Health Evaluation
- Foot and ankle
 - Diabetes: Foot Exam (CBE #0056)
 - Diabetic Foot & Ankle Care, Peripheral Neuropathy – Neurological Evaluation (CBE #0417)^m
 - Diabetic Foot & Ankle Care, Ulcer Prevention – Evaluation of Footwear (CBE #0416)^m
 - Diabetic Foot Ulcer (DFU) Healing or Closure*.^q

Diabetes Quality Measures – Clinician/Clinician Group Level (cont.)

Prediabetes

- *Diabetes/Pre-Diabetes Screening for Patients with DSP^q*

Vision

- *Comprehensive Diabetes Care: Eye Exam (retinal) performed (CBE #0055)^m*
- *Diabetic Macular Edema – Loss of Visual Acuity^{*,q}*
- *Diabetic Retinopathy: Documentation of Presence or Absence of Macular Edema and Level of Severity of Retinopathy (CBE #0088)*

Person-Centered Care

Functional outcome

Vision

- *Improved Visual Acuity after Vitrectomy for Complications of Diabetic Retinopathy within 120 Days^{*,q}*

Safety

Preventable healthcare harm

Amputation prevention

- *Adequate Off-Loading of Diabetic Foot Ulcers performed at each visit, appropriate to location of ulcer^q*

Seamless Care Coordination

Transitions of care

Ensuring follow-up care

- *Diabetic Retinopathy: Communicating with the Physician Managing Ongoing Diabetes Care^m*

*outcome measure

^mMIPS measure for 2022 performance period

^qQCDR measure

Gaps for Potential Measure Development

Through peer-reviewed and grey literature, the team identified three relevant measure subtopics for which no measure was located (Appendix E). The team will present these subtopics to the TEP for consideration:

- Diabetes-specific nutrition/lifestyle education
- Management of prediabetes
- Patient activation

HIV/AIDS

Table 6-3 describes the 34 measures (one outcome and 33 process) that met the inclusion criteria for this clinical focus. The measure list that follows is organized under four applicable health care quality domains and associated measure topics and subtopics. For detailed measure information, see the Excel file *Measure Scan Results*, Appendix D.

Table 6-3: HIV/AIDS Measure Counts by Health Care Quality Domain, Subtopic, Source, and Type

Quality Domain/Measure Subtopic	Count	MIPS	QCDR	Other Source
Chronic Conditions				
PCP prophylaxis	1			1 process
Screening – drug resistance	1			1 process
Viral load measurement	1			
Viral load suppression	1	1 outcome		1 process
Safety				
HIV-exposed infant	2			2 process
Seamless Care Coordination				
Ensuring follow up care	7	1 process		6 process
HIV medication prescribing	1			1 process
Provider-to-patient communication	1			1 process
Wellness and Prevention				
Hepatitis	2			2 process
HIV positivity	1			1 process
Late diagnosis	1			1 process
Oral health	6			6 process
Routine screening	1	1 process		
Sexually transmitted infection	4	1 process		3 process
Substance use disorder	1			1 process
Tuberculosis	1			1 process
Vaccination	2			2 process
Total	34	1 outcome 3 process	0 outcome 0 process	0 outcome 30 process

HIV/AIDS Quality Measures – Clinician/Clinician Group Level (n = 34)

Chronic Conditions

Adherence to evidence

PCP prophylaxis

- HIV/AIDS: *Pneumocystis jiroveci* Pneumonia (PCP) Prophylaxis (CBE #0405)

Screening – drug resistance

- HIV Drug Resistance Testing Before Initiation of Therapy

Viral load measurement

- HIV

Disease-specific outcomes

Viral load suppression

- HIV viral load suppression (CBE #2082)*.m

Safety

Safety for special populations

HIV-exposed infant

- Diagnostic Testing to Exclude HIV Infection in Exposed Infants
- *Pneumocystis Carinii* Pneumonia (PCP) Prophylaxis for HIV-Exposed Infants

*outcome measure

.mMIPS measure for 2022 performance period

HIV/AIDS Quality Measures – Clinician/Clinician Group Level (cont.)

Seamless Care Coordination

Care coordination

Provider-to-patient communication

- HIV Test Results for PLWHA

Medication management

HIV medication prescribing

- Prescription of HIV Antiretroviral Therapy (CBE #2083)

Transitions of care

Ensuring follow-up care

- Annual Retention in Care
- Gap in HIV medical visits (CBE #2080)
- HIV Linkage to Care
- HIV Medical Visit Frequency (CBE #2079)^m
- HIV Risk Counseling
- Medical Case Management
- Medical Case Management: Care Plan

Wellness and Prevention

Age-specific prevention guidelines adherence

Hepatitis

- Hepatitis B Screening
- Hepatitis C Screening

Late diagnosis

- Late HIV Diagnosis

Routine screening

- HIV Screening^m

^mMIPS measure for 2022 performance period

Sexually transmitted infection

- Chlamydia Screening
- Gonorrhea Screening
- HIV/AIDS: Sexually Transmitted Diseases – Screening for Chlamydia, Gonorrhea, and Syphilis (CBE #0409)^m
- Syphilis Screening

Substance use disorder

- Substance Use Screening

Tuberculosis

- Tuberculosis Screening

Dental care

Oral health

- Oral Exam
- Oral Health: Dental and Medical History
- Oral Health: Dental Treatment Plan
- Oral Health: Oral Health Education
- Oral Health: Periodontal Screening or Examination
- Oral Health: Phase 1 Treatment Plan Completion

Public health

HIV Positivity

- HIV Positivity

Immunization

Vaccination

- Hepatitis B Vaccination
- Pneumococcal Vaccination

Gaps for Potential Measure Development

Through peer-reviewed and grey literature, the team identified 10 relevant subtopics for which no measure was located (Appendix E), all relating to testing/screening, referrals, and adherence to medication and pre-exposure prophylaxis (PrEP). The team will present subtopics to the TEP for consideration.

Hypertension

Table 5-4 describes the five measures (four outcome and one process) that met the inclusion criteria for this clinical focus. The measure list that follows is organized under two applicable health care quality domains and associated measure topics and subtopics. For detailed measure information, see the Excel file *Measure Scan Results*, Appendix D.

Table 5-4: Hypertension Measure Counts by Health Care Quality Domain, Subtopic, Source, and Type

Quality Domain/Measure Subtopic	Count	MIPS	QCDR	Other Source
Chronic Conditions (n = 4)				
Blood pressure control	2	1 outcome		1 outcome
Vascular care	2	1 outcome		1 outcome
Wellness and Prevention (n = 1)				
Blood pressure screening	1	1 process		
Total	5	2 outcome 1 process	0 outcome 0 process	2 outcome 0 process

Hypertension Quality Measures – Clinician/Clinician Group Level (n = 5)

Chronic Conditions

Disease-specific outcomes

Blood pressure control

- *Controlling High Blood Pressure (CBE #0018)*,m*
- *Ischemic Vascular Disease: Blood Pressure Control (CBE # 0073)**

Vascular care

- *Ischemic Vascular Disease (IVD): All or None Outcome Measure (Optimal Control)*,m*
- *Optimal Vascular Care (CBE #0076)**

Wellness and Prevention

Disease-/condition-specific outcomes

Blood pressure screening

- *Preventive Care and Screening: Screening for High Blood Pressure and Follow-Up Documented^m*

*outcome measure

^mMIPS measure for 2022 performance period

Gaps for Potential Measure Development

The team identified no additional measure subtopics from peer-reviewed and grey literature.

Kidney Disease

Table 5-5 describes the 14 measures (seven outcome and seven process) that met the inclusion criteria for this clinical focus. The measure list that follows is organized under four applicable health care quality domains and associated measure topics and subtopics. For detailed measure information, see the Excel file *Measure Scan Results*, Appendix D.

Table 5-5: Kidney Disease Measure Counts by Health Care Quality Domain, Subtopic, Source, and Type

Quality Domain/Measure Subtopic	Count	MIPS	QCDR	Other Source
Affordability and Efficiency				
Renal colic	1		1 process	
Chronic Conditions				
Arteriovenous graft/fistula	3		3 outcome	
Dialysis initiation	2		1 process	1 process
Hemodialysis adequacy	1			1 outcome
Medication prescribing	1			1 process
Peritoneal dialysis catheter	1		1 outcome	
Vascular access	2	1 outcome	1 outcome	
Person-Centered Care				
Care aligned with goals	1		1 process	
Seamless Care Coordination				
Provider-to-provider communication	2		2 process	
Total	14	1 outcome	5 outcome 5 process	1 outcome 2 process

Kidney Disease Quality Measures – Clinician/Clinician Group Level (n = 14)

Affordability and Efficiency

Disease-/condition-specific overuse or underuse of resources

Renal colic

- *Appropriate Use of Imaging for Recurrent Renal Colic^q*

Chronic Conditions

Adherence to evidence

Dialysis initiation

- *End Stage Renal Disease (ESRD) Initiation of Home Dialysis or Self-Care^q*
- *Optimal End Stage Renal Disease (ESRD) Starts (CBE #2594)*

Medication prescribing

- *Angiotensin Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy (CBE #1662)*

Disease-specific outcomes

Arteriovenous graft/fistula

- *Arteriovenous Fistulae Thrombectomy Success Rate^{*·q}*

- *Arteriovenous Graft Thrombectomy Success Rate^{*·q}*

- *Percutaneous Arteriovenous Fistula for Dialysis – Clinical Success Rate^{*·q}*

Hemodialysis adequacy

- *Adult Kidney Disease: Hemodialysis Adequacy: Solute (CBE #0323)^{*}*

Peritoneal dialysis catheter

- *Peritoneal Dialysis Catheter Success Rate^{*·q}*

Vascular access

- *Hemodialysis Vascular Access: Practitioner Level Long-Term Catheter Rate^{*·m}*
- *Tunneled Hemodialysis Catheter Success^{*·q}*

^{*}outcome measure

^mMIPS measure for 2022 performance period

^qQCDR measure

Kidney Disease Quality Measures – Clinician/Clinician Group Level (cont.)

