



CMS Quality Measure Development Plan

2020 Population Health Environmental Scan and Gap Analysis Report

For the Quality Payment Program





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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 *CMS Quality Measure Development Plan*¹ and the transition to the Merit-based Incentive Payment System (MIPS) for eligible clinicians and Alternative Payment Models (APMs). The scan was designed to inform development of MIPS Value Pathways (MVPs), a future state of MIPS that CMS envisions to include a foundation of measures focused on population health and calculated from administrative claims to limit clinician burden. The global coronavirus disease pandemic (COVID-19) has highlighted the importance of population health priorities and the need to identify where to focus improvement efforts, to measure and improve population health outcomes. This work identifies topics of quality measures needed to assess and improve population health outcomes across the United States.

The following are key components of the report:

- **Conceptual framework:** The scan was organized by six topics of population health: access, clinical outcomes, coordination of care and community services, health behaviors, preventive care and screening, and utilization of health services.
- **Health care quality gaps:** Important gaps were identified through federal rules, national reports, and peer-reviewed literature and classified into subtopics (e.g., telehealth).
- **Existing measures:** Existing measures were comprehensively identified through online databases, federal programs, health care systems, and measure stewards.
- **Opportunities for adoption or adaptation of existing measures:** Measures were evaluated for potential adoption or adaptation (i.e., specifying an existing measure from another level of analysis).

Main Findings

Opportunities for Population Health Measure Adoption

- 248 existing population health measures—103 specified for clinicians—were mapped to the conceptual framework for this environmental scan and gap analysis.
- 1 measure—*Follow-Up After Hospitalization for Mental Illness (FUH)* (MIPS#391/NQF #0576)—may be suitable for adoption for MVPs using administrative claims data.ⁱ
- The remaining clinician measures require data unavailable through administrative claims.

Opportunities for Population Health Measure Adaptation

- 14 of 35 clinician measure gaps could potentially be filled by adapting existing measures used in other settings:
 - **Access to care:** Foreign language interpretive services; health insurance coverage – child; *telehealth
 - **Clinical outcomes:** Mortality—cancer; mortality—maternal; poor birth outcomes; well-being
 - **Coordination of care and community services:** Community collaboration; *housing; *identification of community services; support for opioid use disorder

ⁱ Quality measures calculated through administrative claims require no additional reporting effort by the clinician; those reported through Medicare Part B Claims in MIPS require one or more Quality Data Codes to be added to the claim.

- **Health behaviors:** Smoking
- **Preventive care and screening:** Cancer screening – prostate
- **Utilization of health services:** Emergency department use – inappropriate

Opportunities for de Novo Population Health Measure Development

- The remaining 21 of 35 clinician-level measure gaps would require *de novo* measure development:
 - **Access to care:** *Availability – rural; nutritional support for older adults
 - **Clinical outcomes:** Interpregnancy interval; morbidity – opioid-related; mortality – opioid related; mortality – premature; postpartum complications
 - **Coordination of care and community services:** Breastfeeding support; *employment; integration of mental health, substance use, and physical health; social support for older adults; timely transition in care – substance use disorder; *transitions in care – rural
 - **Health behaviors:** Accident prevention – head injury; accident prevention – seat belt; distracted driving; health literacy; safe medication disposal
 - **Preventive care and screening:** Abuse and neglect; cancer screening – thoracic; caregiver risk assessment
 - **Utilization of health services:** No subtopics were identified as gaps across all levels of analysis.

*Subject matter experts identified these 6 clinician-level subtopic gaps as relevant aspects of population health during the COVID-19 public health emergency.

CHAPTER 1. INTRODUCTION

The Medicare Access and Children’s Health Insurance Program (CHIP) Reauthorization Act of 2015 (MACRA) established the Merit-based Incentive Payment System (MIPS)³ and Advanced Alternative Payment Models (APMs),⁴ new payment and delivery models that prioritize the patient voice, patient outcomes, and cost-effective care. The two participation tracks, collectively known as the Quality Payment Program, aim to improve beneficiary population health, lower costs, advance the use of health care information, and provide actionable performance data to clinicians, patients, and other stakeholders.

CMS contracted with HSAG to develop and maintain the CMS Quality Measure Development Plan (MDP)¹ for the Quality Payment Program according to the requirements of section 102 of MACRA. The MDP highlights known measurement and performance gaps and recommends an approach to close those gaps through the development, adoption, and refinement of quality measures. Section 102 of MACRA also requires annual reports on measure development and the status of clinician-level measure priorities and gaps highlighted in the MDP, as well as newly identified gaps.

