CMS Quality Measure Development Plan

2019 Annual Report

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Center for Clinical Standards and Quality
Centers for Medicare & Medicaid Services (CMS)

CMS Quality Measure Development Plan (MDP)

2019 Annual Report

Prepared by Health Services Advisory Group, Inc.

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Note: Throughout this report, superscript Roman numerals in the text link to statutory citations and explanatory footnotes; superscript Arabic numerals cite references listed at the end of the report.

Executive Summary

The U.S. Department of Health and Human Services (HHS) and the Centers for Medicare & Medicaid Services (CMS) must report annually on the progress CMS is making in developing measures for the Quality Payment Program and implementing the *CMS Quality Measure Development Plan: Supporting the Transition to the Merit-based Incentive Payment System (MIPS) and Alternative Payment Models (APMs)*,[i,1] also known as the Measure Development Plan or MDP. This 2019 MDP Annual Report fulfills that statutory requirement.

Report Development

Building upon the methods of the 2017 and 2018 MDP Annual Reports, CMS tracked the progress of federal efforts to implement important aspects of section 102 of the Medicare Access and Children's Health Insurance Program (CHIP) Reauthorization Act of 2015 (MACRA). To assemble the required elements, CMS prepared a summary of measure development activities, calculated measure development costs for fiscal year (FY) 2018, and compiled an inventory of applicable quality measures available for 2019 reporting. A review of the 2019 inventory assessed progress in addressing gaps for clinician specialties underrepresented in the Quality Payment Program measure portfolio. Finally, the findings of the *2018 CMS MDP Environmental Scan and Gap Analysis Report*[2] and summaries of the MDP Technical Expert Panel (TEP) meetings convened by the project contractor in May 2018 and November 2018 provided additional data to guide measure development and selection. Collectively, the products of this information-gathering illustrate how CMS is partnering with patients, families, clinicians, payers, and other stakeholders to build a strong foundation for the Quality Payment Program.

Key Findings

Funding New Measure Development

- CMS awarded seven cooperative agreements totaling $26.6 million over three years to develop, improve, update, or expand quality measures for the Quality Payment Program.[3,4] CMS will collaborate with professional societies and other entities engaged in quality measure development to create measures that fill an important need or gap area.

Identifying and Developing Meaningful Measures

- CMS took steps in 2018 toward building a patient-centered portfolio of clinician measures that safeguard public health and improve patient outcomes:
  - Finalized 257 quality measures for MIPS reporting in 2019, including 169 high-priority measures representing each of the MACRA domains
  - Added four specialty-specific measure sets for a total of 39 available for 2019 reporting
  - Placed eight potential MIPS quality measures on the 2018 CMS Measures Under Consideration List, five of which are applicable to the prioritized specialties of general medicine/crosscutting, orthopedic surgery, and physical medicine and rehabilitation**.** Received conditional support for rulemaking from the Measure Applications Partnership (MAP) convened by the National Quality Forum (NQF) for four of those five measures

[i] Section 1848(s)(3) of the Social Security Act (the Act), as added by section 102 of the Medicare Access and Children's Health Insurance Program (CHIP) Reauthorization Act of 2015 (MACRA).

- Funded development on 59 measures distributed across five Health Care Quality Priority/MACRA domains[ii]
- Conducted a MIPS measure portfolio review that resulted in removal of 26 measures not aligned with the Meaningful Measures framework
- Approved 127 qualified clinical data registries (QCDRs) covering 54 clinical specialties, including 19 registries applicable to five newly prioritized specialties

Partnering With Patients, Families, and Caregivers in Measure Development

- CMS measure developers engaged with patients and caregivers throughout various stages of measure development through focus groups, interviews, online discussion forums, and technical expert panels (TEPs).
- A Person and Family Engagement Network met in town hall sessions to discuss measure concepts and ways to clearly communicate quality measure results to health care consumers.

Partnering With Clinicians and Professional Societies

- CMS measure developers collaborated with clinicians and professional societies through measure-specific workgroups, TEPs, and clinician committees.
- A second cohort of Clinician Champions convened in 2018 to review and provide feedback on the Quality Payment Program's outreach and resources. These Champions advocated for ongoing technical support for solo, rural, and small practices.

Reducing Clinician Burden of Data Collection for Quality Measure Reporting

- CMS established policies for the 2019 MIPS performance period to alleviate clinician burden and increase flexibility by allowing the use of a combination of data collection types[iii] to meet the quality performance category reporting requirement.[5(p. 60002)]

Alignment of Measures

- To streamline and harmonize measures, CMS assessed alignment potential between the Quality Payment Program portfolio and other measure sets.
- CMS conducted a wide range of outreach activities to QCDR measure developers to support alignment.

Additional HHS Efforts to Support the MDP

- The Collaborative Measure Development (CMD) Workspace and other resources were developed, based on feedback received through the eCQM Strategy Project, for measure developers, professional associations, health information technology (IT) vendors, and measure endorsers to use in collaborating on measure concepts.
- CMS transitioned to Clinical Quality Language (CQL) as the standard for expression logic within electronic clinical quality measures (eCQMs).

Measure Development Applicable to the Quality Payment Program

CMS funded work on 59 measures, which included four measures completed in 2018 and three on which development was halted. Areas of focus covered five MACRA domains specified in section 1848(s)(1)(B) of the Social Security Act (the Act), which align with Health Care Quality Priorities that CMS has established with input from stakeholders (Table 1).[iv] Combined FY 2018 expenditures for measures applicable to the Quality Payment Program were estimated at $19.9 million.

[ii] Some funding for measure development activities was obligated prior to the passage of MACRA from sources other than section 1848(s)(6) of the Act.

[iii] Data collection types include Medicare Part B claims measures, MIPS clinical quality measures, electronic clinical quality measures (eCQMs), and QCDR measures.

[iv] Health Care Quality Priorities include the MACRA domains specified in section 1848(s)(1)(B) of the Act (care coordination, clinical care, population health and prevention, safety, patient and caregiver experience), as well as affordable care.

Whereas the *2018 MDP Annual Report* provided calendar year-based expenditure estimates (specifically, for CY 2017), the expenditure estimates provided in this report are derived from the FY-based CMS budget (specifically, for FY 2018). Thus, estimates of expenditures made in the first quarter of FY 2018 (October–December 2017) are included in both the *2018 MDP Annual Report* and this report. All other information regarding measures developed and in development is presented for CY 2018.

Table 1: Summary of CMS-Funded Measures Developed or in Development in CY 2018 for the Quality Payment Program[v]

Health Care Quality Priority/MACRA Domain*	# Developed or In Development in CY 2018	# Electronically Specified[vi]
Make Care Affordable (Affordable Care)	1	0
Promote Effective Communication and Coordination of Care (Communication and Coordination)/Care Coordination	12	2
Promote Effective Prevention and Treatment of Chronic Disease (Effective Treatment)/Clinical Care	19	7
Work With Communities to Promote Best Practices of Healthy Living (Healthy Living)/ Population Health and Prevention	0	N/A
Make Care Safer by Reducing Harm Caused in the Delivery of Care (Patient Safety)/ Safety	9	4
Strengthen Person and Family Engagement as Partners in Their Care (Person and Family Engagement)/Patient and Caregiver Experience	18	11
Total	59	24

* The MACRA domains specified in section 1848(s)(1)(B) of the Act are care coordination, clinical care, population health and prevention, safety, and patient and caregiver experience. CMS Health Care Quality Priorities also include affordable care. Tables in this report use shortened titles for Health Care Quality Priorities, as indicated in parentheses.

Newly Identified Measure Gaps and Status of Previously Identified Gaps[vii]

The *2018 CMS MDP Environmental Scan and Gap Analysis Report*[2] examined five clinical specialties that were newly identified in the 2018 MDP Annual Report as having measurement gaps:

- Allergy/immunology
- Emergency medicine
- Neurology
- Physical medicine and rehabilitation
- Rheumatology

In the gap analysis report, 167 measures specific to those five specialties were identified and mapped to a Meaningful Measures-based conceptual framework composed of 182 subtopics for those five specialties. The measure mapping revealed gaps, as 76 subtopics (42%) had no existing measures. The 2018–2019 MDP TEP confirmed these 76 subtopic gaps, which are listed in Appendix D, Table D-1, by clinical specialty, Health Care Quality Priority/MACRA domain, and Meaningful Measure Area.

[v] As of December 31, 2018, to allow for federal review and clearance prior to publication of this report. Please note that this does not include measures developed or in development in CY 2018 using FY 2019 funds.
[vi] Section 1848(s)(3)(B)(ii)(V) of the Act.
[vii] Section 1848(s)(3)(B)(iv) of the Act.

The MDP TEP further examined crosscutting measure gaps derived from the 2017 and 2018 *CMS MDP Environmental Scan and Gap Analysis Reports*[2,6] and recommended 28 crosscutting subtopics across four Health Care Quality Priority/MACRA domains and eight Meaningful Measure Areas as priorities for future measure development applicable to most, if not all, eligible clinicians.

Conclusion and Future Directions

The 2019 MDP Annual Report highlights CMS efforts over the previous year to implement the MDP, which serves as a strategic framework for developing quality measures for the Quality Payment Program. The award of MACRA-funded cooperative agreements launched a three-year partnership with professional societies and other entities engaged in quality measure development to create measures that fill an important need or gap area. The MDP TEP examined gaps identified for five newly prioritized clinician specialties and recommended measure subtopics for future development for these five specialty areas, as well as crosscutting subtopics. For the 2019 performance year of MIPS, new measure sets and other high-priority measures adopted by rulemaking, together with CMS-approved QCDRs, expanded coverage for underrepresented clinician specialties.

CMS has begun applying the principles of the Meaningful Measures framework in gap analyses for the Quality Payment Program, as well as in pre-rulemaking and portfolio review. Results were evident in a focused, streamlined 2018 Measures Under Consideration List and in the removal of 26 measures from MIPS that no longer were contributing to improved outcomes.

In other progress toward advancing the strategic approaches of the MDP, CMS extended broad outreach toward patients, families, clinicians, and other providers to better understand the types of measures needed to fill performance gaps. Stakeholder input informed initiatives to improve measure harmonization and alignment, advance reporting mechanisms, and alleviate clinician cost and burden.

Together, these activities demonstrated substantial progress in the transition from volume-based payment to a value-based health system that reflects what is most important to patients and families.

I. Introduction

During 2018, CMS advanced implementation of the *CMS Quality Measure Development Plan: Supporting the Transition to the Merit-based Incentive Payment System (MIPS) and Alternative Payment Models (APMs)*[1] (the MDP) through the first funding initiative supporting public-private efforts to develop measures for the Quality Payment Program. The MDP provides a strategic framework for analyzing and fulfilling the measurement needs of the program, which CMS established in 2017 to implement certain provisions of MACRA.