Person-Centered Care

Patient engagement

Care aligned with goals

- *Advance Directives Completed^a*

^aQCDR measure

Seamless Care Coordination

Ensuring follow-up care

Provider-to-provider communication

- *Rate of Timely Documentation Transmission to Dialysis Unit/Referring Physician^a*
- *Transplant Referral^a*

Gaps for Potential Measure Development

Through peer-reviewed and grey literature, the team identified 21 relevant measure subtopics for which no measure was located (Appendix E). Among the gaps identified are patient activation, education, and planning for disease progression, as well as diagnosis comprehension and care goal achievement. Additional subtopics are inappropriate prescribing and transplant rejection. Sources also identify a need for various patient-reported outcome measures. The team will present subtopics to the TEP for consideration.

Women's Health and Maternal Care

Table 5-6 describes the 38 measures (12 outcome and 26 process) that met the inclusion criteria for this clinical focus. The measure list that follows is organized under six applicable health care quality domains and associated measure topics and subtopics. For detailed measure information, see the Excel file *Measure Scan Results*, Appendix D.

**Table 5-6: Women's Health/Maternal Care Measure Counts
by Health Care Quality Domain, Subtopic, Source, and Type**

Quality Domain/Measure Subtopic	Count	MIPS	QCDR	Other Source
Affordability and Efficiency				
Disease-/Condition-specific overuse or underuse of resource	1	1 process		
Endometrial ablation	1	1 process		
Chronic Conditions				
Bone and joint	3	1 process	1 outcome 1 process	
Breast cancer	4	2 process	1 process	1 process
Hysterectomy	1			1 process
Urinary incontinence	2	1 process		1 process
Person-Centered Care				
Care aligned with goals	1	1 process		
Shared decision making	1			1 outcome
Safety				
Healthcare-associated complications	2	1 outcome 1 process		
Maternal safety	8	1 outcome 3 process	1 outcome 2 process	1 process
Seamless Care Coordination				
Ensuring follow up care	1		1 outcome	
Follow-up for patients with fractures	1	1 process		
Wellness and Prevention				
Breast cancer	1			1 outcome
Breastfeeding support	1	1 process		
Cervical cancer	1			1 outcome
Counseling	1			1 outcome
Disease/condition-specific screening	1	1 process		
Family planning	3			2 outcome 1 process
Screening and diagnostic testing	4	2 process	1 outcome	1 process
Total	38	2 outcome 16 process	4 outcome 4 process	6 outcome 6 process

Women's Health and Maternal Care Quality Measures – Clinician/Clinician Group Level (n = 38)

Affordability and Efficiency

Appropriate Use of Health Care

Disease-/condition-specific overuse or underuse of resources

- *Non-Recommended Cervical Cancer Screening in Adolescent Females^m*

Endometrial ablation

- *Appropriate Workup Prior to Endometrial Ablation^m*

Chronic Conditions

Adherence to evidence

Bone and joint

- *DEXA/DXA and Fracture Risk Assessment for Patients with Osteopenia^q*
- *Osteoporosis Management in Women Who Had a Fracture (CBE #0053)^m*
- *Vitamin D level: Effective Control of Low Bone Mass/Osteopenia and Osteoporosis: Therapeutic Level of 25 OH Vitamin D Level Achieved^{*q}*

Breast Cancer

- *Breast cancer*
- *Sentinel Lymph Node Biopsy for Invasive Breast Cancer^m*
- *Trastuzumab administered to patients with AJCC stage I (T1c) – III human epidermal growth factor receptor 2 (HER2) positive breast cancer who receive adjuvant chemotherapy (CBE #1858)^m*
- *Use of Breast Cancer Risk Score on Mammography^q*

Hysterectomy

- *Performing vaginal apical suspension at the time of hysterectomy to address pelvic organ prolapse (CBE #2038)*

Urinary Incontinence

- *Preoperative evaluation for stress urinary incontinence prior to hysterectomy for pelvic organ prolapse (CBE #2677)*
- *Urinary Incontinence: Assessment of Presence or Absence of Urinary Incontinence in Women Aged 65 Years and Older^m*

Person-Centered Care

Patient engagement

Care aligned with goals

- *Urinary Incontinence: Plan of Care for Urinary Incontinence in Women Aged 65 Years and Older^m*

Shared decision-making

- *Shared Decision-Making Process (CBE #2962)**

Safety

National serious safety events

Healthcare-associated complications

- *Performing cystoscopy at the time of hysterectomy for pelvic organ prolapse (CBE #2063)^m*
- *Proportion of Patients Sustaining a Bowel Injury at the time of any Pelvic Organ Prolapse Repair^{*m}*

Safety for special populations

Maternal safety

- *Hypotension Prevention After Spinal Placement for Elective Cesarean Section^q*
- *Rh Status Evaluation and Treatment of Pregnant Women at Risk of Fetal Blood Exposure^q*
- *Labor Epidural Failure when Converting from Labor Analgesia to Cesarean Section Anesthesia^{*q}*
- *Ultrasound Determination of Pregnancy Location for Pregnant Patients with Abdominal Pain^m*
- *Epilepsy: Counseling for Women of Childbearing Potential with Epilepsy^m*
- *Maternity Care: Elective Delivery (Without Medical Indication) at < 39 Weeks (Overuse)^{*m}*
- *Uterine Artery Embolization Technique: Documentation of Angiographic Endpoints and Interrogation of Ovarian Arteries^m*
- *Early Entry into Prenatal Care*

*outcome measure

^mMIPS measure for 2022 performance period

^qQCDR measure

Women's Health and Maternal Care Quality Measures – Clinician/Clinician Group Level (cont.)

Seamless Care Coordination

Transitions of care

Ensuring follow-up care

- *Communication with the Physician or Other Clinician Managing On-Going Care Post-Fracture for Men and Women Aged 50 Years and Older^m*

Follow-up for patients with fractures

- *Report Turnaround Time: Mammography^{*q}*

Wellness and Prevention

Age-specific prevention guidelines

Disease-/condition-specific screening

- *Screening for Osteoporosis for Women 65-85 Years of Age (CBE #0046)^m*

Cancer prevention

Screening and diagnostic testing

- *Breast Cancer Screening [ages 40–69 years] (CBE #0031)*
- *Breast Cancer Screening [ages 50–74 years] (CBE #2372)^m*
- *Cervical Cancer Screening (CBE #0032)^m*
- *Screening Colonoscopy Adenoma Detection Rate^{*q}*

Contraceptive care

Family planning

- *Contraceptive Care – Access to LARC (CBE #2904)*
- *Contraceptive Care – Most & Moderately Effective Methods (CBE #2903)**
- *Contraceptive Care – Postpartum (CBE #2902)**

Counseling

- *Person-Centered Contraceptive Counseling (PCCC) measure (CBE #3543)**

Maternal and child care

Breastfeeding support

- *Maternity Care: Postpartum Follow-up and Care Coordination^m*

Public health

Breast cancer

- *Breast Cancer**

Cervical cancer

- *Cervical Cancer**

*outcome measure

^mMIPS measure for 2022 performance period

^qQCDR measure

Gaps for Potential Measure Development

Through peer-reviewed and grey literature, the team identified 26 relevant measure subtopics for which no measure was located (Appendix E), encompassing maternal and postpartum morbidity and mortality, preconception and prenatal education, and maternal care experience for vulnerable populations, as well as prenatal mental health and postpartum depression. Specific disorders including preeclampsia, endometriosis, and fibroids are addressed, along with HIV testing in pregnancy. The team will present subtopics to the TEP for consideration.

CHAPTER 6. LIMITATIONS AND ACTIONS TO CONSIDER

Measures were not assessed for their potential impact in an MVP, nor was the overall quality of the measures assessed. The results of the scan provide a starting point for identifying the universe of suitable measures for MVPs. All measures identified would benefit from further review and an objective and standardized system to assess their strengths and weaknesses (e.g., Quality Measure Index or QMI).