As part of this work, HSAG conducts environmental scans and gap analyses to assess the landscape of clinician quality measures and determine priorities for measure development funded by MACRA.^{5,6}

The CY 2020 Medicare Physician Fee Schedule final rule conceived a new direction for the Quality Payment Program that will streamline reporting requirements, align MIPS performance categories, and increase the ability to compare clinician performance. CMS will further define MIPS Value Pathways (MVPs) in future rulemaking cycles.^{7(p. 62946)} CMS envisions a common foundation of population health and promoting interoperability measures for each MVP, broadly applicable to most, if not all clinicians. Use of administrative claims as the data source for population health measures will require no additional reporting effort by clinicians.^{7(p. 62955)}

To align with this vision of the future state of MIPS, the *2020 MDP Environmental Scan and Gap Analysis Report* focuses on population health measures to support the establishment of a foundation for the MVPs. Given the paucity of administrative claims-based measures at the clinician level, the HSAG project team (“the team”) scanned available population health measures, including those used in federal quality programs, at five levels of analysisⁱⁱ to inform the development of population health quality measures applicable to MIPS eligible clinicians.

ⁱⁱ Levels of analysis include clinician/clinician group, facility, health care plan, integrated delivery system, and population.⁸

CHAPTER 2. DEFINING POPULATION HEALTH

The 2018–2019 MDP TEP prioritized the development of crosscutting quality measures and recommended greater alignment of MIPS reporting requirements across performance categories to ease reporting burden. These recommendations are captured in the *2018 CMS Quality Measure Development Plan Environmental Scan and Gap Analysis Report*⁶ and two workgroup meeting summaries.^{9,10}

The scope of this scan and gap analysis addresses both the TEP’s endorsement of broadly applicable clinician measures and CMS goals expressed in the Meaningful Measures framework.¹¹ By examining population health measures from which an MVP foundation could be constructed, the *2020 MDP Environmental Scan and Gap Analysis Report* supports CMS efforts to collect meaningful data from MIPS clinicians nationwide while streamlining reporting requirements.

A targeted review of peer-reviewed journals and National Quality Forum (NQF) reports contributed to definitions of population health and population health measures¹²⁻¹⁸ (Table 2-1), which CMS confirmed for use in this report.^{iv} Chapter 4 further explains the six topics included in the population health measure definition. Sources such as the Institute for Healthcare Improvement’s *Well-Being in the Nation Measure Framework* supplied examples of health outcomes, health conditions and

Table 2-1. Terms Used in the Environmental Scan and Gap Analysis

Term	Operational Definition
Population health	Health behaviors and outcomes of a broad group of individuals, including the distribution of such outcomes affected by the contextual factors within the group
Population health measure	Broadly applicable indicator that reflects the quality of a group’s overall health and well-being. Topics include access to care, clinical outcomes, coordination of care and community services, health behaviors, preventive care and screening and utilization of health services ⁱⁱⁱ
Topic	Broad area of care that represents critical aspects of population health (e.g., access to care)
Subtopic	Structure, process, or outcome of care described in more detail within a topic area (e.g., telehealth)
Measure	Specified mechanism for assessing observations, treatment, processes, experiences, and/or outcomes. Assesses the degree the provider competently and safely delivers appropriate clinical services to the patient in an optimal time frame
Level of analysis	Performance level at which quality measure results are assessed (e.g. clinician, health plan)
Adoption	Selection of a measure for use in a reporting program at the same level of analysis as that originally specified; requires only minimal modifications for implementation
Adaptation	Selection and modification of a measure to allow implementation other than that originally specified (e.g., re-specifying a facility measure for clinician-level reporting or a chart-abstracted measure as an electronic clinical quality measure [eCQM])
De novo measure development	Development of a new measure