MDP Annual Reports in 2017 and 2018 documented foundational work to prepare for and guide such measure development. In September 2018, CMS selected seven applicants to receive cooperative agreement awards authorized under MACRA, totaling $26.6 million over three years. The seven awardee organizations, in coordination with specialty societies, practicing clinicians, and other clinical experts, will work to establish more appropriate measures for clinical specialties underrepresented in the current measure portfolio. Their efforts will focus on outcome measures, including patient-reported and functional status measures, to reflect what matters most to patients.[3] Through these partnerships, CMS is working closely with external organizations—clinical professional organizations and specialty societies, patient advocacy groups, educational institutions, independent research institutions, and health systems—to develop and implement measures that offer the most promise for improving patient care.

The CMS Meaningful Measures Initiative fosters operational efficiencies to reduce costs, including collection and reporting burden, while focusing quality measurement on meaningful patient outcomes. Meaningful Measures is a component of the Patients Over Paperwork initiative, aimed at evaluating and streamlining regulations to reduce unnecessary cost and burden, increase efficiencies, and improve the beneficiary experience.[7]

This report demonstrates how CMS has engaged patients, families, and clinicians and integrated Meaningful Measures principles in activities to support measure development for the Quality Payment Program. Through these collaborative efforts, the transition from volume-based payment for Medicare services to a system focused on quality and value is gaining momentum.

Objectives

The 2019 MDP Annual Report, developed in accordance with section 102 of MACRA,[viii] highlights the latest efforts by the Secretary of Health and Human Services (HHS) to support the evolution of the MDP as a strategic framework for measure development for the Quality Payment Program. The report describes the development of quality measures for the Quality Payment Program and progress in addressing newly and previously identified performance and measure gaps, as well as ongoing efforts to engage patients, families, caregivers, clinicians, and specialty societies as key collaborators in these efforts.

Together with the MDP, this report informs and guides CMS and measure developers on progress and priorities for measure development while fulfilling the following requirements of section 102 of MACRA[ix]:

[viii] Section 1848(s)(3) of the Act.
[ix] Excerpts of the authorizing legislation for this report appear in *MACRA Statutory Language Excerpts* (Appendix A).

- **Reports on the progress made in developing quality measures for the Quality Payment Program[x] and the Secretary's efforts to implement the MDP.**[xi] These efforts include funding new measure development; conducting an environmental scan and gap analysis focused on five clinical specialties; obtaining input from the 2018–2019 MDP TEP[xii] to help identify priorities for filling measurement gaps; and partnering with patients, clinicians, and professional societies in measure development.
- **Provides other information the Secretary determines to be appropriate.**[xiii] HHS efforts to align quality measures have produced a new tool to support measure development processes, integrated a new standard into eCQM specifications, and introduced new resources to reduce the burden of data collection and reporting for clinicians.
- **Details updates to the MDP, including newly identified gaps and the status of previously identified gaps** (*Previously Identified Gaps Addressed in 2018 Measures Under Consideration List* [Appendix C]).[xiv] Key findings from the 2018 *CMS MDP Environmental Scan and Gap Analysis Report*[2] detail newly identified gaps for five specialties prioritized by CMS in 2017 (Appendix D) and crosscutting gaps recommended by the MDP TEP as priorities for future measure development (Appendix E).
- **Describes the quality measures developed during the previous year (January 1, 2018–December 31, 2018)[xv]** (*CMS-Funded Measures Developed During the Previous Year* **[**Appendix F]**)**. Measure information provided includes name, Health Care Quality Priority(ies); developer, steward, type, and whether electronically specified. The total number of quality measures developed, endorsement status, and an estimate of the total amount expended to develop all measures of a particular type are also provided.
- **Describes quality measures in development at the time of the report (as of December 31, 2018)**[xvi] (*CMS-Funded Measures in Development* [Appendix G]). In addition to the same details described for fully developed measures, a timeline for completion is included if available. If development of a measure was suspended during the year, an explanation is provided.
- **Provides an inventory of applicable measures.[xvii]** Relevant information is compiled on quality measures for MIPS, including MIPS APM measures, published in the CY 2019 Physician Fee Schedule final rule; measures for Advanced APMs (*CMS APM Quality Measures Inventory* [Appendix H]); and measures reportable through MIPS QCDRs for 2019.

[x] Section 1848(s)(3)(A) of the Act.
[xi] Section 1848(s)(3)(B)(i) of the Act.
[xii] *Acknowledgments* (Appendix B) recognizes the contributions of the 2018–2019 MDP TEP and includes a membership list.
[xiii] Section 1848(s)(3)(B)(v) of the Act.
[xiv] Section 1848(s)(3)(B)(iv) of the Act.
[xv] Section 1848(s)(3)(B)(ii) of the Act.
[xvi] Section 1848(s)(3)(B)(iii) of the Act.
[xvii] Section 1848(s)(3)(B)(iv) of the Act.

Report Development

Section 102 of MACRA authorizes $15 million each fiscal year (FY) from 2015 through 2019, available through the end of FY 2022, for measure development and supporting activities advancing the strategic plan set forth in the MDP. As required by section 102 of MACRA, the 2019 MDP Annual Report provides an estimate of expenditures, which totaled $16.8 million for FY 2018[xviii]:

- $9.2 million for measure development under MACRA cooperative agreements
- $3.3 million for other measure development funded by section 102 of MACRA
- $1.3 million for technical support to MACRA cooperative agreement recipients
- $3.0 million to support activities related to the MDP (e.g., development of the MDP Annual Report, advancing the priorities identified in the MDP) and to provide a strong foundation for measure development opportunities funded by MACRA (e.g., Measures Management System outreach and education related to MACRA).

As described in the 2017 and 2018 MDP Annual Reports,[8,9] CMS and its stakeholder partners have laid the groundwork for measure developers to begin addressing identified gaps. Among the foundational activities to support measure development was further examination of measure gaps for clinical specialties.

An inventory was compiled of measures developed and in development, and the inventory was compared with previously identified gaps. The 2018 CMS Measures Under Consideration List[10] was reviewed to assess progress in addressing gaps for clinical specialties underrepresented in the Quality Payment Program measure portfolio. That examination included the seven specialties prioritized in the MDP (general medicine/crosscutting, mental health/substance use conditions, oncology, orthopedic surgery, palliative care, pathology, and radiology) and five additional specialties identified in the 2018 MDP Annual Report (allergy/immunology, emergency medicine, neurology, physical medicine and rehabilitation, and rheumatology).

This Annual Report draws from the findings described in the *2018 CMS MDP Environmental Scan and Gap Analysis Report*[2] and summaries of the MDP TEP meetings convened by the project contractor in May 2018 and November 2018.[11] The clinicians, quality and measurement experts, and patient and caregiver representatives serving on the 2018–2019 MDP TEP advanced the work of their predecessors by evaluating the findings of the gap analysis and recommending measure subtopics for future development in alignment with the guiding principles of the Meaningful Measures Initiative. Recruited through an open Call for TEP posted on the CMS website from December 7, 2017, through January 8, 2018, this TEP will serve until mid-2019, providing valuable insights to support measure development and a future update of the MDP.

[xviii] The *2018 MDP Annual Report* provided calendar year-based expenditure estimates (specifically, for CY 2017); expenditure estimates in this report are for FY 2018. Thus, estimates of expenditures made in the first quarter of FY 2018 (October–December 2017) are included in both the *2018 MDP Annual Report* and this report.

II. MACRA Requirements for the CMS MDP Annual Report

This section of the MDP Annual Report details progress on each requirement in the Objectives section above, including CMS efforts to implement the MDP; broader HHS efforts to support the strategic approaches and key considerations within the MDP; methods to identify and close gaps; and inventories of clinician quality measures applicable to the Quality Payment Program.

Efforts to Implement the MDP

The MDP outlined specific strategies to address a number of anticipated challenges, or key considerations, in developing measures for MIPS and Advanced APMs. Among those considerations were partnering with clinicians, patients, families, and caregivers; reducing clinician burden of reporting; coordination and sharing across measure developers; and aligning measures. CMS gives public engagement a central role in implementing the Quality Payment Program and in addressing various operational requirements of MACRA. The following activities represent ongoing efforts to implement the strategic approaches of the MDP in partnership with patients and families, clinicians and professional societies, measure developers, and other affected parties.

Funding New Measure Development

On September 21, 2018, CMS awarded seven cooperative agreements authorized under MACRA to develop, improve, update, or expand quality measures for use in the Quality Payment Program.[3,4] The following recipients will partner with CMS to develop measures that fill an important need or gap area and align with quality domains and specialties prioritized by MACRA, the MDP, and the Meaningful Measures framework[12]:

- The Brigham and Women's Hospital, Inc. (orthopedic surgery)
- American Society for Clinical Pathology (pathology)
- The Regents of the University of California, San Francisco (radiology)
- American Psychiatric Association (mental health and substance use)
- University of Southern California (mental health and substance use)
- Pacific Business Group on Health (oncology)
- American Academy of Hospice and Palliative Medicine Inc. (palliative care)

In addition to financial grants totaling $26.6 million over three years, CMS awarded the Measure & Instrument Development and Support (MIDS) MACRA 102 Cooperative Agreements Technical Assistance (CATA) Task Order to provide technical support to award recipients. For this one-year contract, the CATA contractor team is available as a measure development resource and is providing individualized support and guidance. Each agreement is intended to produce one or more fully developed, specified, and tested quality measures for potential use in the Quality Payment Program.