Only condition-specific measures were included in this scan. If a measure was applicable to more than one condition, it was assigned to the condition associated with the principal diagnosis. For example, a measure that assesses nephropathy in a patient with diabetes was categorized as a diabetes measure.

QCDR measures could be considered for adaptation and were included in the scan for completeness. However, QCDR measures may not be suitable for use in MVPs without additional development and testing because they do not have the same requirements as measures developed for MIPs. In addition, many QCDRs are proprietary; therefore, their measures may not be available to all clinicians.

CHAPTER 7. CONCLUSION

Through the past two rulemaking cycles, CMS has begun a transition to MIPS MVPs that will simplify participation by creating distinct pathways that best match a medical specialty, condition, or episode of care.²⁷ For the 2023 performance period, MIPS eligible clinicians will have new MVP reporting options for rheumatology, stroke care and prevention, heart disease, chronic disease management, emergency medicine, lower extremity joint repair, and anesthesia.

CMS and HHS leadership designated additional priorities for MVPs. To assist in their development, this environmental scan identified existing clinician quality measures and potential measurement gaps applicable to these six clinical areas: behavioral health, diabetes, HIV/AIDS, hypertension, kidney disease, and women's health and maternal care.

The team searched national reports and peer-reviewed articles for quality measure subtopics reported as gaps; scanned databases and contacted other federal programs to locate existing condition-specific measures; mapped those measures to appropriate health care quality domains, topics, and subtopics consistent with the Meaningful Measures framework; and recognized relevant subtopics for which no measure was identified.

The scan identified 168 measures applicable to the six clinical areas:

- 43 (25.5%) were outcome measures—a high priority for the Quality Payment Program—versus 125 (74.5%) process.
- 51 (30%) were endorsed by the CBE; 117 (70%) were not endorsed.
- 51 (30%) were existing MIPS measures; 53 (31.5%) were from QCDRs and may require additional development and/or testing; and 64 (38%) came from other sources.
- The most measures identified for a clinical area were 58 for behavioral health; the fewest were five for hypertension.

The team identified 29 potential measurement gaps for behavioral health, 26 for women's health/maternal care, 21 for kidney disease, 10 for HIV/AIDS, and three for diabetes.

TEP members will be asked to review existing measures and offer recommendations for possible inclusion in MVPs. The team also will present subtopic gaps for members' consideration.

REFERENCES

1. Centers for Medicare & Medicaid Services, Center for Clinical Standards and Quality. *CMS Quality Measure Development Plan: Supporting the Transition to the Merit-based Incentive Payment System (MIPS) and Alternative Payment Models (APMs)*. Baltimore, MD: US Department of Health and Human Services; 2016.
<https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/MACRA-MIPS-and-APMs/Final-MDP.pdf>. Accessed April 10, 2022.
2. Medicare Program; CY 2022 Payment Policies Under the Physician Fee Schedule and Other Changes to Part B Payment Policies; Medicare Shared Savings Program Requirements; Provider Enrollment Regulation Updates; and Provider and Supplier Prepayment and Post-Payment Medical Review Requirements; Final Rule. *Fed Regist*. 2021; 86(221): 64996-66031.
3. Office of the Assistant Secretary for Planning and Evaluation. *Developing Health Equity Measures*. Washington, DC: US Department of Health and Human Services; 2021.
4. Executive Office of the President. Presidential Executive Order 13985: Advancing Racial Equity and Support for Underserved Communities Through the Federal Government. Washington, DC: The White House; 2021. <https://www.govinfo.gov/content/pkg/FR-2021-01-25/pdf/2021-01753.pdf>. Accessed September 20, 2021, 2021.
5. Howell EA. Reducing disparities in severe maternal morbidity and mortality. *Clin Obstet Gynecol*. 2018;61(2):387-399. doi:10.1097/GRF.0000000000000349.
6. National Alliance on Mental Illness. Mental health by the numbers. 2021. <https://www.nami.org/mhstats>. Accessed September 22, 2021.
7. Kalichman S, Shkembi B, Hernandex D, Katner H, Thorson KR. Income inequality, HIV stigma and preventing HIV disease progression in rural communities. *Prev Sci*. 2019;20(7):1066-1073. doi:10.1007/s11121-019-01013-5.
8. Desai N, Lora CM, Lash JP, Ricardo AC. CKD and ESRD in US Hispanics. *Am J Kidney Dis*. 2019;73(1):102-111. doi:10.1053/j.ajkd.2018.02.354.
9. Centers for Disease Control & Prevention. *HIV surveillance report*. Atlanta, GA: Services USDoHaH; 2019. <http://www.cdc.gov/hiv/library/reports/hiv-surveillance.html>. Accessed September 22, 2021.
10. Centers for Disease Control & Prevention. Chronic kidney disease in the United States, 2021. U.S. Department of Health and Human Services; 2021. <https://www.cdc.gov/kidneydisease/publications-resources/CKD-national-facts.html>. Accessed September 22, 2021.
11. Centers for Medicare & Medicaid Services, Office of Minority Health. *Paving the Way to Equity: A Progress Report 2015-2021*. Washington, DC: US Department of Health and Human Services; 2021.
12. Caldwell JT, Ford CL, Wallace SP, Wang MC, Takahashi LM. Intersection of living in a rural versus urban area and race/ethnicity in explaining access to health care in the United States. *Am J Public Health*. 2016;106(8):1463-1469. doi:10.2105/AJPH.2016.303212.
13. Centers for Medicare & Medicaid Services. *2021 National Impact Assessment of the Centers for Medicare & Medicaid Services (CMS) Quality Measures Report*. Baltimore, MD: US Department of Health and Human Services; 2021.

14. Office of the Assistant Secretary for Planning and Evaluation. *Report to Congress: Social Risk Factors and Performance Under Medicare's Value-Based Purchasing Programs*. Washington, DC: US Department of Health and Human Services; 2016. <https://aspe.hhs.gov/system/files/pdf/253971/ASPESESRTCfull.pdf>. Accessed August 26, 2019.
15. Centers for Disease Control & Prevention. Risk of Severe Illness or Death from COVID-19: Racial and Ethnic Health Disparities. Atlanta, GA; 2020. <https://www.cdc.gov/coronavirus/2019-ncov/community/health-equity/racial-ethnic-disparities/disparities-illness.html>. Accessed March 9, 2022.
16. Centers for Medicare & Medicaid Services. *CMS Measures Management System Blueprint Version 17.0*. Baltimore, MD: US Department of Health and Human Services; 2021. Accessed January 20, 2022.
17. Centers for Medicare & Medicaid Services. *CMS Quality Measurement Action Plan*. Baltimore, MD: US Department of Health and Human Services; 2021. <https://www.cms.gov/files/document/2021-cms-quality-conference-cms-quality-measurement-action-plan-march-2021.pdf>. Accessed March 30, 2022.
18. Office of the Federal Register. Federal Register. College Park, MD: National Archives and Records Administration; nd. <https://www.federalregister.gov/>. Accessed March 24, 2022.
19. Centers for Medicare & Medicaid Services. Quality Payment Program Overview. Baltimore, MD: US Department of Health and Human Services; nd. <https://qpp.cms.gov/about/qpp-overview>. Accessed March 24, 2022.
20. Centers for Medicare & Medicaid Services. Quality Payment Program 2022 Quality Measures. Baltimore, MD: US Department of Health and Human Services; nd. <https://qpp.cms.gov/mips/explore-measures?tab=qualityMeasures&py=2022>. Accessed March 24, 2022.
21. Centers for Medicare & Medicaid Services. Quality Payment Program resource library. Baltimore, MD: US Department of Health and Human Services; 2021. <https://qpp.cms.gov/resources/resource-library>. Accessed March 24, 2022.
22. Centers for Medicare & Medicaid Services. CMS Measures Inventory Tool. Baltimore, MD: US Department of Health and Human Services; 2017. https://cmit.cms.gov/CMIT_public/ListMeasures. Accessed March 24, 2022.
23. National Quality Forum. Quality Positioning System. Washington, DC: National Quality Forum; 2017. <http://www.qualityforum.org/QPS>. Accessed March 24, 2022.
24. National Quality Forum. NQF Projects. Washington, DC: National Quality Forum; 2015. <http://www.qualityforum.org/ProjectListing.aspx>. Accessed March 24, 2022.
25. National Quality Forum. Measure Applications Partnership. Washington, DC: National Quality Forum; 2020. <https://www.qualityforum.org/map/>. Accessed March 24, 2022.
26. Centers for Medicare & Medicaid Services, Office of Minority Health. *The CMS Equity Plan for Improving Quality in Medicare*. Baltimore, MD: US Department of Health and Human Services; 2015.
27. Centers for Medicare & Medicaid Services. MIPS Value Pathways (MVPs). Baltimore, MD: US Department of Health and Human Services; nd. <https://qpp.cms.gov/mips/mips-value-pathways>. Accessed April 8, 2022.

APPENDIX A – KEY SOURCES FOR IDENTIFYING MEASURE SUBTOPICS

The team reviewed key national reports to garner the perspective of quality measurement organizations and stakeholders and surveyed peer-reviewed journals to identify clinician health measurement gaps from the broader health care community.