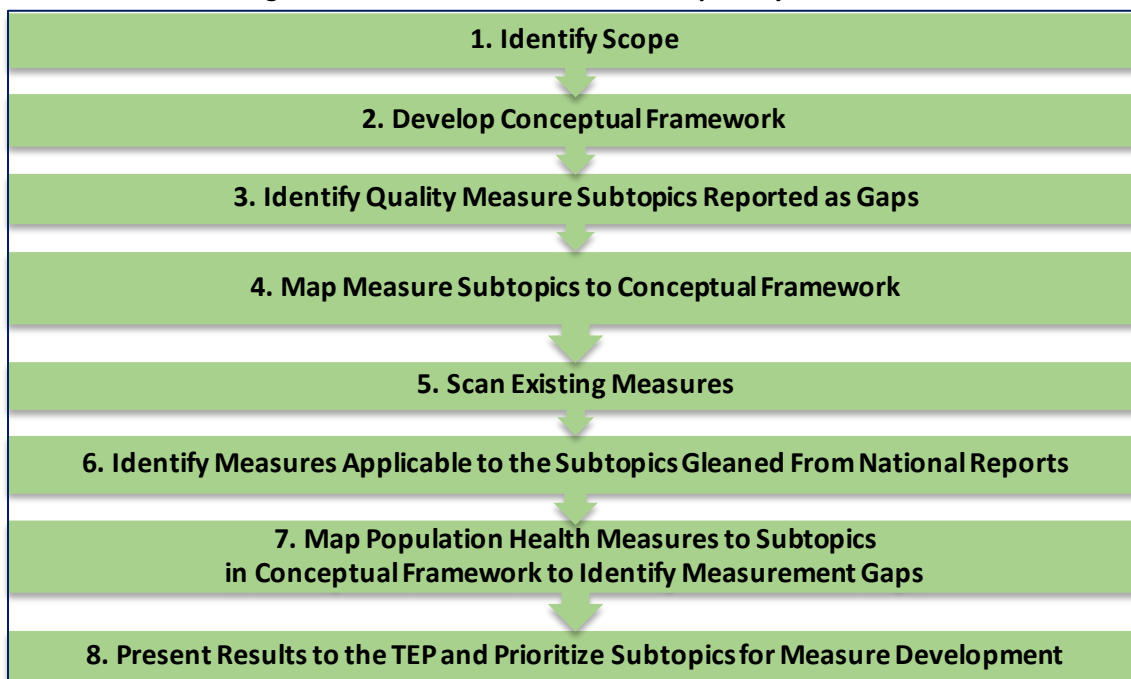
ⁱⁱⁱ After completion of this report, the CY 2022 Physician Fee Schedule proposed rule published an updated Population Health Measure definition: “A quality measure that indicates the quality of a population or cohort’s overall health and well-being, such as, access to care, clinical outcomes, coordination of care and community services, health behaviors, preventive care and screening, health equity, or utilization of health services.”

^{iv} Quality Measurement & Value-Based Incentives Group (QMVG) Leadership

CHAPTER 3. APPROACH

The *Blueprint for the CMS Measures Management System Version 15.0*²⁰ guided the approach to this environmental scan and gap analysis (Figure 3-1). The Blueprint outlines standardized processes in clinical quality measure development efforts that all CMS contractors follow.

Figure 3-1: Environmental Scan and Gap Analysis Process



1. **Identify scope.** Population health measures are the focus.
2. **Develop a conceptual framework.** A matrix was created to incorporate the population health definition and its six topics.
3. **Identify quality measure subtopics reported as gaps.** Appendix A lists the key sources used to identify high-interest subtopics.
4. **Map measure subtopic gaps to the conceptual framework.** Appendix B lists the subtopic results mapped to the conceptual framework.
5. **Scan existing measures.** Appendices C and D list the measure sources scanned.
6. **Identify measures applicable to the subtopics gleaned from key national reports.** Keyword searches using three to five search terms were performed for each subtopic. Assessments and reconciled issues were discussed and consensus was reached.
7. **Map population health measures to subtopics in the conceptual framework to identify measurement gaps.** Appendix E lists the populated conceptual framework with a count of measures and gaps (0) for each subtopic at the clinician level.
8. **Present results to the TEP.** Recommendations to prioritize the population health subtopic gaps identified in the scan can be found in the *CMS MDP Technical Expert Panel Meeting Summary*.²

CHAPTER 4. CONCEPTUAL FRAMEWORK

Development of the Conceptual Framework

The team developed a conceptual framework to aid in the organization and identification of population health measurement gaps. The framework consists of tables representing six topics derived from the operational definition of population health measures: access to care; clinical outcomes; coordination of care and community services; health behaviors; preventive care and screening; utilization of health services.