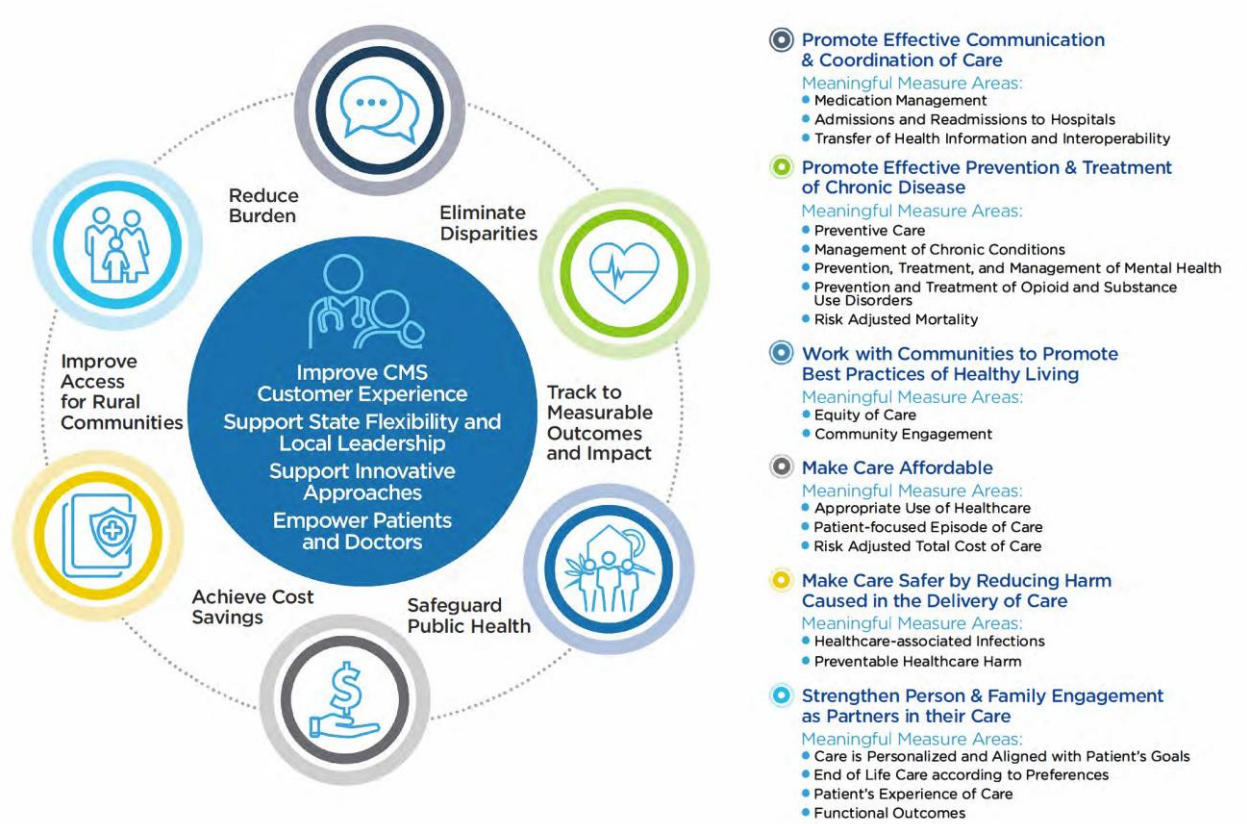
Identifying and Developing Meaningful Measures

The Meaningful Measures Initiative, a component of the 2017 Patients Over Paperwork initiative, guides CMS efforts to improve patient outcomes, increase efficiencies, and reduce clinician burden through the development and alignment of high-value quality measures.[13] Experts and stakeholders incorporated quality measure work from the Health Care Payment Learning and Action Network, the NQF, and the National Academy of Medicine[14] to develop a framework that organizes 19 Meaningful Measure Areas under six Health Care Quality Priorities to represent core issues vital to high-quality care (Figure 1).[15] To advance the mission of

improving health outcomes through value-based programs, CMS seeks to use meaningful measurement and improvement to:

- Improve quality measurement and quality improvement programs and processes;
- Reflect the wisdom of patients and providers, family practitioners and specialists, rural representatives and public health entities; and
- Infuse the principles of value, innovation, and flexibility.

Figure 1: Meaningful Measures Framework



CMS established the Meaningful Measures website to provide resources, webinars, and tools for stakeholder use. CMS quality measure developers report that the Meaningful Measures Initiative has guided their work in identifying low-burden and outpatient outcome measures to develop. Measure developers are conducting outreach to clinicians and specialty societies and convening panels of technical experts and patients, seeking to ensure that potential measure concepts are meaningful and useful to both patients and clinicians. The guidance of the initiative is reflected in the 2018 Measures Under Consideration List, for which submissions to CMS were fewer than in previous years but more focused on clearly defined Meaningful Measure Areas that safeguard public health and improve patient outcomes.

CMS also has conducted portfolio reviews to identify quality measures that reflect the high-priority areas in the Meaningful Measures framework. A review of the MIPS measure portfolio in 2018 led to the removal through rulemaking of 26 measures that did not support Meaningful Measures objectives.

Serving as a foundation for community engagement, the Meaningful Measures framework supports a continuing and concerted effort to move toward achieving high-value outcomes in CMS programs.

Partnering With Patients, Families, and Caregivers in Measure Development

CMS encourages the engagement of patients and their families and caregivers as partners in identifying and developing measures. These efforts underscore the focus of the Meaningful Measures framework on measures that are patient-centered and meaningful to patients.

In October 2018, CMS issued a MIDS Task Order to recruit and maintain a network of patients and caregivers. The selected organization will support CMS measure development contractors by supplying patient/caregiver representatives for TEPs, working groups, or focus groups. This funding opportunity aligns with a new CMS approach to focus contractors' efforts on their areas of expertise versus assigning them responsibility for the entire measure development lifecycle. The use of a single contractor to lead patient and family engagement activities will ensure a consistent approach as measure developers construct measures for various care settings and CMS quality reporting programs.

Throughout 2018, measure contractors partnered with CMS in the use of innovative practices to ensure that patients and caregivers are heard at various stages of the measure lifecycle:

- Used patient engagement as a criterion to evaluate MACRA cooperative agreement proposals to ensure that all award recipients prioritized patient and caregiver input in their measure development efforts.
- Embraced a human-centered design approach by first gathering patient input and then using that input to identify new evidence-based measure concepts.
- Created the *Person and Family Engagement (PFE) Toolkit: A Guide for Measure Developers*, currently available to MIDS measure contractors, which provides instructive content and staff trainings on how to meaningfully engage with PFE partners.
- Maintained and supported the Person and Family Engagement Network, a group of approximately 60 patients, family caregivers, and health care advocates who participate in all phases of the measure development lifecycle through technical expert panels, working groups, town hall sessions, and surveys. Participants explored hospital-based measure concepts for chronic disease management, care coordination, and shared decision-making and considered ways to calculate and present measure results that are understandable to consumers.
- Created engagement mechanisms for patients, family caregivers, consumers, and advocates, including an online discussion forum to post engagement opportunities and solicit feedback.
- Conducted patient interviews, surveys, and work groups to include the patient perspective across measure development tasks, including identifying unintended consequences and developing risk-adjustment approaches and outcome attribution strategies.
- Included the patient perspective in the development and maintenance of CMS-stewarded measures through patient and caregiver participation in TEPs.

Partnering With Clinicians and Professional Societies

CMS is working to better support providers who invest in practice innovation, care redesign, and coordination through new and revised APMs supported by the Meaningful Measures Initiative. Efforts are underway to advance options for feedback and data analysis, improve data collection

and submission systems through technology, and enhance population health management initiatives.

CMS and its measure development contractors prioritize clinician and professional society engagement to inform measure development across the measure lifecycle. This partnership informs measure development priorities and helps ensure that quality measures align with guidelines and clinical intent, are specified appropriately for clinicians, and incorporate efficient data collection to minimize the cost and burden of reporting. With the MACRA-funded cooperative agreement awards, CMS is encouraging professional societies, among others, to develop measures specific to their own clinical specialties.

Collecting clinician input and feedback – Through partnerships with clinicians and professional societies, CMS and measure contractors harnessed the value of the clinician perspective in establishing priorities and developing measures for the Quality Payment Program. Measure-specific workgroups, clinical committees, and TEPs drew on clinician and professional society representation for insights into efficient data collection and reporting derived from clinical workflow, measure concepts meaningful to both patients and clinicians, and appropriate attribution to ensure accountability. The 2018–2019 MDP TEP brought such representation to the tasks of assessing the landscape of current MIPS measures and recommending initial priorities for underrepresented clinical specialties prioritized by CMS for measure development.

In September 2018, CMS welcomed 11 new members to the second cohort of Clinician Champions, a group that provides feedback to CMS to improve the clarity and content of communications materials and resources about the Quality Payment Program. Participants serve as a connection between CMS and the clinician community, sharing their peers' insights about the Quality Payment Program. Champions reviewed program materials such as specialty-focused measure development guides and discussed emerging issues such as the need for technical support of rural, solo, and small practices. An outreach presentation to the group invited Champions' feedback on appropriate content for an update of the MDP.

Quality Payment Program education resources – Throughout the year, CMS provided 39 webinars, including an overview of the CY 2019 Physician Fee Schedule final rule, and other educational offerings on the Quality Payment Program.[16,17] Resource documents available through the Quality Payment Program Resource Library (https://qpp.cms.gov/about/resource-library) include fact sheets, specialty guides, technical and user guides, and measure specification and benchmark documents.

The Medicare Learning Network offers free educational materials for health care professionals on CMS policies, programs, and initiatives. The Learning Management System (LMS), a pivotal component, hosts and tracks educational activities, post-assessments, and certificates for health care providers. CMS offered eight web-based training courses in 2018 through the LMS, where participants could earn continuing education credit while learning about the Quality Payment Program.[18] A new look for the LMS enhanced the user experience.

Measures Management System (MMS) outreach efforts – A CMS measure contractor produced the monthly MMS newsletter to inform all stakeholders interested in measure development activities and opportunities for engagement. The newsletter, disseminated to over 75,000 subscribers, provided special announcements for report releases and technical developments, overviews of different measure types and clinical practice guidelines, and a calendar of upcoming events, such as Calls for Measures and updates on TEPs and public

comment periods. A separate newsletter targeted more than 1,000 subscribers specifically interested in MACRA measure development, including specialty societies, patient advocacy groups, and measure developers. As part of a Measure Development Education and Outreach Series, the MMS contractor conducted webinars highlighting keys to successful Quality Payment Program measure development, including installments on available resources (e.g., the MMS website, CMS Measures Inventory Tool (CMIT), and *Blueprint for the CMS Measures Management System* [MMS Blueprint]) and an overview of the CMS pre-rulemaking process and the 2018 Measures Under Consideration List.

Call for Measures – An *Annual Call for Measures and Activities* for the Quality Payment Program solicits stakeholder submissions for each of the four MIPS performance categories: quality, cost, improvement activities, and promoting interoperability.[19] CMS uses stakeholder feedback in selecting measures and activities for notice and comment rulemaking that are applicable and valid at the individual clinician level, feasible, reliable, evidence-based, and scientifically acceptable, as well as distinct from existing measures and activities.

Development of episode-based cost measures for MIPS – Clinicians and specialty societies contribute to the development of care episode and patient condition groups for use in cost measures to meet the requirements of section 1848(r)(2) of MACRA. In 2017, the first wave of seven clinical subcommittees selected and provided input on the development of eight episode-based cost measures. For 2018, a second wave of 10 clinical subcommittees recommended episode-based cost measures to develop and provided detailed input on every component of development of 11 episode-based cost measures.

Understanding the clinician perspective – CMS aims to create a unified product strategy and visual identity across Quality Payment Program products, based on industry best practices.[20,21] Those efforts will be grounded in an understanding of what clinicians and other stakeholders need from a policy, product, or service before design work begins. In November 2018, CMS began a search for a contractor with expertise in human-centered design to support current and future Quality Payment Program system and policy development. Human-centered design is participatory, so user research will center on direct contact with clinicians, beneficiaries, and others to observe their work and engagement with CMS, as well as to understand the solutions created to support them.[20,21]

Reducing Clinician Burden of Data Collection for Quality Measure Reporting

Clinicians have voiced their concerns to CMS about burdensome data collection and reporting tasks that take away clinical time from patients. In launching the Patients Over Paperwork and Meaningful Measures initiatives, CMS established a top priority to reduce clinician reporting burden by streamlining measures, promoting interoperability, and focusing on the highest-value and most critical areas for quality improvement.[15,22] CMS has developed a range of resources for clinicians to ease the burden of data collection for quality measure reporting.