Table A-1: Key Sources: National Reports

Source	Title	Author	Date
NQF	Addressing Opioid-Related Outcomes Among Individuals With Co-occurring Behavioral Health Conditions	NQF	2021
NQF	Addressing Opioid-Related Outcomes Among Individuals With Co-Occurring Behavioral Health Conditions: An Environmental Scan of Quality Measures	NQF	2021
NQF	Analysis of Measurement Gap Areas and Measure Alignment	CQMC	2020
NQF	Approaches to Future Core Set Prioritization	CQMC	2020
NQF	Behavioral Health and Substance Use, Fall 2020 Cycle: CDP Report	NQF	2021
NQF	Behavioral Health and Substance Use, Spring 2019 Review Cycle: CDP Report	NQF	2020
NQF	Behavioral Health and Substance Use, Spring 2020 Cycle: CDP Report	NQF	2021
NQF	Cardiovascular, Fall 2020 Cycle: CDP Report	NQF	2021
NQF	Cardiovascular, Spring 2019 Cycle: CDP Report	NQF	2020
NQF	Cardiovascular, Spring 2020 Cycle: CDP Report	NQF	2021
NQF	Current Practices of Testing Social and Functional Status-Related Risk Factors Within Risk Adjustment Models of Performance Measurement	NQF	2021
NQF	Developing and Testing Risk Adjustment Models for Social and Functional Status-Related Risk Within Healthcare Performance Measurement	NQF	2021
NQF	Leveraging Quality Measurement to Improve Rural Health, Telehealth, and Healthcare System Readiness	NQF	2021
NQF	Maternal Morbidity and Mortality Measurement Recommendations Report	NQF	2021
NQF	Measure Applications Partnership 2020 Considerations for Implementing Measures in Federal Programs: Clinicians	NQF	2020
NQF	Measure Applications Partnership 2020-2021 Considerations for Implementing Measures in Federal Programs: Clinicians, Hospitals, and PAC/LTC	NQF	2021
NQF	NQF 2019 Activities: Report to Congress and the Secretary of the Department of Health and Human Services	NQF	2020
NQF	NQF 2020 Activities: Report to Congress and the Secretary of the Department of Health and Human Services	NQF	2021
NQF	Opioids and Opioid Use Disorder: Quality Measurement Priorities	NQF	2020
NQF	Opportunities for Advancing Adult Immunization Through Quality Measurement	NQF	2021
NQF	Perinatal and Women’s Health, Fall 2019 Track 2: CDP Report	NQF	2021
NQF	Perinatal and Women’s Health, Fall 2020 Cycle: CDP Report	NQF	2021
NQF	Perinatal and Women’s Health, Spring 2020 Cycle: CDP Report	NQF	2021
NQF	Prevention and Population Health Spring 2020 Cycle: CDP Technical Report	NQF	2021
NQF	Prevention and Population Health, Fall 2019 Cycle, Track 1 Measures: CDP Report	NQF	2020
NQF	Prevention and Population Health, Fall 2020 Cycle: CDP Report	NQF	2021
NQF	Prevention and Population Health, Spring 2018 Cycle: CDP Report	NQF	2019
NQF	Primary Care and Chronic Illness, Fall 2020 Cycle: CDP Report	NQF	2021
NQF	Primary Care and Chronic Illness, Fall 2019 Cycle Track 2: CDP Technical Report	NQF	2021
NQF	Primary Care and Chronic Illness, Spring 2019 Review Cycle: CDP Report	NQF	2020

NQF	Primary Care and Chronic Illness, Spring 2020 Cycle: CDP Report	NQF	2021
NQF	Renal, Fall 2019 Cycle Track 2: CDP Report	NQF	2020
NQF	Renal, Fall 2020 Cycle CDP Report	NQF	2021
NQF	Renal, Spring 2019 Cycle: CDP Report	NQF	2020
NQF	Renal, Spring 2020 Cycle: CDP Report	NQF	2021
NQF	Rural-Relevant Quality Measures for Testing of Statistical Approaches to Address Low Case-Volume	NQF	2020
NQF	Social Risk Trial Final Report	NQF	2021

Table A-2: Key Sources: Peer-Reviewed Articles

Source	Title	Author	Date
<i>Advances in Experimental Medicine and Biology</i>	Anxiety Disorders in the Elderly	Carmen Andreescu; Soyoung Lee	2020
	Role of Benzodiazepines in Anxiety Disorders	Richard Balon; Vladan Starcevic	2020
<i>Advances in Therapy</i>	Real-World Diagnosis and Treatment of Diabetic Kidney Disease	Fatima Rodriguez; Donghyun J. Lee; Sanchit S. Gad; et al.	2021
<i>AIDS and Behavior</i>	A Systematic Review of the Social Network Strategy to Optimize HIV Testing in Key Populations to End the Epidemic in the United States	Kristefer Stojanovski; Gary Naja-Riese; Elizabeth J. King; et al.	2021
<i>Alzheimer's Research & Therapy</i>	Challenges and opportunities for improving the landscape for Lewy body dementia clinical trials	Jennifer G. Goldman; Leah K. Forsberg; Bradley F. Boeve; et al.	2020
<i>American Family Physician</i>	End-Stage Renal Disease: Medical Management	Noah Wouk, MD	2021
<i>American Heart Journal</i>	Reducing disparities in adverse pregnancy outcomes in the United States	Lochan M. Shah, MD; Bhavya Varma, MD; Khurram Nasir, MD, MPH, MSc; et al.	2021
<i>American Journal of Cardiology</i>	Underdiagnosis of Isolated Systolic and Isolated Diastolic Hypertension	Carol Conell, PhD; Alexander C. Flint, MD, PhD; Xiushui Ren, MD; et al.	2020
<i>American Journal of Emergency Medicine</i>	HIV testing among people with and without substance use disorder in emergency departments: A nationwide cohort study	Simeon D. Kimmel, MD, MA; Erik S. Anderson, MD; Marc R. Larochelle, MD, MPH	2021
<i>American Journal of Health Behavior</i>	Prevalence and Correlates of HIV Testing among Sexual Minorities	Ellen T. Kurtzman, PhD, MPH, RN, FAAN; Karen Fraser Wyche, PhD, MSW, MA	2021
<i>American Journal of Hypertension</i>	Blood Pressure in Childhood and Adolescence	Shakia T. Hardy; Elaine M. Urbina	2021
<i>American Journal of Kidney Diseases</i>	CKD Awareness Among US Adults by Future Risk of Kidney Failure	Chi D. Chu, MD; Charles E. McCulloch, PhD; Tanushree Banerjee, PhD; et al.	2020
<i>American Journal of Maternal Child Nursing</i>	Postpartum Depression in American Indian/Alaska Native Women: A Scoping Review	Jennifer L. Heck, PhD, RNC-NIC, CNE	2021

Source	Title	Author	Date
<i>American Journal of Obstetrics and Gynecology</i>	Maternal mortality in the United States: research gaps, opportunities, and priorities	Juanita J. Chinn, PhD; Esther Eisenberg, MD, MPH; Shavon Artis Dickerson, DrPH, MPH; et al.	2020
	Quality of periconceptional dietary intake and maternal and neonatal outcomes	Lynn M. Yee, MD, MPH; Robert M. Silver, MD; David M. Haas, MD, MS; et al.	2020
	Third-trimester repeat HIV testing: it is time we make it universal	Irina R. Cassimatis, MD, MSc; Laurie D. Ayala, MPH; Emily S. Miller, MD, MPH; et al.	2021
<i>American Journal of Preventive Medicine</i>	HIV Testing Strategies for Health Departments to End the Epidemic in the U.S.	Kevin P. Delaney, MPH, PhD; Elizabeth A. DiNenno, PhD	2021
	Impacts of Medicaid Expansion on Health Among Women of Reproductive Age	Claire E. Margerison, PhD; Colleen L. MacCallum, MS; Jiajia Chen, PhD; et al.	2020
	Prepregnancy Counseling Among U.S. Women With Diabetes and Hypertension, 2016–2018	Cassandra J. Marshall, DrPH, MPH; Zille Huma, MPH, MBBS; Julianna Deardorff, PhD; et al.	2021
	The HIV Treat Pillar: An Update and Summary of Promising Approaches	Nanette D. Benbow, MAS; Eve D. Mokotoff, MPH; Julia C. Dombrowski, MD, MPH; et al.	2021
<i>American Journal of Public Health</i>	Estimating Gains in HIV Testing by Expanding HIV Screening at Routine Checkups	Deesha Patel, MPH; Weston O. Williams, PhD; Janet Heitgerd, PhD; et al.	2021
<i>Annals of Epidemiology</i>	Life-course impact of child maltreatment on midlife health-related quality of life in women: longitudinal mediation analysis for potential pathways	Hsing-Hua S. Lin, PhD; Ashley I. Naimi, PhD; Maria M. Brooks, PhD; et al.	2020
	The relationship between the neighborhood built and social environment and hypertensive disorders of pregnancy: A scoping review	Kaitlyn K Stanhope, PhD, MPH; Deborah I Adeyemi, MPH; Tanya Li, BS; et al.	2021
<i>Annals of Pharmacotherapy</i>	Development of a Theory-Informed Behavior Change Intervention to Reduce Inappropriate Prescribing of Nephrotoxins and Renally Eliminated Drugs	Sandra L. Kane-Gill, PharmD, MSc; Erin F. Barreto, PharmD, MSc; Azra Bihorac, MS, MD; et al.	2021
<i>Bipolar Disorders: An International Journal of Psychiatry and Neurosciences</i>	Prevention of suicidal behavior in bipolar disorder	Leonardo Tondo; Gustavo H. Vázquez; Ross J. Baldessarini	2021
<i>BMC Nephrology</i>	The COVID-19 nephrology compendium: AKI, CKD, ESKD and transplantation	Sam Kant; Steven P. Menez; Mohamed Hanouneh; et al.	2020
<i>BMC Women's Health</i>	Missed opportunities to prevent cardiovascular disease in women with prior preeclampsia	Alina Brener; Irene Lewnard; Jennifer Mackinnon; et al.	2020
<i>Circulation. Cardiovascular quality and outcomes</i>	Importance of Housing and Cardiovascular Health and Well-Being	Mario Sims, PhD, MS, FAHA; Kiarri N. Kershaw, PhD, MPH, FAHA; Khadijah Breathett, MD, MS, FAHA; et al.	2020