The first column of each table lists measure subtopics that the scan found to be associated with the topic. The second column identifies whether a measure was mapped to the clinician/clinician group level of analysis. The remaining headers specify the level of analysis, indicating whether a measure examines the performance of an accountable entity (i.e., clinician/clinical group, facility, health plan, integrated delivery system) or results for a whole population. The clinician/clinician group level of analysis is the primary focus of this report; however, CMS could adapt measures at other levels of analysis for use at the clinician level.

Identification and Mapping of Quality Measure Subtopic Gaps

To identify high-interest measure subtopic gaps appropriate to include under the population health measure topics, the team reviewed a range of key sources published from January 1, 2018, to December 31, 2019,^{iv} including 63 national reports related to measure development and evaluation; seven reports from the Measure & Instrument Development and Support (MIDS) Resource Library; nine *Federal Register* rules, including the CY 2020 Physician Fee Schedule final rule; the 2019 MDP Annual Report²¹; and relevant peer-reviewed publications (Appendix A).

Source material was divided among four members of the team with expertise in quality measures for initial abstraction of population health subtopics, which the team then reviewed to reach consensus on applicability of the identified subtopic gaps. The team reconciled wording of equivalent subtopics identified across sources to ensure consistency and avoid duplication. For example, the subtopic “Medication Reconciliation” includes the *safe use* of medications, so that element was removed from another subtopic, “Safe Medication Use and Disposal.”

The team review of key sources identified 58 measure subtopics applicable to the six population health measure topics, which populate the conceptual framework tables and are discussed further in *Gap Analysis* (Chapter 6).

^{iv} Given the breadth in scope of the search for quality measure subtopics to capture population health measure gaps across programs and specialties, sources were limited to this two-year period.

CHAPTER 5. SCAN OF EXISTING MEASURES

Search Strategy

The team conducted an environmental scan of quality measure databases and measures in use by CMS quality programs, other federal agencies, health care systems, and measure steward organizations to identify quality measures that could fill gaps in the conceptual framework of population health topics and subtopics.

NQF Quality Positioning System (QPS)/NQF website – The team searched the NQF QPS database⁸ by selecting endorsement status “Endorsed” and “eMeasures Approved for Trial Use” and reviewed the NQF website²² for other projects related to clinician quality measures.

CMS Measures Inventory Tool – The CMS Measures Inventory Tool (CMIT) is an interactive repository of measures used by CMS in various quality, reporting, and payment programs.²³ The team searched the CMIT by selecting “Measure Status by Program,” “Finalized,” and “Merit-based Incentive Payment System (MIPS) Program.” The results were a subset of those identified in the Quality Payment Program Resource Library and are attributed to that source in this report.

CMS quality programs – The team identified 25 quality programs in use by CMS (Appendix C). The team reviewed nine final rules published in the *Federal Register* in CY 2019,^{7,24-31} including the CY 2020 Physician Fee Schedule final rule⁷; 2020 Qualified Clinical Data Registry (QCDR) Measure Specifications³²; call letters published on CMS.gov³³⁻³⁵; and program-specific CMS web pages.^{36,37}

Ten federal agencies/offices were contacted for assistance, and the six indicated by an asterisk provided a list of measures they use. The CMS Innovation Center and SAMHSA were unable to provide the requested information prior to report development. OMH and ASPE indicated the request was not applicable to them.