The CY 2019 Physician Fee Schedule final rule identified low-priority process measures for removal and increased the focus on meaningful quality outcomes for patients. Beginning in 2019, MIPS eligible clinicians benefit from options that allow them to report measures using more than one data collection type (e.g., MIPS clinical quality measures, eCQMs, QCDR measures, and for small practices, Medicare Part B claims measures) within the MIPS quality performance category.[5(p. 60002)]

To further alleviate reporting burden, the 2018–2019 MDP TEP recommended the development of crosscutting measures for reporting across clinical specialties and MIPS performance categories. The TEP suggested that greater focus on crosscutting quality measures could simplify data reporting for all MIPS eligible clinicians. During its November 2018 meeting, the TEP identified 28 crosscutting measure subtopic gaps within eight Meaningful Measure Areas as high-priority prospects for future measurement development.[11] Crosscutting measure subtopic gaps are discussed further in the *Identifying New Gaps for Specialty Measure Development* section of this report.

Coordination and Sharing Across Measure Developers

Between September 15, 2017, and August 1, 2018, the CMS Measures Management System contractor convened a TEP to assist in adding value and efficiency to the measure development process. Titled Quality Measure Development: Supporting Efficiency and Innovation in the Process of Developing CMS Quality Measures, this multidisciplinary TEP included MIDS contractors and non-MIDS measure developers, patients and patient advocates, practicing clinicians, hospital/clinician system representatives, research analysts, academics, and health IT professionals.[23]

Five major themes emerged from four in-person meetings and 27 hours of TEP discussions:

- Collaboration and sharing of best practices
- Stakeholder engagement and education
- Testing data and tools
- Meaningful measures and transparency in the measure development process
- Updates to the measure lifecycle

For each theme, TEP members suggested ways to refine the measure development lifecycle to increase stakeholder engagement, eliminate inefficiencies, and reduce burden while increasing the number of meaningful measures.

Alignment of Measures

Alignment of measures across programs, payers, and payment systems supports an efficient health care system. Alignment can be achieved by using the same quality measures in multiple programs to elicit meaningful information without increasing reporting burden.[24] In 2018, CMS reviewed how other program measure sets aligned with the Quality Payment Program measures to encourage streamlining and harmonization. CMS conferred with the National Committee for Quality Assurance (NCQA) to better understand approaches used to align measures implemented at both health plan and clinician levels of measurement.

The Quality Payment Program incorporates selected specialty-specific measures developed by professional societies for their clinical registries. CMS considered over 1,100 measures submitted in 2018 as part of the review and approval process for QCDRs. During this process, CMS developed evaluation criteria and tools to group similar measures to foster harmonization. CMS established the process to ensure that registry measures accepted for MIPS reporting reflect the care provided by clinicians.

CMS measure development contractors reported a wide range of 2018 activities supporting measure alignment with QCDRs, all of which promote harmonization, reduce duplication, and support the growth of crosscutting and multispecialty measure concepts for clinician-level measure development. Measure Workgroup Webinars throughout 2018 presented

recommendations for harmonizing measure concepts. CMS held 50 preview calls with QCDR measure developers and other stakeholders to provide opportunities to discuss measure concepts in development before the 2019 self-nomination process. Outreach to QCDR measure developers to support measure alignment also included virtual office hours, monthly support calls, and an online forum to foster discussions between QCDR measure developers. CMS is actively working with QCDRs to establish new avenues for discussion and collaboration. The QCDR Measure Development Handbook is an additional CMS resource available to QCDR measure developers.

Additional HHS Efforts to Support the MDP

The MDP highlights the role of health IT in advancing quality measures. CMS, in collaboration with the Office of the National Coordinator for Health Information Technology (ONC) and the National Library of Medicine (NLM), supports this advancement with the development and alignment of measure resources available to all users. These collaborative efforts establish an infrastructure to support measure development and alignment and ultimately facilitate measure reporting as part of the clinical workflow. Additional resources developed or enhanced in 2018 to support measure development demonstrate progress in these areas:

eCQM Strategy Project – CMS initiated the eCQM Strategy Project to identify and address challenges with eCQMs through collaboration with clinicians, acute care and critical access hospitals, and EHR vendors. Among other activities, participants explore tools that can decrease the burden and costs of implementing and reporting eCQMs. A recent product of this effort is the Collaborative Measure Development (CMD) Workspace, an online platform to facilitate collaboration on eCQM concepts and provide access to draft measures.[25] The eCQM Strategy Project, in close collaboration with several CMS contractors, published an updated *Guide to Reading eCQMs*[26] in 2018 to support the transition to the new CQL standard. CMS and its contractors continually strive to improve communication related to eCQMs and accelerate the release of annual updates.

The eCQM Data Element Repository, a component of the CMD Workspace derived from eCQM specifications, allows measure developers and others to search all published and tested eCQM data elements, further supporting measure alignment. The NLM hosts the repository as part of the web-based Value Set Authority Center platform.[27]

Measure developers, professional associations, health IT vendors, and measure endorsers will benefit from further development of the CMD Workspace. Future components may include eCQM Concepts, the new eCQM Clinical Workflow, eCQM Test Results, and automated updates on eCQMs under development.[28]

eCQM standardization – The transition to CQL as the expression logic within eCQMs is another example of HHS efforts to reduce measurement burden by modernizing the standards for eCQMs. CQL is a Health Level Seven International[29] (HL7®) standard designed to unify the expression of logic for eCQMs and clinical decision support. This clinically focused, high-level query language can express sophisticated logic constructs that previously were too complex to include in an eCQM specification. CQL also adapts to emerging standards and supports data model flexibility.

CMS began transitioning to the CQL standard for eCQM utilization in 2016. Testing and development continued in 2017 through the combined efforts of measure developers, implementers, and vendors. In spring 2018, CMS posted eCQM specifications containing the new standard, giving users time to update their systems. The transition was completed in 2018 for CY 2019 reporting.

Updated measures database – The CMIT,[30] updated in 2018, contains over 2,000 unique measures used across 37 CMS quality programs and initiatives, including the Quality Payment Program. With this interactive database, clinicians, patients, and health care stakeholders have access to all available CMS measures. A filtered search assists users to find detailed information about a measure, such as type, clinical specialty, setting of care, or available reporting program. Users can quickly identify measures to fulfill their clinical quality improvement and data reporting requirements within the applicable CMS program. The 2018 update added a listing of similar measures, a measure comparison tool to aid in identifying gap areas, and the option to export tables with measure counts by category. Lastly, the CMIT now indicates upcoming status changes for measures.

The eCQM Strategy Project, CQL standardization, and updated CMIT all support HHS efforts to align quality measures to reduce the burden of data collection and reporting for clinicians.

Status of Measurement Gaps

The MDP identified high-level priorities for measure development in clinical specialties with known gaps to ensure clinicians have a sufficient selection of measures to report for the Quality Payment Program. Current measure development efforts demonstrate progress toward addressing the measure gaps identified in the two previous annual reports. Further progress in 2018 is evident in the CMS Measures Under Consideration List, adoption of high-priority measures through rulemaking, further gap analysis, and collaboration with clinical specialties represented on the MDP TEP to enhance their representation in the measure portfolio.

Measures Under Consideration List Applicable to Identified Gaps

The 2018 Measures Under Consideration List identifies quality and efficiency measures under consideration by the Secretary of HHS for use in certain Medicare quality programs.[10] The *2018 MDP Annual Report*[9] identified 22 measures on the 2017 Measures Under Consideration List to consider for inclusion in MIPS, seven of which were applicable to two clinical specialties identified in the *2017 MDP Annual Report*[8] as having measurement gaps (four for orthopedic surgery and three for general medicine/crosscutting). The CY 2019 Physician Fee Schedule final rule[5(p. 60097-60110)] included six of those seven measures; the measure *Diabetes A1c Control (<8.0)* (applicable to general medicine/crosscutting) was not finalized for implementation in 2019.

Thirty-nine measures for use in Medicare programs, including eight potential MIPS quality measures, were included on the 2018 Measures Under Consideration List. Of the eight, five were applicable to priority specialties with gaps identified in the 2017 and 2018 MDP Annual Reports[8,9]: two for general medicine/crosscutting, two for orthopedic surgery, and one applicable to both orthopedic surgery and physical medicine and rehabilitation.

As part of the pre-rulemaking process, the multistakeholder MAP convened by NQF reviewed all five measures applicable to the identified specialties. After evaluation, the MAP conditionally supported four of the measures for rulemaking.[31,xix] CMS considers the MAP recommendations when reviewing measures for potential use in programs.

A list of these measures applicable to the identified priority specialties is provided in *Previously Identified Gaps Addressed in 2018 Measures Under Consideration List* (Appendix C). Table 2 provides a count of the measures, categorized in four of the six MACRA quality domains

Table 2: Summary of 2018 Measures Under Consideration Applicable to Identified Gaps

Health Care Quality Priority/ MACRA Domain*	# of Measures for General Medicine/ Crosscutting	# of Measures for Orthopedic Surgery	# of Measures for Physical Medicine and Rehabilitation
Affordable Care *- Discouraging the routine use of Occupational and/or Physical Therapy after carpal tunnel release*ᶻ	0	1	0
Communication and Coordination	0	0	0
Effective Treatment *- Annual Wellness Assessment: Preventive Care*ᶻ *- Adult Immunization Status*	2	0	0
Healthy Living *	0	0	0
Patient Safety *- Time to surgery for elderly hip fracture patients*	0	1	0
Person and Family Engagement *- Functional Status Change for Patients with Neck Impairments*	0	1	1
Total	2	3	1

* Prevention measures are included in "Effective Treatment."

ᶻ Addresses a gap identified in the 2017 *CMS MDP Environmental Scan and Gap Analysis Report*[6]

Gaps identified through the MDP environmental scans are anticipated to close as measure developers proceed with the sequence of steps required to develop, test, and validate measures prior to submission.

Identifying New Gaps for Measure Development for Five Prioritized Specialties

Environmental Scan – As referenced in the *2018 MDP Annual Report*, CMS analyzed clinical specialties to identify five with known gaps in measures as priorities for future measure development. The *2018 CMS MDP Environmental Scan and Gap Analysis Report* further examined the measurement gaps for those five specialties: allergy/immunology, emergency medicine, neurology, physical medicine and rehabilitation, and rheumatology. The environmental scan and gap analysis process and results are summarized here.

The methodology followed a process aligned with the MMS Blueprint, Version 14.0.[24] A conceptual framework derived from the Meaningful Measures framework[15] and the MACRA

[xix] The *Adult Immunization Status* measure received a "Do not support with potential for mitigation" recommendation from the MAP.

quality domains organized the information gathered from relevant reports, public comment letters, and scans from the MIDS Resource Library,[xx] as well as input from the MDP TEP, patients, and caregivers. Mapped to the conceptual framework were 182 measure subtopics, each applicable to a single specialty and Health Care Quality Priority/Meaningful Measure Area combination (Appendix D, Table D-1).