Source	Title	Author	Date
<i>Clinical Journal of the American Society of Nephrology</i>	Toward Patient-Centered Innovation: A Conceptual Framework for Patient-Reported Outcome Measures for Transformative Kidney Replacement Devices	Jennifer E. Flythe; Tandra S. Hilliard; Kourtney Ikeler; et al.	2020
<i>Current HIV/AIDS Reports</i>	Interventions Addressing Depression and HIV-Related Outcomes in People with HIV	Noelle A. Mendez; Daniel Mayo; Steven A. Safren	2021
<i>Current Hypertension Reports</i>	Clinical Decision Support for the Diagnosis and Management of Adult and Pediatric Hypertension	Suchith Vuppala; Christy B. Turer	2020
<i>Current Opinion in Nephrology and Hypertension</i>	Precision medicine approach to dialysis including incremental and decremental dialysis regimens	Mariana Murea	2021
	The clinical application of frailty in nephrology and transplantation	Ranim Alsaada; Xiaomeng Chena; Mara McAdams-DeMarco	2021
<i>Current Opinion in Organ Transplantation</i>	Kidney transplant outcomes in minority populations: Can we close the gap?	Amishi Desai; Rupinder K. Sodhi; Sanjeev Akkina	2021
<i>Current Opinion in Psychiatry</i>	Ageing with schizophrenia: an update	Haley V. Solomona; Martina Sinopoli; Lynn E. DeLisi	2021
	Suicide prevention efforts in the United States and their effectiveness	Amy Barnhorsta; Hilary Gonzalesa; Rameesha Asif-Sattar	2021
<i>Current Psychiatry Reports</i>	Bipolar Disorder and Suicide: a Review	Jacob N. Miller; Donald W. Black	2020
	Correlates of Quality of Life in Anxiety Disorders: Review of Recent Research	M. Taylor Wilmer; Kelley Anderson; Monique Reynolds	2021
	Medical Ethics Issues in Dementia and End of Life	William Allen	2020
	Understanding Vulnerability to Late-Life Suicide	Olivia J. Ding; Gary J. Kennedy	2021
<i>Drug and Alcohol Dependence</i>	Effects of incentives on viral suppression in people living with HIV who use cocaine or opiates	Sarah Pollocka; Forrest Toegela; August F. Holtyn; et al.	2020
<i>Frontiers in Psychiatry</i>	A Biopsychosocial-Ecological Framework for Family-Framed Dementia Care	Carol Ann Podgorski; Sharon D. Anderson; Jasneet Parmar	2021
<i>General Hospital Psychiatry</i>	Lethal means counseling for suicide prevention: Views of emergency department clinicians	Bonnie J. Siry; Evan Polzer; Faris Omeragic	2021
<i>GeroScience</i>	Cardiovascular fitness and structural brain integrity: an update on current evidence	Tracy d'Arbeloff	2020
<i>Harvard Review of Psychiatry</i>	mHealth Assessment and Intervention of Depression and Anxiety in Older Adults	Jason T. Grossman, MA; Madelyn R. Frumkin, MA; Thomas L. Rodebaugh, PhD; Eric J. Lenze, MD	2020
<i>Health & Social Work</i>	Desired Characteristics of HIV Testing and Counseling among Diverse Survivors of Intimate Partner Violence Receiving Social Services	Rosa Maria Gonzalez-Guarda; Jessica Williams; Dalia Lorenzo; et al.	2021

Source	Title	Author	Date
<i>Hypertension</i>	Angiotensin-Converting Enzyme Inhibitor or Angiotensin Receptor Blocker Use Among Hypertensive US Adults With Albuminuria	Chi D. Chu; Neil R. Powe; Charles E. McCulloch; et al.	2021
	Management of Stage 1 Hypertension in Adults With a Low 10-Year Risk for Cardiovascular Disease: Filling a Guidance Gap	Daniel W. Jones, MD, FAHA; Paul K. Whelton, MB, MD, MSc; Norrina Allen, PhD, MPH; et al.	2021
	Medication Adherence and Blood Pressure Control: A Scientific Statement From the American Heart Association	Niteesh K. Choudhry, MD, PhD; Ian M. Kronish, MD, MPH, FAHA; Wanpen Vongpatanasin, MD; et al.	2022
<i>International Journal of Clinical and Health Psychology</i>	Depression screening and treatment among uninsured populations in Primary Care	Afsaneh Rezaeizadeha; Katherine Sanchez; Kiumars Zolfaghari; et al.	2021
<i>JAMA Network Open</i>	Perspectives on Kidney Disease Education and Recommendations for Improvement Among Latinx Patients Receiving Emergency-Only Hemodialysis	Tessa K. Novick, MD, MSW, MHS; Santiago Diaz, MD; Francisco Barrios, MD; et al.	2021
<i>JAMA Psychiatry</i>	Association of Suicide Prevention Interventions With Subsequent Suicide Attempts, Linkage to Follow-up Care, and Depression Symptoms for Acute Care Settings A Systematic Review and Meta-analysis	Stephanie K. Doupnik, MD, MSHP; Brittany Rudd, PhD; Timothy Schmutte, PhD; et al.	2020
<i>Journal of Cancer Survivorship</i>	The Women's Circle of Health Follow-Up Study: A population-based longitudinal study of Black breast cancer survivors in New Jersey	Elisa V. Bandera; Kitaw Demissie; Bo Qin; et al.	2019
<i>Journal of Clinical Endocrinology & Metabolism</i>	Casting a Health Equity Lens on Endocrinology and Diabetes	Sherita Hill Golden; Joshua J. Joseph; Felicia Hill-Briggs	2020
<i>Journal of Crisis Intervention and Suicide Prevention</i>	An Exploration of Barriers to Suicide Prevention Messaging With US Veterans	Elizabeth Karras; Brooke A. Levandowski; Janet M. McCarten	2022
<i>Journal of General Internal Medicine</i>	Improving Blood Pressure Management in Primary Care Patients with Chronic Kidney Disease: a Systematic Review of Interventions and Implementation Strategies	Celia C. Kamath, PhD; Claudia C. Dobler, MD; Rozalina G. McCoy, MD	2020
<i>Journal of General Internal Medicine</i>	Translating CKD Research into Primary Care Practice: a Group-Randomized Study	Cara B. Litvin, MD, MS; Paul J. Nietert, PhD; Ruth G. Jenkins, PhD; et al.	2019
<i>Journal of Health Care for the Poor and Underserved</i>	Kidney Transplantation in Native Americans: Time to Explore, Expel Disparity	Sujit Vijay Sakpal; Steven Donahue; Cody Ness	2022
	Preeclampsia Risk and Prevention among Pregnant Medicaid Beneficiaries	Caitlin Cross-Barnet; Brigitte Courtot; Sarah Benatar; et al.	2020