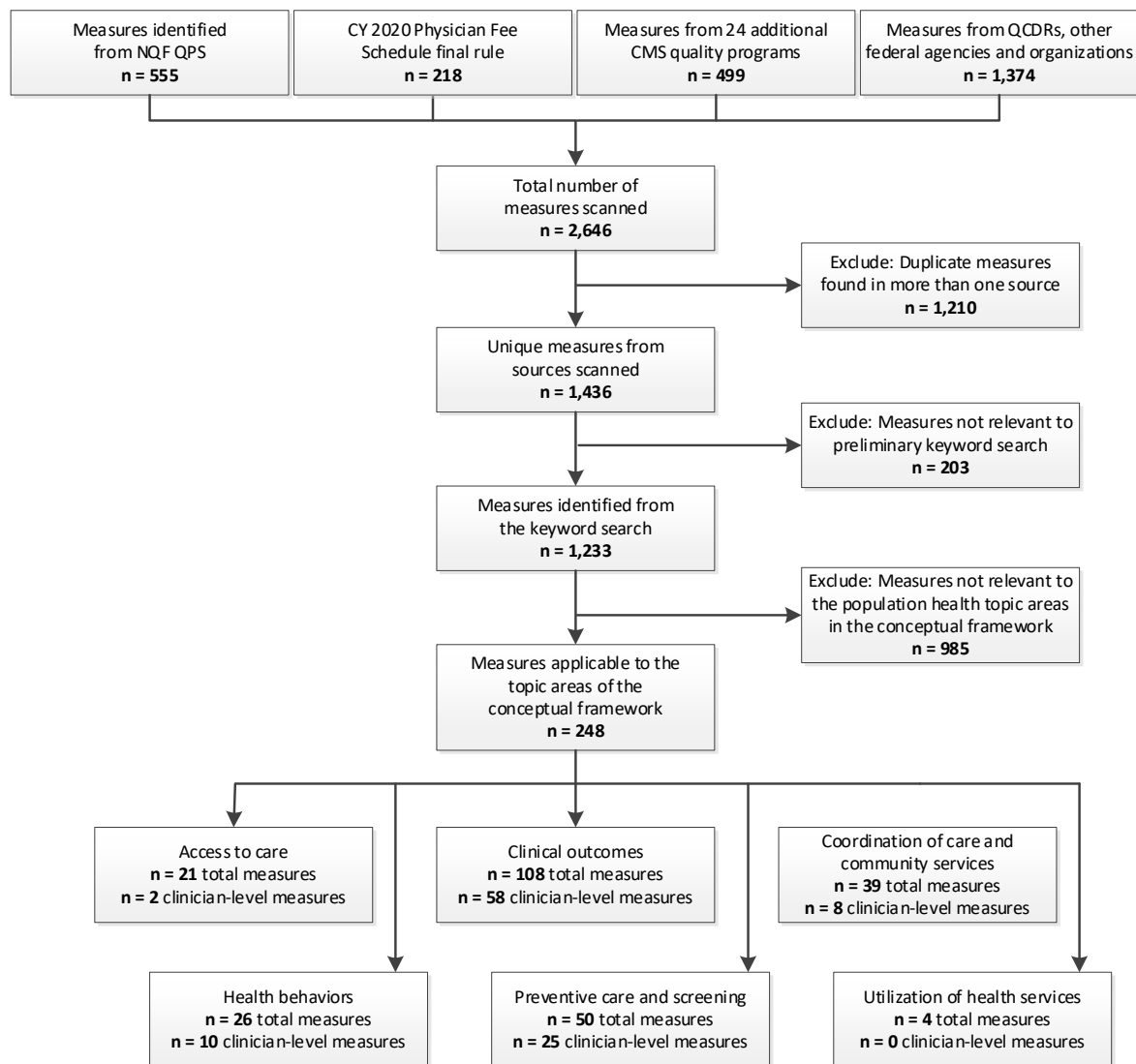
- *Agency for Healthcare Research & Quality (AHRQ)
- *Centers for Disease Control and Prevention (CDC)
Center for Medicare & Medicaid Innovation (CMS Innovation Center)
- *Defense Health Agency (DHA)
- *Health Resources and Services Administration (HRSA)
- *Indian Health Service (IHS)
Office of Minority Health (OMH)
Office of the Assistant Secretary for Planning and Evaluation (ASPE)
Substance Abuse and Mental Health Services Administration (SAMHSA)
- *Veterans Health Administration (VHA)

The team visited the websites of professional/medical societies, state or regional health care systems, and public or private organizations that are measure stewards with one or more NQF-endorsed measures (Appendix D). The search used terms such as “quality measurement” and “performance measurement.” The team also added measure information from the 2019 Healthcare Effectiveness Data and Information Set[®] (HEDIS[®]) manual for consideration.

Inclusion Criteria

The search (Figure 5-1) targeted measures that were fully developed with accessible information, including measure description, numerator, denominator, and steward/developer. All results were exported to a spreadsheet for analysis.

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



Measure Scan Results

In total, 2,646 measures were located by scanning the identified sources and applying the search strategy inclusion criteria. Excluding duplicates—identical measures located in more than one source—reduced the count to 1,436. The team used keywords to search those measure titles and descriptions for every subtopic in the conceptual framework; further exclusions yielded 1,233 unique measures. A measure-by-measure review was conducted on those results to confirm applicability to the conceptual framework. A majority of results from the keyword scan were identified as artifacts (n = 983), meaning they did not meet the intent of the subtopics.