A scan of large, publicly available quality measure sources[xxi] located 1,519 existing clinician-level measures. This number was reduced to 213 by excluding measures that did not fit within one of the five specialty areas and a Health Care Quality Priority and Meaningful Measure Area. (Figure D-1 in Appendix D illustrates the search strategy.) After the removal of 46 crosscutting measures, the conceptual framework retains 167 measures specific to the five specialties: 33 MIPS measures; 120 available for reporting only through a QCDR; and 14 in the "Other" category—that is, not included in the Quality Payment Program—that could be evaluated for consideration as MIPS measures (Appendix D, Tables D-2 through D-6).

As described previously, 182 subtopics were identified for the five specialty areas. The gap analysis revealed a lack of measures for 76 subtopics, or 42% of the 182 subtopics identified across the five specialties in the conceptual framework, some of which may be applicable to more than one specialty. In Appendix D, Table D-1, a (0) count in a cell indicates no measure was identified for one of the182 subtopics, which signifies an opportunity for measure development aligned with a high-priority Meaningful Measure Area. Figure D-2 in Appendix D summarizes results of the gap analysis.

TEP Review –The 2018–2019 MDP TEP provided critical feedback on the environmental scan and gap analysis. The TEP members reviewed the draft *2018 CMS MDP Environmental Scan and Gap Analysis Report*[2] and the MDP and individually rated measure subtopics representing gaps, using an online assessment tool. TEP members rated 94% of the subtopics (n = 45) as "highly important" (median 7–9) and 6% of the subtopics (n = 3) as "moderately important" (median 4–6). Tables D-7 through D-11 in Appendix D detail the median ratings for subtopics by specialty.

The initial meeting in May 2018 fostered dialogue among TEP members, provided multi-stakeholder input on the results of the scan, and formalized recommendations for initial measure development for the five prioritized specialties. Subtopics recommended to be crosscutting rather than specialty-focused were reserved for discussion at a later TEP meeting. Table 3 presents results of the TEP discussion for each specialty. Appendix D lists the specialty-specific subtopics prioritized by the TEP in Tables D-12 through D-16.

[xx] CMS makes environmental scan and gap analysis reports accessible across measure development contractors through a shared workspace, the CMS MIDS Resource Library.

[xxi] Sources include CMIT, NQF Quality Positioning System, National Quality Measures Clearinghouse, HHS Measures Inventory System, CMS public reporting programs and other federal agencies/offices, professional/ medical society websites, state or regional health care systems, and public or private organizations that steward one or more NQF-endorsed measures.

Table 3: Results of TEP Discussions for Specialty-Specific Measure Subtopic Gaps

Specialty	Results of TEP Discussion
Emergency medicine	• Pre-assessment subtopic gaps rated as important (median score ≥ 7): 17 • Emergency medicine-specific subtopics proposed by one or more TEP members for consideration in the conceptual framework: 22 • Results of TEP discussion and recommendations: ○ 11 of 39 subtopics prioritized for measure development ○ 14 of 39 subtopics tabled for consideration as crosscutting ○ 14 of 39 subtopics not recommended for inclusion* in conceptual framework
Allergy/ Immunology	• Pre-assessment subtopic gaps rated as important (median score ≥ 7): 2 • Allergy/immunology-specific subtopics proposed by one or more TEP members for consideration in the conceptual framework: 37 • Results of TEP discussion and recommendations: ○ 19 of 39 subtopics prioritized for measure development ○ 2 of 39 subtopics tabled for consideration as crosscutting ○ 18 of 39 subtopics not recommended for inclusion* in conceptual framework
Neurology	• Pre-assessment subtopic gaps rated as important (median score ≥ 7): 16 • Neurology-specific subtopics proposed by one or more TEP members for consideration in the conceptual framework: 20 • Results of TEP discussion and recommendations: ○ 10 of 36 subtopics prioritized for measure development ○ 6 of 36 subtopics tabled for consideration as crosscutting ○ 20 of 36 subtopics not recommended for inclusion* in conceptual framework
Physical medicine and rehabilitation	• Pre-assessment subtopic gaps rated as important (median score ≥ 7): 4 • Physical medicine and rehabilitation-specific subtopics proposed by one or more TEP members for consideration in the conceptual framework: 34 • Results of TEP discussion and recommendations: ○ 24 of 38 subtopics prioritized for measure development ○ 5 of 38 subtopics tabled for consideration as crosscutting ○ 9 of 38 subtopics not recommended for inclusion* in conceptual framework
Rheumatology	• Pre-assessment subtopic gaps rated as important (median score ≥ 7): 6 • Rheumatology-specific subtopics proposed by one or more TEP members for consideration in the conceptual framework: 28 • Results of TEP discussion and recommendations: ○ 12 of 34 subtopics prioritized for measure development ○ 18 of 34 subtopics tabled for consideration as crosscutting ○ 4 of 34 subtopics not recommended for inclusion* in conceptual framework
Crosscutting	Defined as relevant to most, if not all, clinicians, practices, and settings; broadly based; and usually independent of a specific diagnosis

*Most subtopics not recommended for inclusion were suggested by one or more TEP members during the pre-assessment and either withdrawn at the meeting or rejected by consensus of the TEP. Some were judged to be inappropriate for measure development; others represented existing measures or standards of clinical practice. All subtopics under TEP consideration were identified as subtopic gaps in the *2018 Environmental Scan and Gap Analysis Report*.

Among the key takeaways from the May 2018 TEP meeting were the following themes:

- **Support for a clear pathway for QCDR measures to become part of MIPS to fill measurement gaps (with certain caveats).** A few members expressed concerns about access to QCDR measures, equitable distribution of costs incurred, and the lack of a standard, rigorous measure development process across QCDRs.
- **Emphasis on including families and lay caregivers in the concept of patient-centered care**. Clinicians and others agreed with patient and caregiver members on this point.

- **Commitment to developing crosscutting measures applicable across clinician specialties, such as those recommended by the TEP.** Unique settings such as emergency departments might require tailoring of some crosscutting subtopics to ensure meaningful measurement.

The project team combined the reserved crosscutting subtopics from the May 2018 meeting with general medicine/crosscutting subtopics from the *2017 MDP Environmental Scan and Gap Analysis Report*,[6] eliminated duplications, and divided the remaining subtopics into two classifications:

- Crosscutting: Relevant to most, if not all, clinicians, practices, and settings; broadly based; and usually independent of a specific diagnosis
- Multispecialty: Relevant to more than one specialty but not necessarily all specialties

A second meeting in November 2018, as requested by TEP members, focused solely on subtopic gaps designated as crosscutting. TEP members individually assessed 35 crosscutting subtopics in an online pre-assessment, which produced median ratings of 7–9 for 32 subtopics (91%) (Appendix E, Table E-1).

At the follow-up meeting by webinar, the TEP reviewed the 32 subtopics members had rated as extremely important and discussed whether to approve them as priorities for future measure development. By consensus, the TEP removed four subtopics and revised five others (Appendix E, Tables E-2 and E-3). Subsequently the TEP recommended 28 crosscutting subtopics for measure development, detailed in Appendix E, Table E-4.

These main themes also arose from the November 2018 meeting:

- **Prioritizing crosscutting measure subtopics for measure development can reduce clinician reporting burden and streamline measure development.** Crosscutting subtopics were prioritized to conserve measure development efforts and reduce burden across clinician specialties and reporting programs.
- **Though important, crosscutting measure subtopics are not all appropriate for clinician-level measurement.** Certain measure subtopics were either challenging to conceptualize as a clinician-level measure (e.g., access to care) or influenced by factors outside of a clinician's control (e.g., socioeconomic factors); the consensus was that these topics may be best suited for a different level of measurement.
- **Clear two-way communication, shared decision-making between patient and provider, and clinician support to enable the patient to follow a care plan are essential.** TEP members discussed the supportive role that clinicians can serve throughout the patient experience, such as providing clear instructions, assessing self-care abilities, and following up to ensure the patient is achieving established goals.

Quality Measures Developed During the Previous Year

This subsection of the report describes CMS measures intended for inclusion in MIPS, MIPS APMs, or Advanced APMs for which development was completed between January 1, 2018, and December 31, 2018 (Appendix F). Estimated development expenditures for one process measure ($71,080) and three outcome measures[xxii] ($2.5 million) totaled $2.6 million for FY 2018:

- One of the four measures is applicable to the MACRA domain of clinical care[xxiii] and was included on the 2018 CMS Measures Under Consideration List.[10] This process of care measure reflects key tenets and principles outlined in the MDP,[1] including alignment with CMS Health Care Quality Priorities and use of electronic specifications.[xxiv] Clinical process measures must have a strong scientific evidence base to demonstrate a linkage between the process being measured and improved outcomes.

  Process measures:

  - *Potential Opioid Overuse*: This general medicine/crosscutting measure, developed by Mathematica Policy Research and stewarded by CMS, focuses on the prevention of opioid and substance use disorder.

- One of the four measures is applicable to the MACRA domain of safety and the prioritized specialty of orthopedic surgery.

  Outcome measure:

  - *Eligible Clinician- or Eligible Clinician Group-Level Risk-Standardized Complication Rate Following Elective Primary Total Hip Arthroplasty and/or Total Knee Arthroplasty*: Developed by Yale-New Haven Health Services Corporation/Center for Outcomes Research and Evaluation (Yale CORE) and stewarded by CMS, this orthopedic surgery measure has been submitted to NQF for endorsement and is relevant to complications from procedures, a gap identified in the *CMS MDP Environmental Scan and Gap Analysis Report.*[6]

- Two of the four measures, applicable to the MACRA domain of care coordination, will support reduction of hospital admissions.

  Outcome measures:

  - *Clinician and Clinician Group Risk-standardized Hospital Admission Rates for Patients with Multiple Chronic Conditions*: Developed by Yale CORE and stewarded by CMS, this general medicine is relevant to a gap identified in the *CMS MDP Environmental Scan and Gap Analysis Report*[6]: outcome measures for patients with multiple chronic conditions.
  - *Eligible Clinician- or Eligible Clinician Group-Level Hospital-Wide All-Cause Unplanned Readmission Measure*: Developed by Yale CORE and stewarded by CMS, this general medicine measure was adapted for use at the clinician or clinician group level and will be considered for future implementation in MIPS.

[xxii] These three outcome measures, funded under section 1848(s)(6), were in development in FY 2017 but were not included in the *2018 MDP Annual Report*.
[xxiii] This process measure is intended for use in MIPS but was not funded by section 1848(s)(6) of the Act, as funding for development was obligated prior to the passage of MACRA.
[xxiv] Section 1848(s)(3)(B)(ii)(V) of the Act.