Source	Title	Author	Date
<i>Journal of Public Health Management and Practice</i>	Addressing Health Equity and Social Determinants of Health Through Healthy People 2030	Cynthia A. Gómez, PhD; Dushanka V. Kleinman, DDS, MScD; Nico Pronk, PhD, MA, FASCM, FAWHP	2021
<i>Journal of the American College of Cardiology</i>	Pre-Pregnancy Hypertension Among Women in Rural and Urban Areas of the United States	Natalie A. Cameron, MD; Rebecca Molsberry, MPH; Jacob B. Pierce, BA; et al.	2020
<i>Journal of the American Society of Nephrology</i>	Measuring Quality in Kidney Care: An Evaluation of Existing Quality Metrics and Approach to Facilitating Improvements in Care Delivery	Mallika L. Mendu; Sri Lekha Tummalapalli; Krista L. Lentine; et al.	2020
<i>Journal of the Association for Research in Otolaryngology</i>	Hearing Impairment and Cognition in an Aging World	Danielle S. Powell; Esther S. Oh; Frank R. Lin; et al.	2021
<i>Journal of the International Association of Providers of AIDS Care</i>	Women's Decision-Making about PrEP for HIV Prevention in Drug Treatment Contexts	Yilu Qin, MD; Carolina Price, MPA; Ronnye Rutledge, MD, MHS; et al.	2019
<i>Journal of Vascular Access</i>	The patient experience of hemodialysis vascular access decision-making	Karen Woo; Huibrie Pieters	2021
<i>Journal of Women's Health</i>	Breast, Cervical, and Colorectal Cancer Screening Adherence: Effect of Low Body Mass Index in Women	Paniz Charkhchi, MD; Matthew B. Schabath, PhD; Ruth C. Carlos, MD, MS	2020
<i>Lung Cancer</i>	COPD and lung cancer incidence in the Women's Health Initiative Observational Study: A brief report	Misako Nagasakaa; Amy Lehman; Rowan Chlebowski; et al.	2020
<i>Mental Health Weekly Digest</i>	Studies from Johns Hopkins University Update Current Data on Schizophrenia (Neurodevelopmental Factors In Schizophrenia).	Johns Hopkins University	2020
<i>Morbidity and Mortality Weekly Report</i>	Increasing Access to HIV Testing Through Direct-to-Consumer HIV Self-Test Distribution — United States, March 31, 2020–March 30, 2021	Jen Hecht, MPH; Travis Sanchez, DVM; Patrick S. Sullivan, PhD; et al.	2021
<i>Nephrology Nursing Journal</i>	Patient Peer-to-Peer Mentoring for Patients with Kidney Failure: Methods, Facilitators, and Lessons Learned	Kou Kha-Moua, BSN, RN; Amber B. Paulus, PhD, RN, CPHQ, CPPS	2021
<i>North Carolina Medical Journal</i>	Maternal Mental Health MATTERS	Mary Kimmel	2020
	The State of North Carolina's Perinatal Health	Kelly S. Kimple; Latoshia Rouse; Walidah Karim-Rhoades	2020
<i>Nursing Research</i>	Integrated Review of Psychosocial and Behavioral Health Assessments and Interventions in Pulmonary Hypertension	Tania T. Von Visger; Diana Lee; Amy Lyons; et al.	2021
<i>Obesity (Silver Spring)</i>	It's Absolutely Relative: The Effect of Age on the BMI–Mortality Relationship in Postmenopausal Women	Hailey R. Banack; Jennifer W. Bea; Andrew Stokes; et al.	2020

Source	Title	Author	Date
<i>Peritoneal Dialysis International</i>	Gender differences in peritoneal dialysis initiation in the US end-stage renal disease population	Savannah L Vogel; Tripti Singh; Brad C Astor; et al.	2020
	Utilization of CMS pre-ESRD Kidney Disease Education services and its associations with the home dialysis therapies	Ashutosh M Shukla; Shahab Bozorgmehri; Rupam Ruchi; et al.	2021
<i>PLoS One</i>	Determinants of rural-urban differences in health care provider visits among women of reproductive age in the United States	Hyunjung Lee; Ashley H. Hirai; Ching-Ching Claire Lin; et al.	2020
	Highly variable trends in rates of newly diagnosed HIV cases in U.S. hotspots, 2008–2017	Lorena Segarra; Samuel J. Simmens; Amanda D. Castel; et al.	2021
	Mental health status among women of reproductive age from underserved communities in the United States and the associations between depression and physical health. A cross-sectional study	Sue C. Lin; Nadra Tyus; Maura Maloney; et al.	2020
	Young women’s reproductive health conversations: Roles of maternal figures and clinical practices	Nicole K. Richards; Elizabeth Crockett; Christopher P. Morley; et al.	2020
<i>Scientific Reports</i>	Blood Pressure measurements are site dependent in a cohort of patients with neurological illness	Kathrina B. Siron; Michaela X. Cortes; Sonja E. Stutzman; et al.	2020
	Comparison of intradialytic versus home-based exercise programs on physical functioning, physical activity level, adherence, and health-related quality of life: Pilot study	Lucía Ortega-Pérez deVillar; Francisco José Martínez-Olmos; Francisco de Borja Pérez-Domínguez; et al.	2020
<i>Seminars in Dialysis</i>	Anticoagulation in hemodialysis: A narrative review	Sophie E. Claudel; Lauren A. Miles; Mariana Murea	2021
	Preventive care for patients with end-stage kidney disease: Crossroads between nephrology and primary care	Samuel S. Phen; Amir Kazory; Shahab Bozorgmehri	2020
	When ESKD complicates the management of pain	Manisha Jhamb; Laura Tucker; Jane Liebschutz	2020
<i>SLEEP</i>	Perceived racial discrimination and risk of insomnia among middle-aged and elderly Black women	Traci N. Bethea; Eric S. Zhou; Eva S. Schernhammer; et al.	2019
<i>Suicide and Life-Threatening Behavior</i>	Anticipated Suicide Stigma, Secrecy, and Suicidality among Suicide Attempt Survivors	Lea Mayer; MSC, Nicolas Rusch, MD; Laura M. Frey, PHD; et al.	2021
<i>Topics in Antiviral Medicine</i>	CROI 2021: Epidemiologic Trends in the HIV and SARS-CoV-2 Pandemics and HIV Prevention Research	Susan Buchbinder, MD; Albert Liu, MD, MPH	2021

APPENDIX B – MeSH STRINGS FOR IDENTIFYING JOURNAL ARTICLES

The National Library of Medicine (NLM) maintains the [Medical Subject Headings](#) (MeSH) thesaurus used for indexing, categorizing, and searching for biomedical and health-related information. It includes the subject headings appearing in MEDLINE/PubMed, the NLM Catalog, and other NLM databases.

Table B-1: Medical Subject Headings (MeSH) Strings

Condition	MeSH String
Behavioral health	Search: (((((((((((((((((((((((quality improvement[MeSH Terms]) OR (Quality Indicators, Health Care[MeSH Terms])) OR (Patient Reported Outcome Measures[MeSH Terms])) OR (Outcome assessment, Health Care[MeSH Terms])) OR (Process Assessment, Health Care[MeSH Terms])) AND (Centers for Medicare and Medicaid Services, U.S.[MeSH Terms])) OR (Medicare Access and CHIP Reauthorization Act of 2015[MeSH Terms])) OR (Value-Based Health Insurance[MeSH Terms])) AND (clinician)) OR (Quality Payment Program)) OR (MIPS)) OR (MVP)) AND (Professional Practice Gaps[MeSH Terms])) OR (measurement gaps)) OR (gap)) AND (mental disorders[MeSH Terms])) AND (2020/1/1:2022/1/31[pdat]) AND ((fha[Filter]) AND (2020/1/1:2022/1/30[pdat]) AND (english[Filter])) AND ((fha[Filter]) AND (2020/1/1:2022/1/31[pdat]) AND (english[Filter])) AND ((fha[Filter]) AND (2020/1/1:2022/1/31[pdat]) AND (english[Filter])) Filters: Abstract, English, from 2020/1/1 - 2022/1/31
Behavioral health – anxiety	Search: (((((((((((((((((((((((quality improvement[MeSH Terms]) OR (Quality Indicators, Health Care[MeSH Terms])) OR (Patient Reported Outcome Measures[MeSH Terms])) OR (Outcome assessment, Health Care[MeSH Terms])) OR (Process Assessment, Health Care[MeSH Terms])) AND (Centers for Medicare and Medicaid Services, U.S.[MeSH Terms])) AND (Professional Practice Gaps[MeSH Terms])) or (measurement gaps) AND (anxiety[Title/Abstract])) OR (anxiety disorders[MeSH Terms]) Filters: Abstract, English, Abstract, English, from 2020/1/1 – 2022/1/31
Behavioral health – bipolar	Search: (((((((((((((((((((((((quality improvement[MeSH Terms]) OR (Quality Indicators, Health Care[MeSH Terms])) OR (Patient Reported Outcome Measures[MeSH Terms])) OR (Outcome assessment, Health Care[MeSH Terms])) OR (Process Assessment, Health Care[MeSH Terms])) AND (Centers for Medicare and Medicaid Services, U.S.[MeSH Terms])) AND (Professional Practice Gaps[MeSH Terms])) or (measurement gaps) AND (bipolar[Title/Abstract]) OR (bipolar disorder[MeSH Terms]) Filters: Abstract, English, Abstract, English, from 2020/1/1 – 2022/1/31
Behavioral health – dementia	Search: (((((((((((((((((((((((quality improvement[MeSH Terms]) OR (Quality Indicators, Health Care[MeSH Terms])) OR (Patient Reported Outcome Measures[MeSH Terms])) OR (Outcome assessment, Health Care[MeSH Terms])) OR (Process Assessment, Health Care[MeSH Terms])) AND (Centers for Medicare and Medicaid Services, U.S.[MeSH Terms])) AND (Professional Practice Gaps[MeSH Terms])) or (measurement gaps) AND (dementia[Title/Abstract]) OR (dementia[Title/Abstract]) Filters: Abstract, English, Abstract, English, from 2020/1/1 – 2022/1/31
Behavioral health – depression	Search: (((((((((((((((((((((((quality improvement[MeSH Terms]) OR (Quality Indicators, Health Care[MeSH Terms])) OR (Patient Reported Outcome Measures[MeSH Terms])) OR (Outcome assessment, Health Care[MeSH Terms])) OR (Process Assessment, Health Care[MeSH Terms])) AND (Centers for Medicare and Medicaid Services, U.S.[MeSH Terms])) AND (Professional Practice Gaps[MeSH Terms])) or (measurement gaps) AND (depression[MeSH Terms])) OR (depression[Title/Abstract]) Filters: Abstract, English, from 2020/1/1 – 2022/1/31