Figure 5-1 illustrates the search strategy by which 248 measures were identified as applicable to the population health measure topics: access to care (21), clinical outcomes (108), coordination of care and community services (39), health behaviors (26), preventive care and screening (50), and utilization of health services (four). Appendix B contains the subtopics, along with search terms and results; Appendix E lists all 248 measures applicable to the conceptual framework.

CHAPTER 6. GAP ANALYSIS

Method

To assess population health measurement gaps, the team mapped 248 measures identified in the environmental scan to the conceptual framework. The team reviewed titles and descriptions to match each measure to the appropriate measure topic and subtopic. This exercise identified clinician-level measures not yet included in the Quality Payment Program—candidates to adapt or adopt for MVPs—as well as measure subtopics not addressed by existing quality measures. Population health measures for other levels of analysis could inform measure development or adaptation at the clinician level.

Results

Across the six conceptual framework tables—one for each topic—103 unique measures addressed 23 of 58 clinician-level subtopics, while 35 subtopics (60%) remained clinician-level gaps (each designated by a red 0 in Tables 6-1 through 6-6). Subject matter experts identified six subtopic gaps as particularly relevant to the management of population health during the global pandemic: employment; housing; identification of community services; rural health care availability; rural transitions in care; and telehealth.

MIPS measures representing five of the six topics and 14 subtopics are presented in *Population Health Measures Used in MIPS*, page 17. One measure, *Follow-Up After Hospitalization for Mental Illness (FUH)* (MIPS #391/ NQF #0576), is reportable using administrative claims and thus a candidate for the MVP foundational framework. Further review and analysis of measure specifications would be needed to confirm its suitability for inclusion. Qualified clinical data registry (QCDR) and other measures are also included in the clinician-level measure counts.

Candidates for adaptation may be found among the 57 measures mapped to the conceptual framework across 14 measure subtopics but specified at levels of analysis other than clinician. Twenty-one remaining subtopics were confirmed as gaps across all levels of analysis. If any of these subtopics were deemed priorities for population health, *de novo* measure development would be needed.

Population Health Conceptual Framework

Table 6-1: Access to Care Subtopics (n = 7) and Measure Counts by Level of Analysis

Subtopic	Clinician/ Clinician Group	Facility	Health Plan	Integrated System	Population
Availability – general	1 (1 MIPS)	1	5	1	
Availability – rural	0				
Behavioral health – access	1 (1 MIPS)		4	1	3
Foreign language interpretive services	0		3		
Health insurance coverage – child	0		3		
Nutritional support for older adults	0				
Telehealth	0	1			
Total Measures*	2	2	15	2	3

* Some measures apply to more than one level of analysis; 21 unique measures were identified.

Table 6-2: Clinical Outcomes Subtopics (n = 14) and Measure Counts by Level of Analysis

Subtopic	Clinician/ Clinician Group	Facility	Health Plan	Integrated System	Population
Behavioral health – remission	6 (1 MIPS, 2 QCDR, 3 other)	4	2		
Cesarean birth	1 (1 MIPS)	1			
Function	37 (11 MIPS, 23 QCDR, 3 other)	28		1	
Interpregnancy interval	0				
Morbidity – opioid-related	0				
Mortality – cancer	0	1			3
Mortality – maternal	0				1
Mortality – opioid-related	0				
Mortality – premature	0				
Poor birth outcomes	0	5			15
Postpartum complications	0				
Quality of life	13 (1 MIPS, 12 QCDR)				
Recovery	1 (1 QCDR)				
Well-being	0		1		
*Total Measures	58	39	3	1	19

*Some measures apply to more than one level of analysis; 108 unique measures were identified.

Table 6-3: Coordination of Care and Community Services Subtopics (n = 13) and Measure Counts by Level of Analysis

Subtopic	Clinician/ Clinician Group	Facility	Health Plan	Integrated System	Population
Breastfeeding support	0				
Community collaboration	0	6	7		8
Employment	0				
Housing	0	1			
Identification of community services	0		1		1
Integration of mental health, substance use, and physical health	0				
Pain management (non-narcotic)	2 (2 QCDR)				
Referral to community services	2 (1 MIPS, 1 other)	3		1	
Social support for older adults	0				
Support for OUD	0				3
Timely transition in care – SUD	0				
Transitions in care – general	4 (3 QCDR, 1 other)	9	2	2	1
Transitions in care – rural	0				
*Total Measures	8	19	10	3	13