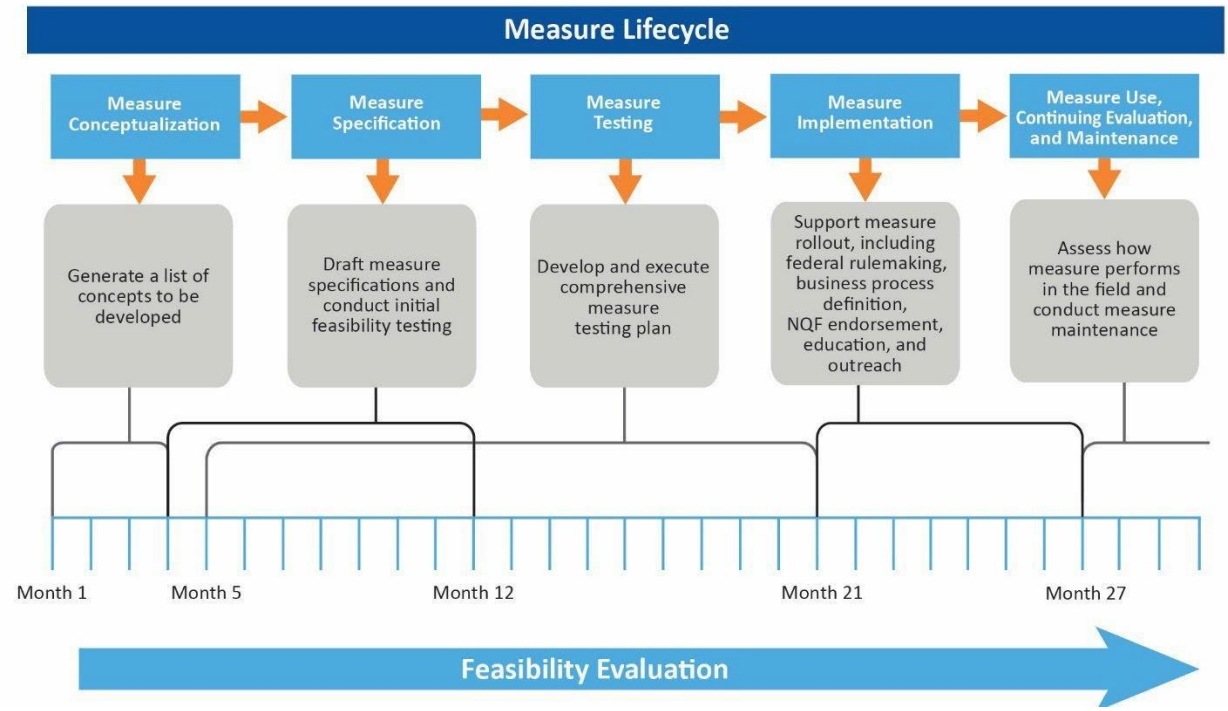
See *CMS-Funded Measures Developed During the Previous Year* (Appendix F) for measure details.[xxv]

Quality Measures in Development at the Time of This Report

This subsection of the report describes measures CMS intends for inclusion in the MIPS program, MIPS APMs, or Advanced APMs that were in development (but not yet completed) between January 1, 2018, and December 31, 2018, using an estimated $17.3 million[xxvi] in FY 2018.

Many organizations are actively developing quality measures for use by clinicians; therefore, CMS is promoting broader collaboration with such entities through cooperative agreements funded under MACRA to advance clinician measures for the Quality Payment Program.

The measure development process can be conceived as a series of gates through which each measure must pass to advance for consideration in CMS quality programs. Measure conceptualization, specification, and testing—the first three steps in the measure lifecycle—are critical to vet and assess the viability of a measure concept prior to implementation.



Source: *Blueprint for the CMS Measures Management System, Version 14.0*

Table 4 provides titles of the measures in development within each Health Care Quality Priority/ MACRA quality domain and whether the measures were electronically specified. See *CMS-Funded Measures in Development* (Appendix G) for additional details[xxvii] about these measures, including developers and timelines for completion.

[xxv] Section 1848(s)(3)(B)(ii) of the Act.
[xxvi] This amount includes $12.5 million from section 102 of MACRA ($9.2 million for cooperative agreements and $3.3 million for other MACRA-funded measure development) and $4.8 million in funding from other sources obligated before the passage of MACRA.
[xxvii] Section 1848(s)(3)(B)(iii) of the Act.

Table 4: Summary of CMS-Funded Measures in Development[xxviii]

Health Care Quality Priority/MACRA Domain* Measure Name (Steward/Developer[s])	# in Development CY 2018	# Electronically Specified
Affordable Care - *Inappropriate Use of Percutaneous Coronary Intervention (PCI) in Asymptomatic Patients*[xxix] (CMS/Mathematica Policy Research, PCPI®)	1	0
Communication and Coordination/Care Coordination - *Care Coordination after Asthma-Related Emergency Department Visit*† (CMS/ Mathematica Policy Research) - *Care Coordination after Asthma-Related Emergency Department Visit: EP Follow-up*† (CMS/Mathematica Policy Research) - *Heart Failure Admission Measure* (CMS/Yale CORE) - *Notification to the ordering provider requesting amylase testing in the diagnosis of suspected acute pancreatitis* (American Society for Clinical Pathology) - *Notification to the ordering provider requesting myoglobin or CKMB (creatine kinase-muscle/brain) in the diagnosis of suspected acute myocardial infarction (AMI)* (American Society for Clinical Pathology) - *Notification to the ordering provider requesting thyroid screening tests other than only a Thyroid Stimulating Hormone test in the initial screening of a patient with a suspected thyroid disorder* (American Society for Clinical Pathology) - *Rate of communicating results of an amended report with a major discrepancy to the responsible provider* (American Society for Clinical Pathology) - *Rate of notification to clinical providers of a new diagnosis of malignancy* (American Society for Clinical Pathology) - *Time interval: critical value reporting for chemistry* (American Society for Clinical Pathology) - *Time interval: critical value reporting for troponin* (American Society for Clinical Pathology)	10	2
Effective Treatment/Clinical Care** - *Annual Wellness Assessment: Preventive Care (Composite)*† (CMS/NCQA) - *Cognitive Impairment (CI) Assessment Among Older Adults (75 Years and Older)* † (CMS/Mathematica Policy Research) - *Continuity of Pharmacotherapy for Opioid Use Disorder*[xxx] (University of Southern California) - *Diabetes Overtreatment in the Elderly*† (CMS/Mathematica Policy Research, NCQA) - *Opioid Extended Use Rate Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)* † (Brigham and Women's Hospital) - *Improvement or maintenance of functioning for all patients seen for mental health and substance use care* (American Psychiatric Association) - *Improvement or maintenance of symptoms for patients with opioid misuse* (American Psychiatric Association) - *Improvement or maintenance of symptoms for patients with psychosis* (American Psychiatric Association) - *Improvement or maintenance of symptoms for patients with suicide risk* (American Psychiatric Association) - *Standardized Assessment* (American Psychiatric Association) - *Initiation of antipsychotic treatment among individuals with first-episode psychosis (FEP)* (American Psychiatric Association) - *Initiation of medication-assisted treatment (MAT) among individuals with opioid use disorder (OUD)* (American Psychiatric Association) - *Monitoring* (American Psychiatric Association)	18	6

[xxviii] As of December 31, 2018, to allow for federal review and clearance prior to publication of this report
[xxix] Measure title in *2018 MDP Annual Report*: *Overuse of PCI in Asymptomatic Patients*
[xxx] Endorsed at the health plan level—the level of analysis and data source are being expanded.

Health Care Quality Priority/MACRA Domain* Measure Name (Steward/Developer[s])	# in Development CY 2018	# Electronically Specified
- *Patient Reported Pain in Cancer Following Chemotherapy* (Pacific Business Group on Health) - *Quality-of-Life Assessment for Patients who Receive Any Substance Use Disorder Intervention*† (CMS/Mathematica Policy Research) - *Recovery for all patients seen for mental health and substance use care* (American Psychiatric Association) - *Treatment Adjustment* (American Psychiatric Association) - *Opioids in High Dosage in Persons Without Cancer Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)* † (Brigham and Women's Hospital)		
Healthy Living/Population Health and Prevention	0	N/A
Patient Safety/Safety - *Adverse Drug Events for Patients Taking Anticoagulant Medications in an Ambulatory Setting*† (CMS/Mathematica Policy Research) - *Risk-Standardized Bleeding-Related Adverse Drug Event Rate for Patients Taking Anticoagulant Medications Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)* † (Brigham and Women's Hospital) - *Risk-Standardized Complication Rate (RSCR) Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)* † (Brigham and Women's Hospital) - *Clinician and Clinician Group Diabetes Short-Term Complications* (CMS/Yale CORE) - *Composite radiation dose and image quality* (The Regents of the University of California San Francisco) - *Practitioner-Level Long-Term Catheter Rate* (CMS/UM-KECC) - *Risk-Standardized Opioid-Related Respiratory Depression Rate Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)* † (Brigham and Women's Hospital) - *Safety plan for individuals with suicide risk* (American Psychiatric Association)	8	4
Person and Family Engagement/Patient and Caregiver Experience - *CAHPS Measure Modification for CPC+ Practices* (CMS/RTI) - *Care Goal Achievement Following Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)* (Brigham and Women's Hospital) - *Changes in Patient Reported Outcomes (PROs) Following Non-Emergent Percutaneous Coronary Intervention (PCI)* † (CMS/Mathematica Policy Research/The Lewin Group) - *Communication Measure* (American Academy of Hospice and Palliative Medicine) - *Disease Activity Assessments and Target Setting in Patients with Rheumatoid Arthritis*† (CMS/Mathematica Policy Research, NCQA) - *Documentation of a Health Care Partner for Patients with Dementia or Mild Cognitive Impairment*† (CMS/Mathematica Policy Research) - *Functional Status Assessment and Target Setting for Patients with Congestive Heart Failure*† (CMS/Mathematica Policy Research, NCQA) - *Functional Status Assessments and Target Setting for Patients with Asthma*† (CMS/Mathematica Policy Research, NCQA) - *Functional Status Assessments and Target Setting for Patients with Chronic Obstructive Pulmonary Disease*† (CMS/Mathematica Policy Research, NCQA) - *Functional Status Improvement for Patients who Received a Total Hip Replacement*† (CMS/Mathematica Policy Research, NCQA) - *Functional Status Improvement for Patients who Received a Total Knee Replacement*† (CMS/Mathematica Policy Research, NCQA) - *Pain Assessments and Target Setting for Patients with Osteoarthritis*† (CMS/ Mathematica Policy Research, NCQA) - *Patient experience of care for all patients seen with mental health and substance use care* (American Psychiatric Association)	18	11

Health Care Quality Priority/MACRA Domain* Measure Name (Steward/Developer[s])	# in Development CY 2018	# Electronically Specified
- *Patient Reported Health Related Quality of Life in Cancer Following Chemotherapy* (Pacific Business Group on Health) - *Patient-reported outcome measure* (measure title TBD)† (CMS/AIR, Johns Hopkins University [JHU]) - *Patient-reported outcomes and risk variable data collection (PRO)* (CMS/Yale CORE) - *Symptom Measure* (American Academy of Hospice and Palliative Medicine) - *Pain management* (measure title TBD)† (CMS/Mathematica Policy Research)		
Total	55	23

* As a measure moves through the development cycle, a more suitable domain may be identified. CMS will update a measure's priority and Meaningful Measure Area as applicable.