Condition	MeSH String
Behavioral health – illicit drug use	Search: (((((((((((((((((((((((((((((((quality improvement[MeSH Terms]) OR (Quality Indicators, Health Care[MeSH Terms])) OR (Patient Reported Outcome Measures[MeSH Terms])) OR (Outcome assessment, Health Care[MeSH Terms])) OR (Process Assessment, Health Care[MeSH Terms])) AND (Centers for Medicare and Medicaid Services, U.S.[MeSH Terms])) AND (Professional Practice Gaps[MeSH Terms])) or (measurement gaps) AND (illicit drugs[Title/Abstract])) OR (Illicit Drugs[MeSH Terms]) Filters: Abstract, English, Abstract, English, from 2020/1/1 – 2022/1/31
Behavioral health – schizophrenia	Search: (((((((((((((((((((((((((((((((quality improvement[MeSH Terms]) OR (Quality Indicators, Health Care[MeSH Terms])) OR (Patient Reported Outcome Measures[MeSH Terms])) OR (Outcome assessment, Health Care[MeSH Terms])) OR (Process Assessment, Health Care[MeSH Terms])) AND (Centers for Medicare and Medicaid Services, U.S.[MeSH Terms])) AND (Professional Practice Gaps[MeSH Terms])) or (measurement gaps) AND (schizophrenia[Title/Abstract])) OR (schizophrenia[MeSH Terms]) Filters: Abstract, English, Abstract, English, from 2020/1/1 – 2022/1/31
Behavioral health – suicide	Search: (((((((((((((((((((((((((((((((quality improvement[MeSH Terms]) OR (Quality Indicators, Health Care[MeSH Terms])) OR (Patient Reported Outcome Measures[MeSH Terms])) OR (Outcome assessment, Health Care[MeSH Terms])) OR (Process Assessment, Health Care[MeSH Terms])) AND (Centers for Medicare and Medicaid Services, U.S.[MeSH Terms])) AND (Professional Practice Gaps[MeSH Terms])) or (measurement gaps) AND (suicide[Title/Abstract])) OR (suicide[MeSH Terms]) Filters: Abstract, English, Abstract, English, from 2020/1/1 - 2022/1/31
Diabetes	Search: (((((((((((((((((((((((((((((((quality improvement[MeSH Terms]) OR (Quality Indicators, Health Care[MeSH Terms])) OR (Patient Reported Outcome Measures[MeSH Terms])) OR (Outcome assessment, Health Care[MeSH Terms])) OR (Process Assessment, Health Care[MeSH Terms])) AND (Centers for Medicare and Medicaid Services, U.S.[MeSH Terms])) OR (Medicare Access and CHIP Reauthorization Act of 2015[MeSH Terms])) OR (Value-Based Health Insurance[MeSH Terms])) AND (clinician)) OR (Quality Payment Program)) OR (MIPS)) OR (MVP)) AND (Professional Practice Gaps[MeSH Terms])) OR (measurement gaps)) OR (gap)) AND (Diabetes Mellitus[MeSH Terms]) Filters: Abstract, English, Abstract, English, from 2020/1/1 - 2022/1/31
HIV/AIDS	Search: (((((((((((((((((((((((((((((((quality improvement[MeSH Terms]) OR (Quality Indicators, Health Care[MeSH Terms])) OR (Patient Reported Outcome Measures[MeSH Terms])) OR (Outcome assessment, Health Care[MeSH Terms])) OR (Process Assessment, Health Care[MeSH Terms])) AND (Centers for Medicare and Medicaid Services, U.S.[MeSH Terms])) OR (Medicare Access and CHIP Reauthorization Act of 2015[MeSH Terms])) OR (Value-Based Health Insurance[MeSH Terms])) AND (clinician)) OR (Quality Payment Program)) OR (MIPS)) OR (MVP)) AND (Professional Practice Gaps[MeSH Terms])) OR (measurement gaps)) OR (gap)) AND (HIV[MeSH Terms])) OR (hiv testing[MeSH Terms])) OR (blotting, western[MeSH Terms])) OR (viral load[MeSH Terms])) OR (hiv infection[MeSH Terms]) Filters: Abstract, English, Abstract, English, from 2020/1/1 - 2022/1/31
Hypertension	Search: (((((((((((((((((((((((((((((((quality improvement[MeSH Terms]) OR (Quality Indicators, Health Care[MeSH Terms])) OR (Patient Reported Outcome Measures[MeSH Terms])) OR (Outcome assessment, Health Care[MeSH Terms])) OR (Process Assessment, Health Care[MeSH Terms])) AND (Centers for Medicare and Medicaid Services, U.S.[MeSH Terms])) OR (Medicare Access and CHIP Reauthorization Act of 2015[MeSH Terms])) OR (Value-Based Health Insurance[MeSH Terms])) AND (clinician)) OR (Quality Payment Program)) OR (MIPS)) OR (MVP)) AND (Professional Practice Gaps[MeSH Terms])) OR (measurement gaps)) OR (gap)) AND (hypertension[MeSH Terms])) AND (2020/1/1:2022/1/31[pdat]) Filters: Abstract, English, from 2020/1/1 - 2022/1/31

Condition	MeSH String
Kidney disease	Search: (((((((((((((((((((quality improvement[MeSH Terms]) OR (Quality Indicators, Health Care[MeSH Terms])) OR (Patient Reported Outcome Measures[MeSH Terms])) OR (Outcome assessment, Health Care[MeSH Terms])) OR (Process Assessment, Health Care[MeSH Terms])) AND (Centers for Medicare and Medicaid Services, U.S.[MeSH Terms])) AND (Professional Practice Gaps[MeSH Terms])) OR (measurement gaps)) AND (kidney disease[MeSH Terms]))) OR (chronic kidney failure[MeSH Terms])) OR (acute kidney failure[MeSH Terms])) OR (disease, end stage renal[MeSH Terms]) Filters: Abstract, English, Abstract, English, from 2020/1/1 - 2022/1/31
Maternal/ women's health	Search: (((((((((((((((((((quality improvement[MeSH Terms]) OR (Quality Indicators, Health Care[MeSH Terms])) OR (Patient Reported Outcome Measures[MeSH Terms])) OR (Outcome assessment, Health Care[MeSH Terms])) OR (Process Assessment, Health Care[MeSH Terms])) AND (Centers for Medicare and Medicaid Services, U.S.[MeSH Terms]))) OR (Medicare Access and CHIP Reauthorization Act of 2015[MeSH Terms])) OR (Value-Based Health Insurance[MeSH Terms])) AND (clinician)) OR (Quality Payment Program)) OR (MIPS)) OR (MVP)) AND (Professional Practice Gaps[MeSH Terms])) OR (measurement gaps)) OR (gap)) AND (Maternal health services[MeSH Terms])) OR (Maternal-child nursing[MeSH Terms])) OR (Women's health[MeSH Terms])) OR (women's health services[MeSH Terms])) AND (2020/1/1:2020/1/31[pdat]) AND ((fha[Filter]) AND (2020/1/1:2022/1/31[pdat]) AND (english[Filter])) Filters: Abstract, English, Abstract, English, from 2020/1/1 - 2022/1/31