*Some measures apply to more than one level of analysis; 39 unique measures were identified

Table 6-4: Health Behaviors Subtopics (n = 9) and Measure Counts by Level of Analysis

Subtopic	Clinician/ Clinician Group	Facility	Health Plan	Integrated System	Population
Accident prevention – head injury	0				
Accident prevention – seat belt	0				
Distracted driving	0				
Health literacy	0				
Nutrition/malnutrition	7 (1 MIPS, 6 QCDR)	2	1	1	
Obesity	1 (1 MIPS)	2	3		3
Physical activity – older adults	2 (1 MIPS, 1 QCDR)	2	3	2	1
Safe medication disposal	0				
Smoking	0				1
*Total Measures	10	6	7	3	5

* Some measures apply to more than one level of analysis; 26 unique measures were identified.

Table 6-5: Preventive Care and Screening Subtopics (n = 14) and Measure Counts by Level of Analysis

Subtopic	Clinician/ Clinician Group	Facility	Health Plan	Integrated System	Population
Abuse and neglect	0				
Behavioral health – screening	8 (5 MIPS, 3 QCDR)	1	1		
Cancer screening – prostate	0		1		
Cancer screening – thoracic	0				
Caregiver risk assessment	0				
Comprehensive substance use disorder screening	1 (1 other)				
Family planning for interconception care	1 (1 MIPS)	2	4	1	3
Medication reconciliation	2 (1 QCDR, 1 other)	6	4	2	
Prescription to prevent mortality in patients at risk for opiate overdose	2 (2 QCDR)				
Psychosocial needs	2 (1 QCDR, 1 other)		1	1	2
Screening – alcohol	2 (1 MIPS, 1 QCDR)	1	1		
Screening – opioid abuse/misuse	2 (1 MIPS, 1 QCDR)	1			
Screening – substance use for at-risk populations	2 (1 MIPS, 1 other)	2	2		
Screening – tobacco	3 (2 MIPS, 1 QCDR)	1			
*Total Measures	25	14	14	4	5

* Some measures apply to more than one level of analysis; 50 unique measures were identified.

Table 6-6. Utilization of Health Services Subtopics (n = 1) and Measure Counts by Level of Analysis

Subtopic	Clinician/ Clinician Group	Facility	Health Plan	Integrated System	Population
Emergency department use – inappropriate	0	2	1	1	
Total Measures	0	2	1	1	

Population Health Measures Used in MIPS (Clinician/Clinician Group Level)

Access to Care

Availability – general

- CAHPS® for MIPS Clinician/Group Survey

Behavioral health – access

- Follow-Up After Hospitalization for Mental Illness (FUH)

Clinical Outcomes

Behavioral health – remission

- Depression Remission at Twelve Months
- Cesarean birth: maternity care
- Elective Delivery or Early Induction Without Medical Indication at < 39 Weeks (overuse)
- Function
- Cataracts: Improvement in Patient's Visual Function within 90 Days Following Cataract Surgery
- Functional Status After Lumbar Discectomy/Laminectomy
- Functional Status After Lumbar Fusion
- Functional Status After Primary Total Knee Replacement
- Functional Status Change for Patients with Elbow, Wrist or Hand Impairments

- Functional Status Change for Patients with Hip Impairments
- Functional Status Change for Patients with Knee Impairments
- Functional Status Change for Patients with Low Back Impairments
- Functional Status Change for Patients with Lower Leg, Foot or Ankle Impairments
- Functional Status Change for Patients with Neck Impairments
- Functional Status Change for Patients with Shoulder Impairments

Quality of life

- Quality of Life Assessment For Patients With Primary Headache Disorders

Coordination of Care and Community Services

Referral to community services

- Cardiac Rehabilitation Patient Referral from an Outpatient Setting

Health Behaviors

Nutrition/malnutrition

- Weight Assessment and Counseling for Nutrition and Physical Activity for Children and Adolescents

Obesity

- Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up Plan

Physical activity – older adults

- Parkinson's Disease: Rehabilitative Therapy Options

Preventive Care and Screening

Behavioral health – screening

- Adult Major Depressive Disorder (MDD): Suicide Risk Assessment (eCQM)
- Child and Adolescent Major Depressive Disorder (MDD): Suicide Risk Assessment
- Dementia Associated Behavioral and Psychiatric Symptoms Screening and Management
- Parkinson's Disease: Psychiatric Symptoms Assessment for Patients with Parkinson's Disease
- Preventive Care and Screening: Screening for Depression and Follow-Up Plan