** Prevention measures are included in "Effective Treatment."

† Measure is planned to be electronically specified.

The 55 measures in development between January 1 and December 31, 2018,[xxxi] include 27 measures targeting processes of care, 15 care outcomes, nine patient-reported outcome performance measures, and four patient engagement/experience measures. Twenty-three of the 55 were being developed as eCQMs. The total estimated expenditures for these 55 measures include $3.1 million for 23 process measures, $6.9 million for 15 outcome measures, $4.9 million for 13 patient-reported outcome performance measures, and $2.4 million for four patient engagement/experience measures.

Development was suspended on three of the 55 measures—two because of feasibility concerns and barriers to implement and the other because of challenges operationalizing the numerator and a lack of clear and consistent definition of diabetes overtreatment in the guidelines (*CMS-Funded Measures in Development* [Appendix G], Table G-1).[xxxii]

The remaining 52 measures in development at the time of this report[xxxiii] are at different stages of the measure development process, as described below. CMS will consider each of these measures for inclusion in the Quality Payment Program once measure testing has been completed.

Measure Conceptualization (n = 26)

Twenty-six measures are in the conceptualization stage of the measure lifecycle. Two of the measures are estimated for completion by mid-2020; one, by mid-2021; the remaining 23, by September 2021. (See *CMS-Funded Measures in Development* [Appendix G], Table G-2) for additional details about these measures, including developers and timelines for completion.[xxxiv])

- Twelve of the 26 measures (consisting of five outcome measures, one patient engagement/experience measure, and six process measures) are being developed for implementation in a specialty-specific QCDR. These measure concepts are a priority for mental health and substance use conditions.

  Outcome measures:

  - *Improvement or maintenance of functioning for all patients seen for mental health and substance use care*
  - *Improvement or maintenance of symptoms for patients with opioid misuse*
  - *Improvement or maintenance of symptoms for patients with psychosis*

[xxxi] No funding was spent on five measures for which identification of testing sites is pending.
[xxxii] Section 1848(s)(3)(B)(iii) of the Act.
[xxxiii] As of December 31, 2018, to allow for federal review and clearance prior to publication of this report
[xxxiv] Section 1848(s)(3)(B)(iii) of the Act.

- *Improvement or maintenance of symptoms for patients with suicide risk*
- *Recovery for all patients seen for mental health and substance use care*

Patient engagement/experience measures:

- *Patient experience of care for all patients seen with mental health and substance use care*

Process measures:

- *Standardized Assessment*[xxxv]
- *Initiation of antipsychotic treatment among individuals with first-episode psychosis (FEP)*
- *Initiation of medication-assisted treatment (MAT) among individuals with opioid use disorder (OUD)*
- *Monitoring*[xxxvi]
- *Safety plan for individuals with suicide risk*
- *Treatment Adjustment*[xxxvii]

- Fourteen of the 26 measures are being developed for use by any MIPS eligible clinician. These include five outcome measures, two patient engagement/experience measures, five patient-reported outcome performance measures, and two process measure type. These measures address high-priority measure topics such as opioid and substance use and the prioritized specialties of mental health/substance use, oncology, orthopedic surgery, palliative care, and radiology.

Outcome measures:

- *Risk-Standardized Bleeding-related Adverse Drug Event Rate for Patients Taking Anticoagulant Medications Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)*
- *Risk-Standardized Complication Rate (RSCR) Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)*
- *Composite radiation dose and image quality*
- *Risk-Standardized Opioid-Related Respiratory Depression Rate Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)*
- TBD measure related to pain management

Patient engagement/experience measures:

- Communication measure[xxxviii]
- Symptom measure[xxxix]

Patient-reported outcome performance measures:

[xxxv] All patients 18 years and older presenting with behavioral health complaint or indication that are administered standardized assessments at baseline and throughout a monitoring period, with treatment adjustment <when indicated>.

[xxxvi] All patients 18 years and older presenting with behavioral health complaint or indication that are administered standardized assessments at baseline and throughout a monitoring period, with treatment adjustment <when indicated>.

[xxxvii] All patients 18 years and older presenting with behavioral health complaint or indication that are administered standardized assessments at baseline and throughout a monitoring period, with treatment adjustment <when indicated>.

[xxxviii] Percent of patients age 18 years or over receiving specialist palliative care who report feeling heard and understood by their palliative care provider on the Heard & Understood item

[xxxix] Percent of patients age 18 years and over receiving specialist palliative care who report getting the help they need for their [symptom]; on an item derived from the CAHPS® Hospice Survey (whose respondents are bereaved caregivers) and modified for palliative care/seriously ill patient report

- *Care Goal Achievement Following Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)*
- *Patient Reported Health Related Quality of Life in Cancer Following Chemotherapy*
- Patient-reported outcome measure (TBD)
- *Patient Reported Pain in Cancer Following Chemotherapy*
- *Quality-of-Life Assessment for Patients who Receive Any Substance Use Disorder Intervention*

Process measure:

- *Opioid Extended Use Rate Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)*
- *Opioids in High Dosage in Persons Without Cancer Following Elective Primary Total Hip Arthroplasty (THA) and/or Total Knee Arthroplasty (TKA)*

Measure Specification (n = 3)

Two claims-based measures and one eCQM are in the specification stage of the measure lifecycle, after which they will undergo testing. One measure is applicable to the MACRA domain of clinical care and was included on the 2018 CMS Measures Under Consideration List.[10] Another measure addresses a high-priority topic of opioid and substance use and has an estimated completion date of September 2020. This measure is applicable to mental health and substance use, a prioritized specialty identified in the MDP.[1] The third measure, *Practitioner-Level Long-Term Catheter Rate*, is an outcome measure addressing patient safety and the prevention of health care harm. This measure has an estimated completion date of September 2019. (See *CMS-Funded Measures in Development* [Appendix G], Table G-3.[xl])

Process measure:

- *Annual Wellness Assessment: Preventive Care (Composite)*
- *Continuity of Pharmacotherapy for Opioid Use Disorder*[xli]

Outcome measure:

- *Practitioner-Level Long-Term Catheter Rate*

Fully Specified Pending Test Site (n = 10)

Ten measures are fully specified, but testing will begin once the measure developer procures representative testing sites; completion is estimated by June 2020. (See *CMS-Funded Measures in Development* [Appendix G], Table G-4.[xlii])

- Six of the 10 measures are condition-specific and applicable to the MACRA domain of patient and caregiver experience. One measure is focused on the documentation of a health care partner for patients with cognitive impairment; the others are focused on target-setting and progression toward individualized care goals via a validated assessment tool, thus demonstrating that care is personalized and aligned with patient preferences. Five of the six measures are patient-reported outcome performance measures, and the remaining process measure provides a foundation for the development of meaningful functional outcome measures.

[xl] Section 1848(s)(3)(B)(iii) of the Act.
[xli] Endorsed at the health plan level—the level of analysis and data source are being expanded.
[xlii] Section 1848(s)(3)(B)(iii) of the Act.

Patient-reported outcome performance measure:

- *Changes in Patient Reported Outcomes (PROs) Following Non-Emergent Percutaneous Coronary Intervention (PCI)*
- *Disease Activity Assessments and Target Setting in Patients with Rheumatoid Arthritis*
- *Functional Status Assessment and Target Setting for Patients with Congestive Heart Failure*
- *Functional Status Assessments and Target Setting for Patients with Asthma*
- *Pain Assessments and Target Setting for Patients with Osteoarthritis*

Process measure:

- *Documentation of a Health Care Partner for Patients with Dementia or Mild Cognitive Impairment*

- Two of the 10 measures are setting-specific process measures focused on follow-up and timely exchange of information. Applicable to the MACRA domain of care coordination, these measures will support reduction of hospital admissions.

  Process measures:

  - *Care Coordination after Asthma-Related Emergency Department Visit*
  - *Care Coordination after Asthma-Related Emergency Department Visit: EP Follow-up*

- One of the 10 measures is a general medicine/crosscutting measure focused on cognitive assessment for the aged population. This process measure is applicable to the MACRA domain of clinical care and the Meaningful Measure Area of prevention, treatment, and management of mental health.

  Process measure:

  - *Cognitive Impairment (CI) Assessment Among Older Adults (75 Years and Older)*

- One of the 10 measures is applicable to the MACRA domain of safety and the general medicine/crosscutting specialty. Under the topic of medication safety, this outcome measure pertains to adverse drug event subtopics for anticoagulants and is directly relevant to the gaps identified in the *CMS MDP Environmental Scan and Gap Analysis Report.*[6]

  Outcome measure:

  - *Adverse Drug Events for Patients Taking Anticoagulant Medications in an Ambulatory Setting*

Measure Testing (n = 13)

Thirteen measures are undergoing data collection and measure testing that will inform decisions about use of the measures. The estimated completion date is July 2019 for two measures, August 2019 for one, June 2020 for three, and September 2021 for the remaining seven. (See *CMS-Funded Measures in Development* [Appendix G], Table G-5.[xliii])

- Seven of the 13 measures are being tested in a specialty-specific QCDR. All are process measures applicable to the MACRA domain of care coordination, the Meaningful Measure Area of transfer of health information and interoperability, and the prioritized specialty of pathology.

[xliii] Section 1848(s)(3)(B)(iii) of the Act.

Process measures:

- *Notification to the ordering provider requesting amylase testing in the diagnosis of suspected acute pancreatitis*
- *Notification to the ordering provider requesting myoglobin or CKMB (creatine kinase-muscle/brain) in the diagnosis of suspected acute myocardial infarction (AMI)*
- *Notification to the ordering provider requesting thyroid screening tests other than only a Thyroid Stimulating Hormone test in the initial screening of a patient with a suspected thyroid disorder*
- *Rate of communicating results of an amended report with a major discrepancy to the responsible provider*
- *Rate of notification to clinical providers of a new diagnosis of malignancy*
- *Time interval: critical value reporting for chemistry*
- *Time interval: critical value reporting for troponin*

- Among the six remaining measures, four are applicable to the MACRA domain of patient and caregiver experience; one to safety; and one to care coordination. Three are patient-reported outcome performance measures, two of which assess "functional status pre-/post-orthopedic treatment/joint-specific." One general medicine/crosscutting survey measure can be categorized within the topic of patient/caregiver experience. The remaining two general medicine/crosscutting measures are condition-specific to diabetic complications and admissions due to heart failure.