APPENDIX C – SEARCH STRINGS FOR IDENTIFYING CONDITION-SPECIFIC MEASURES

Table C-1: Condition-Specific Search Strings

Condition	Search Phrase	Preliminary Result	Final Result
Behavioral health	abuse, addict, ADHD, alcohol, Alzheimer, amphetamine, anger, antabuse, anorex, anxiety, attent, autism, behav, being, bipolar, borderline, brain, buprenorphine, cognitive, compuls, cope, criminal, defian, dementia, depress, disorder, drug use, emotion, esteem, etoh, fear, fentanyl, flumazenil, grief, habit, harm, harsh, hash, hostility, hyperactivity, illicit, impulsivity, inattention, isolation, mania, manipula, marijuana, mental, metha, mood, moud, narkan, naloxone, nervous, obsess, opiate, opioid, overdose, paranoia, poverty, psycho, PTSD, recreation, sad, schizo, smoke, spirit, stimulat, stress, substance, suicid, syndrome, THC, tobacco, trauma, vape, vaping, withdrawal	133	58
Diabetes	A1c, amputation, blindness, blood glucose, blood sugar, blurred vision, coma, diabet, diet, fatigue, finger stick, foot care, foot ulcers, gestational, glucose, glycated hemoglobin, HbA1c, hemoglobin A1C, hunger, hyperglycemia, hypoglycemia, insulin, ketoacidosis, ketones, kidney failure, mellitus, metabolic disorders, metformin, neuropathy, nutrition, organ failure, polydipsia, polyuria, prediabetes, retinopathy, sores, thirst, type 1, type 2, urination, weight	63	19
HIV/AIDS	access, acquired immunodeficiency virus (AIDS), acute infection, acute phase, adherence, antibody test, antigen/antibody test, antiretroviral therapy (ART), asymptomatic, body fluids, care continuum, CD4, chronic infection, condom, cryptococcal meningitis, diagnosis, drug resistance, education, exposure, harm reduction, high risk, human immunodeficiency virus (HIV), immune system, infected blood, injection drug use, injection equipment, Kaposi's sarcoma, needle, nucleic acid test (NAT), opportunistic infections, PWH, perinatal transmission, Pneumocystis pneumonia, PEP, PrEP, prevention, protection, rapid test, retention, self-testing, sex, sexually transmitted disease (STD), stages, status, substance use, superinfection, syringe, transmission, viral, virus, Western blot, window period	142	34
Hypertension	aneurysm, angina, angiotensin, apoptosis, ARB, atherosclerosis, blocker, blood, BP, calcium, cardiomyopathy, cardiovascular, circulat, coronary, CVD, DBP, detection, diastolic, diure, edema, elevate, essential, fibri, force, heart, htn, hypertensi, idiopathic, inhibitor, intracranial, ischem, lisinopril, masked, myocardial, mmHg, mm Hg, peripheral artery disease, potassium, portal, primary, proteinuria, pulmonary, retinopathy, SBP, sodium, sphygmomanometer, stenosis, systolic, "silent killer," tensin, thrombo, vascular, venous, white coat	142	5
Kidney disease	anemia, catheter, CKD, creatinine, dialysate, dialysis, dialyzate, diuretic, electrolyte, epoetin, erythropoiesis, ESA, excessive urination, fatigue, filter, fistula, fluid, GFR, glomerular, graft, hemodialysis, hemofiltration, home dialysis, kidney, nephrology, peritoneal, polyuria, potassium, renal failure, renal replacement therapy, ripen, rrt, solute, spKT/v, swell, transfusions, transplant, tubular necrosis, ultrafiltration, urea, volume, weight	77	14

Condition	Search Phrase	Preliminary Result	Final Result
Maternal/ Women's health	abortion, antenatal care, anxiety, arthritis, autoimmune diseases, bacterial vaginosis, blood pressure, birth control, bone density, breast exam, breast cancer, breastfeed, cardiovascular disease, cervical, cesarean, childbirth, colorectal cancer, contracept, COPD, coronary conditions, depression, diabetes, disability, dysmenorrhea, eating disorders, education, emotional violence, endometrial cancer, endometriosis, family planning, fatigue, fibroids, fitness, gender discrimination, gynecol, hormone replacement, heart disease, HIV/AIDS, hot flashes, human papillomavirus (HPV), HPV vaccine, hypertension, hysterectomy, incontinence, infertility, intimate partner violence (IPV), lupus, mammogra, maternal injury, melanoma, menopause, menstrual cycle, midwife, miscarriage, misdiagnosis, mortality, nutrition, obesity, obstetric, osteoporosis, ovarian cancer, osteoporosis, ovulation, pain, pelvic exam, pelvic organ prolapse, physical violence, polycystic ovary syndrome (PCOS), post-delivery, postnatal, poverty, preeclampsia, pregnan, premenstrual syndrome, prenatal, puerperium, reproduct, RhoGAM, sleep disturbances, smok, stillbirth, SUD, vaginal birth after cesarean (VBAC), vaginal cancer, vaginal yeast infection, wellness	254	38

APPENDIX D – MEASURE SCAN RESULTS

Please refer to the Excel workbook by the same name.

APPENDIX E – MEASUREMENT GAPS

The team assigned measure subtopics for each clinical area to relevant CMS health care quality domains and grouped them under broader topics for context when possible. These categorizations are subject to change with ongoing development of the Meaningful Measures framework.

Behavioral Health (n = 29)

Behavioral Health

Mental health disorders

- Bipolar – tobacco/nicotine use
- Emergency department utilization – mental health disorder
- Patient experience with psychiatric care
- Schizophrenia – diagnostic accuracy
- Schizophrenia – tobacco/nicotine use

Opioid use disorders (OUDs)

- Emergency department – initiation of medications for opioid use disorder (MOUD)
- Emergency department utilization – OUD
- Non-opiate pain management
- Opioid use disorder – comorbidities
- Opioid use disorder – criminal justice
- Opioid use disorder – follow-up
- Opioid use disorder – multiple provider prescribing
- Opioid use disorder – polypharmacy
- Opioid use disorder – recovery
- Opioid use disorder – referral to treatment
- Opioid use disorder – screening

- Opioid use disorder – shared decision-making
- Opioid use disorder – smoking cessation
- Opioid use disorder – tapering
- Opioid use disorder – vulnerable populations
- Overdose management follow-up
- Pain – referral to alternative treatment
- Pain – treatment plan
- Referral to community resources (i.e., access to harm reduction strategies for persons with OUD [needles/syringes, naloxone, fentanyl test strips, overdose prevention sites])

Substance use disorders

- Cultural recognition/stigma in substance use disorder
- Emergency department utilization – substance use disorder
- Relapse and relapse prevention
- Substance use disorder – referral to treatment

Suicide prevention

- Suicide – Internet-based cognitive behavioral therapy

Diabetes (n = 3)

Chronic Conditions

Adherence to evidence

- Management of prediabetes

Person-Centered Care

Patient engagement

- Patient activation

Wellness and Prevention

Diet and exercise

- Diabetes-specific nutrition/lifestyle education

HIV/AIDS (n = 10)

Chronic Conditions

Disease-specific outcomes

- HIV medication adherence

Seamless Care Coordination

Transitions of care

- Referral to community-based HIV testing
- Referral to community-based services

Wellness and Prevention

Prevention guidelines adherence

- Pre-exposure prophylaxis (PrEP) adherence
- PrEP initiation
- PrEP use in high-risk individuals

Public health

- Access to self-testing
- HIV testing through pregnancy
- Population-based HIV screening
- Testing for at-risk populations

Hypertension (n = 0)

No measurement gaps were identified from peer-reviewed and grey literature.

Kidney Disease (n = 21)

Chronic Conditions

Adherence to evidence

- Medication management in acute kidney injury

Disease-specific outcomes

- Post-kidney transplant outcomes – rejection

Equity

Equitable care

- Provider cultural competency with transplant patients

Health literacy

- Diagnosis comprehension

Person-Centered Care

Functional outcomes

- Patient-reported outcome measure (PROM) – care goal achievement
- PROM – cramping and swelling – ESRD patients
- PROM – home dialysis
- PROM – kidney disease
- Quality of life in end stage renal disease (ESRD) patients

Patient engagement

- Acute hemodialysis education
- Education for peritoneal dialysis
- Home hemodialysis education
- Patient activation
- Planning for disease progression
- Team coalition for kidney transplant education
- Vascular access shared decision-making

Patient experience

- Non-pharmacologic pain management

Safety

Medication error

- Inappropriate prescribing in patients with acute kidney injury

Workforce safety

- Dialysis center staffing

Seamless Care Coordination

Transitions of care

- Care delivered at various stages in chronic kidney disease

Wellness and Prevention

Diet and exercise

- Kidney-specific nutrition/lifestyle education

Women's Health and Maternal Care (n = 26)

Behavioral Health

Mental health disorders

- Disordered eating
- Postpartum depression
- Prenatal mental health

Chronic Conditions

Adherence to evidence

- Endometriosis
- Fibroids
- Hysterectomy – minimally invasive

Equity

Identification and mitigation of social risk factors

- Maternal care experience for vulnerable populations (e.g., racism, discrimination, unequal treatment, and implicit bias)
- Referral to community-based services (social support)

Person-Centered Care

Patient experience

- Pain control during labor
- Patient experience – alternative labor/birth settings

Safety

Safety for special populations

- Burden of caregiving
- Cesarean section – decision to incision
- Continuous prenatal care
- Interpregnancy interval
- Intimate partner violence
- Maternal morbidity
- Maternal mortality
- *Morbidity postpartum*
- Mortality postpartum
- Preeclampsia
- Screening for pregnancy

Wellness and Prevention

Contraceptive care

- Family planning for interconception care

Diet and exercise

- Monitoring weight gain
- Nutrition education for pregnancy and preconception

Prevention guidelines adherence

- HIV testing in pregnancy

Well-being

- Screening for sleep disturbances
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