Family planning for interconception care

- Maternity Care: Post-Partum Follow-Up and Care Coordination

Screening – alcohol

- Preventive Care and Screening: Unhealthy Alcohol Use: Screening & Brief Counseling

Screening – opioid misuse/abuse

- Evaluation or Interview for Risk of Opioid Misuse

Screening – substance use for at-risk populations

- Opioid Therapy Follow-up Evaluation
- Tobacco Use and Help with Quitting Among Adolescents

Screening – tobacco

- Anesthesiology Smoking Abstinence
- Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention

CHAPTER 7. LIMITATIONS AND ACTIONS TO CONSIDER

This environmental scan and gap analysis were comprehensive relative to the population health measure topics and subtopics included in the conceptual framework; however, the following limitations are noted.

- The conceptual framework includes population health measures that address subtopic gaps identified through the key sources listed in Table 4-2. Sufficient quality measures exist in some notable areas of population health (e.g., colorectal and mammography screenings, influenza immunizations) and therefore, those subtopics and measures are not represented in the conceptual framework because they are not considered gaps.
- Not all measures scanned indicated the level of analysis for which they were designed. If a measure is implemented in a CMS program, it is assumed that the measure is applicable at that program's level of analysis.
- Removal of duplicate measures during the scan of measures depended on publicly available measure information sources, which may be missing or inaccurate. This limitation may lead to an overestimation of measures.
- Given the inclusion of QCDR measures in the environmental scan, certain measurement gaps identified in the conceptual frameworks may be underestimated. Because many QCDRs require a subscription to access the measures, these measures may not be available to all clinicians.

CHAPTER 8. CONCLUSION

Since the *CMS Quality Measure Development Plan*¹ was established as a strategic framework to develop clinician quality measures to support MIPS and Advanced APMs (together known as the Quality Payment Program), high-priority areas have been identified in the 2017 and 2018 *MDP Environmental Scan and Gap Analysis Reports*^{5,6} and measurement gaps have been tracked in the 2017, 2018, and 2019 *MDP Annual Reports*.^{21,38,39} To aid CMS's transition to the MIPS Value Pathways participation framework,^{7(p. 62945)} this report assessed the landscape of population health measures to support the development of a common foundation of population health measures applicable to all MIPS eligible clinicians. The COVID-19 global pandemic underscores the necessity for investment and innovation in population health quality measurement.

The primary aim of this environmental scan and gap analysis was to assess the landscape of population health measures applicable to the clinician level of analysis to support the development of the MVP foundational framework. To achieve this aim, the team developed a conceptual framework based on the definition of population health measures, identified relevant measure subtopics, conducted a scan of existing measures, and mapped the measures across five levels of analysis: facility, clinician/clinician group, health plan, integrated delivery system, and population.

Of 248 measures mapped to the conceptual framework tables, 103 are clinician-level, of which one measure, *Follow-Up After Hospitalization for Mental Illness*,^v is a candidate for measure adoption for the MVP foundation. The measure is designated for claims reporting by the measure developer but is currently implemented in MIPS with a different collection type. These results substantiate a need to either adapt existing measures at other levels of analysis to the clinician level or develop *de novo* clinician-level measures to support CMS's integration of low-burden measures into the MVP foundation.

Findings show that subtopic gaps exist at the clinician level for 35 of 58 subtopics (60%). The 35 subtopic gaps were further reviewed and prioritized by the MDP TEP in the *CMS Quality MDP Technical Expert Panel Meeting Summary*.² Once these subtopics are further prioritized, they can be considered as potential measure topics for measure development. Fourteen of the 35 clinician-level subtopic gaps had measures mapped at other levels of analysis. Examining additional levels of analysis could foster adaptation of existing measures to the clinician level. Measure developers and other stakeholders can use the populated conceptual frameworks to identify such measures adaptable to clinicians or consider options for *de novo* measure development from the subtopic gaps prioritized by the MDP TEP.

Further review and analysis may reveal whether the measures found to address population health subtopics at other levels of analysis are candidates for adaptation for the MVP foundation. If so, they may represent essential building blocks for the future state of MIPS.

^v *Follow-Up After Hospitalization for Mental Illness* (FUH) (MIPS #391/NQF #0576)

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