  Outcome measures:

  - *Clinician and Clinician Group Diabetes Short- Term Complications Measure*
  - *Heart Failure Admission Measure*

  Patient-reported outcome performance measures:

  - *Functional Status Improvement for Patients who Received a Total Hip Replacement*
  - *Functional Status Improvement for Patients who Received a Total Knee Replacement*
  - Patient-reported outcomes and risk variable data collection (PRO)

  Patient engagement/experience measure:

  - *CAHPS® Measure Modification for CPC+ Practices*

See *CMS-Funded Measures in Development*[xliv] (Appendix G, Tables G-1 through G-5) for detailed information on the 52 measures that are continuing development (including estimated time to completion) and three measures on which development has been suspended.

Inventory of Applicable Quality Measures

The inventory of applicable quality measures describes the clinician measures available in 2019 for reporting by participants in the Quality Payment Program. The inventory consists of the 2019 MIPS measures, including MIPS APM measures; 2019 MIPS QCDR measures; and measures approved for use in 2019 Advanced APMs.

The 2019 MIPS measures were posted for stakeholder review and input through the rulemaking process, which culminated in the publication of the CY 2019 Physician Fee Schedule final rule on November 23, 2018, taking effect on January 1, 2019.[5(p. 60097)]

[xliv] Section 1848(s)(3)(B)(iii) of the Act.

2019 Inventory of MIPS Measures Included in the CY 2019 Physician Fee Schedule Final Rule

For the 2018 performance period, 275 MIPS measures were available for reporting. During the CY 2019 rulemaking process, 26 quality measures were removed[5(p. 60228-60240)] and eight new quality measures were added[5(p. 60097-60110)] to MIPS. The rulemaking process yielded 257 quality measures available for the 2019 performance period, including 75 intermediate outcome or outcome measures, 169 process measures, and eight efficiency measures; the remaining five are structural or patient engagement/experience measures.

Of the 257 quality measures, 169 are categorized as high-priority to assist clinicians in meeting the reporting requirements for a positive payment adjustment. CMS included high-priority measures in all specialty sets so that MIPS eligible clinicians should be able to select a specialty set that reflects their scope of practice and report on the measures within that set.[32] CMS modified the measures in the specialty measure sets based on review of updates to quality measure specifications, changes finalized through rulemaking, and feedback from specialty societies.[5(p. 60111)]

For CY 2019, CMS broadened the clinical scope of the specialty-specific sets with the addition of four new sets—geriatrics, physical therapy/occupational therapy, skilled nursing facility, and urgent care—for a total of 39 measure sets available for reporting.[5(p. 60111-60227)] An interactive tool to view the comprehensive list of MIPS measures is available at https://qpp.cms.gov/mips/quality-measures.

Eligible clinicians who participate in MIPS APMs are scored by a standard intended to reduce the reporting burden by eliminating the need to report both APM and MIPS measures.[33] The following 10 MIPS APMs will satisfy the requirements for the 2019 performance year:

- Bundled Payments for Care Improvement Advanced
- Comprehensive ESRD Care Model[xlv] (all tracks)
- Comprehensive Primary Care Plus Model (all tracks)
- Medicare Accountable Care Organization (ACO) Track 1+ Model
- Medicare Shared Savings Program Accountable Care Organizations (all tracks)
- Next Generation ACO Model
- Oncology Care Model[xlvi] (all tracks)
- Vermont All-Payer ACO Model (Vermont Medicare ACO Initiative)
- Maryland Total Cost of Care Model (Maryland Primary Care Program)
- Independence at Home Demonstration

Further information on MIPS APMs for performance year 2019 is available on the Quality Payment Program website at https://qpp.cms.gov/apms/mips-apms?py=2019 and in the CY 2019 Physician Fee Schedule final rule.[5(p. 59821)] MIPS APMs that are also Advanced APMs are included in *CMS APM Quality Measures Inventory* (Appendix H).

[xlv] This includes the Comprehensive ESRD Care (CEC) Model (LDO arrangement), Comprehensive ESRD Care (CEC) Model (non-LDO two-sided risk arrangement), and Comprehensive ESRD Care (CEC) Model (non-LDO one-sided risk arrangement).

[xlvi] This includes the Oncology Care Model (OCM) (one-sided Risk Arrangement) and Oncology Care Model (OCM) (two-sided Risk Arrangement).

Measures Approved for 2019 MIPS Reporting Through a QCDR

QCDRs are designed to expand reporting options for MIPS eligible clinicians, including those without sufficient specialty-applicable MIPS quality measures. QCDRs may report on MIPS quality measures and/or QCDR measures developed by QCDRs and submitted for CMS consideration. For the 2019 MIPS performance period, CMS approved 127 QCDRs covering 54 clinical specialties, as outlined in the *2019 Qualified Clinical Data Registry (QCDRs) Qualified Posting.*[34] Each QCDR has at least one outcome or other high-priority measure among six or more quality measures, consistent with the 2019 requirement for eligible clinicians reporting under MIPS. The approved 2019 QCDRs and corresponding measures list are located at: https://qpp.cms.gov/about/resource-library.

Thirty-four QCDRs focus on clinical specialties identified in the MDP as initial priorities: mental health (five), oncology (ten), orthopedic surgery (three), palliative care (three), pathology (five), and radiology (eight). These numbers represent an increase in applicable QCDRs for three specialties. Fifty-six QCDRs focus on a particular specialty, and 46 QCDRs are applicable to general medicine or crosscutting.

In accordance with MACRA requirements to evaluate quality measure gaps, five additional clinical specialties have been identified as priorities for measure development. For 2019, 19 QCDRs are applicable to the newly prioritized clinical specialties: allergy/immunology (one), emergency medicine (eight), neurology (three), physical medicine and rehabilitation (three), and rheumatology (four).

CMS APM Quality Measures

In the Advanced APM track of the Quality Payment Program, eligible clinicians who achieve threshold levels of participation based on Medicare payments or patient volume can earn a 5% incentive payment under the Quality Payment Program.[35] Qualifying APM participants are excluded from MIPS reporting requirements and payment adjustments.

The Center for Medicare & Medicaid Innovation (CMS Innovation Center) works in consultation with clinicians to test new payment and service delivery models. Models are designed to reduce expenditures while preserving or enhancing the quality of care for beneficiaries.

One criterion for Advanced APMs is that they must base payment for items and services in part on MIPS-comparable quality measures, which CMS has interpreted as measures that are reliable and valid and have an evidence-based focus. See *CMS APM Quality Measures Inventory* (Appendix H) for the list of measures for each Advanced APM included in the 2019 Quality Payment Program.

III. Summary and Conclusions

The 2019 MDP Annual Report, developed in accordance with MACRA, updates the HHS Secretary's efforts to advance the MDP and the Quality Payment Program through initiatives to increase measure harmonization and alignment across programs and payers; to collaborate with patients, clinicians, and other partners, and to reduce clinician burden. This report highlights the ongoing efforts of CMS in collaboration with patients, caregivers, clinicians, specialty societies, and other stakeholders to achieve high-quality health care and meaningful outcomes for patients. The incorporation of patient voices during measure development underscores the commitment of CMS to put patients first. In 2018, CMS employed multiple avenues for patient engagement to hear firsthand what is most important to patients and caregivers.

CMS actively partners with clinicians, professional societies, and others to identify meaningful measures and reduce clinician burden for quality data reporting. Through enhanced outreach and resource development in 2018, CMS demonstrated transparency and responsiveness to these stakeholders. CMS supported these efforts with steps taken to simplify reporting and create a refined MIPS measure set aligned with the Meaningful Measures framework.

In 2018, CMS awarded seven cooperative agreements that established public-private partnerships to develop quality measures for clinical specialties underrepresented in the measure portfolio. Through these awards, CMS is actively collaborating with clinician professional organizations and specialty societies, patient advocacy groups, and health systems to fill gaps in the Quality Payment Program.

The *2018 CMS MDP Environmental Scan and Gap Analysis Report*[2] systematically investigated measurement gaps within the five clinical specialties of allergy/immunology, emergency medicine, neurology, physical medicine and rehabilitation, and rheumatology. After 167 specialty-specific measures for these five specialties were mapped to a Meaningful Measures-based conceptual framework, 76 of the 182 subtopics identified in the environmental scan remained gap areas for those clinical specialties. The 2018 MDP TEP also recommended a portion of the measure gaps to be conceptualized as crosscutting—that is, applicable to most, if not all, clinicians. The TEP confirmed 28 high-priority, crosscutting measure subtopics as gaps to address with future measurement development.

In this 2019 MDP Annual Report, CMS provides a summary of development activities and expenditures for CMS-funded clinician quality measures, as well as an inventory of measures selected for the 2019 Quality Payment Program. As of the time of this report, 52 quality measures remain in development, 21 of which are electronically specified.

In partnership with patients, caregivers, clinicians, and other stakeholders, CMS is making substantial progress in fostering measure alignment and reducing clinician burden to support the Quality Payment Program. Through these ongoing efforts, CMS moves closer to a value-based health system that reflects and rewards what is most important and meaningful to patients.

Glossary of Acronyms/Abbreviations

Acronym	Definition
ACO	accountable care organization
AIR	American Institutes for Research
AMI	acute myocardial infarction
APM	alternative payment model
CAHPS®	Consumer Assessment of Healthcare Providers and Systems®
CATA	Cooperative Agreement Technical Assistance
CEC	Comprehensive ESRD Care
CHIP	Children's Health Insurance Program
CI	cognitive impairment
CKMB	creatine kinase-muscle/brain
CMD	Collaborative Measure Development
CMIT	CMS Measures Inventory Tool
CMS	Centers for Medicare & Medicaid Services
CORE	Center for Outcomes Research and Evaluation
CPC+	Comprehensive Primary Care Plus
CQL	Clinical Quality Language
CQM	clinical quality measure
CY	calendar year
eCQM	electronic clinical quality measure
EHR	electronic health record
EP	eligible professional
ESRD	end stage renal disease
FEP	first-episode psychosis
FY	fiscal year
HHS	Health and Human Services (U.S. Department of)
HSAG	Health Services Advisory Group, Inc.
IT	information technology
JHU	Johns Hopkins University
LDO	large dialysis organization
LMS	Learning Management System
MACRA	Medicare Access and Children's Health Insurance Program Reauthorization Act of 2015
MAP	Measure Applications Partnership
MAT	medication-assisted treatment
MBC	Measurement-Based Care
MDP	Measure Development Plan
MIDS	Measure & Instrument Development and Support
MIPS	Merit-based Incentive Payment System
MMS	Measures Management System
NCQA	National Committee for Quality Assurance
NLM	National Library of Medicine
NQF	National Quality Forum

Acronym	Definition
OCM	Oncology Care Model
ONC	Office of the National Coordinator for Health Information Technology
OUD	opioid use disorder
PCI	percutaneous coronary intervention
PFE	person and family engagement
PRO	patient-reported outcome
QCDR	qualified clinical data registry
RSCR	risk-standardized complication rate
TBD	to be determined
TEP	technical expert panel
THA	total hip arthroplasty
TKA	total knee arthroplasty

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