

NQF 2020 Activities: Report to Congress and the Secretary of the Department of Health and Human Services

FINAL COPY

This report was funded by the Centers for Medicare & Medicaid Services under contract number HHSM-500-2017-00060I Task Order HHSM-500-T0002.

Contents

I.	Executive Summary	4
II.	NQF Funding and Operations	6
III.	Recommendations on the National Quality Strategy and Priorities	7
	Impact of COVID-19 and NQF Response	7
	Patient-Directed Outcomes	9
	EHR-Sourced Measures	10
IV.	Quality and Efficiency Measurement Initiatives (Performance Measurement)	11
	Cross-Cutting Projects to Improve the Measurement Process	11
	<i>Risk Adjustment</i>	11
	<i>Social Risk Trial</i>	12
	Current State of the NQF Measure Portfolio.....	13
	Measure Endorsement and Maintenance Accomplishments	16
V.	Stakeholder Recommendations on Quality and Efficiency Measures and National Priorities	23
	Measure Applications Partnership	24
	MAP 2019-2020 Pre-Rulemaking Recommendations	24
	MAP Rural Health Workgroup	25
	MAP Clinician Workgroup	25
	MAP Hospital Workgroup.....	28
	MAP PAC/LTC Workgroup	29
	Core Quality Measures Collaborative-Private and Public Alignment.....	31
VI.	Gaps in Endorsed Quality and Efficiency Measures	32
	Gaps Identified in 2020 Completed Projects.....	32
	Measure Applications Partnership: Identifying and Filling Measure Gaps	32
VII.	Gaps in Evidence and Targeted Research Needs	33
	Attribution-Critical Illness/Injury	33
	Leveraging Electronic Health Record (EHR)-Sourced Measures to Improve Care	
	Communication and Coordination	34
	Rural Health Perspective	35
	Opioids and Behavioral Health	37
	Common Formats for Patient Safety.....	38
	Person-Centered Planning and Practice.....	38
	Maternal Morbidity and Mortality	39
	Measure Feedback Loop.....	40
	Building a Roadmap From Patient-Reported Outcome Measures to Patient-Reported Outcome	
	Performance Measures	42

Electronic Health Record Data Quality	43
Reducing Diagnostic Error	44
VIII. Conclusion	45
IX. References	48
Appendix A: 2020 Activities Performed Under Contract With HHS.....	53
Appendix B: Multistakeholder Group Rosters: Committee, Workgroups, Task Forces, and Advisory Panels	57
Appendix C: Scientific Methods Panel Roster	62
Appendix D: MAP Measure Selection Criteria	63
Appendix E: MAP Structure, Members, Criteria for Service, and Rosters	66
Appendix F: Federal Quality Reporting and Performance-Based Payment Programs Considered by MAP.....	68
Appendix G: Identified Gaps by NQF Measure Portfolio	69
Appendix H: Medicare Measure Gaps Identified by NQF’s Measure Applications Partnership.....	70
Appendix I: Statutory Requirement of Annual Report Components	73

I. Executive Summary

The National Quality Forum (NQF) is a not-for-profit, non-partisan, membership-based organization that works together with healthcare stakeholders as a catalyst to drive measurable health improvements. A collaborative approach driven by science, these experts provide a balanced perspective to advancing quality measurement and improvement strategies that help the nation achieve better and affordable care, while improving the overall health of Americans.

The Social Security Act—specifically section 1890(b)(5)(A)—mandates that the entity (in this case, NQF) report to Congress and the Secretary of the Department of Health and Human Services (HHS) highlights work performed in 2020 under contract with HHS. This annual report summarizes the following five areas:

- Recommendations on the National Quality Strategy and Priorities
- Quality and Efficiency Measurement Initiatives (Performance Measures)
- Stakeholder Recommendations on Quality and Efficiency Measures and National Priorities
- Gaps in Endorsed Quality and Efficiency Measures
- Gaps in Evidence and Targeted Research Needs

Recommendations on the National Quality Strategy and Priorities

The National Quality Strategy (NQS), first published in 2011, was established as a coordinated approach for quality improvement in healthcare. This strategy focused on three aims to improve health and the quality of healthcare targeting local, state, and national efforts. With NQS as a foundation, the Centers for Medicare & Medicaid Services (CMS) established the *Meaningful Measures* framework that identifies specific priorities addressing core topics that are critical to providing high quality care and improving individual outcomes. NQF and CMS continue to work together to ensure that NQF's work aligns with this framework to assess core issues that are most vital to high quality care and better patient outcomes.

NQF is committed to addressing national health priorities and collaborating with important stakeholders to drive better outcomes. This year, the COVID-19 pandemic has highlighted both the strengths and weaknesses in America's healthcare delivery system. CMS and NQF recognized and worked to address some immediate challenges that came to light during the pandemic. To aid in this effort, NQF received funding for a series of projects that would help to tackle some of the challenges the healthcare community has faced since the onset of this pandemic.

Quality and Efficiency Measurement Initiatives (Performance Measures)

NQF is committed to driving the use of best-in-class quality measures for use in federal and private improvement programs (including statutorily mandated Medicare programs, such as the Quality Payment Program, Hospital Value-Based Purchasing (VBP) Program, and other reporting initiatives across various care settings). Through a consensus-based approach, measures undergo careful evaluation through a set of rigorous criteria to ensure that they address aspects of care that are important and feasible to measure, provide consistent and credible information, and can be used for quality improvement and decision making. This year, NQF reviewed 84 measures across a variety of clinical and cross-cutting topic areas.

Performance measures also rely on evidence-based research and scientific methodology to ensure highly reliable and valid outcomes that represent and affect patient care. To that end, with funding from HHS, NQF undertook new work to provide technical guidance to measure developers on complex

methodological issues. *Best Practices for Developing and Testing Risk Adjustment Models* focused on the importance of exploring and appropriately adjusting or stratifying for social and functional risk factors so that providers can be accurately assessed and not inappropriately penalized financially just because their patient populations are sicker or have special healthcare needs. NQF also continued its efforts with the *Social Risk Trial* by working with its Scientific Methods Panel (SMP) to review social risk adjustment approaches for outcome measures submitted for endorsement or re-endorsement. The SMP and NQF's Disparities Committee also examined the technical issues that remained inconclusive at the end of the initial trial to finalize recommendations for the government on social risk adjustment.

Stakeholder Recommendations on Quality and Efficiency Measures and National Priorities

Measure alignment across the public and private sector is vital to reducing burden for providers and clinicians and allows for quality comparisons across providers and programs. NQF recommends the best-in-class quality measures for use in federal and private improvement programs. This effort for measure alignment continued during 2020. Specific projects include the Core Quality Measures Collaborative (CQMC) and the Measures Application Partnership (MAP).

The CQMC is a membership-driven initiative with funding provided by CMS and America's Health Insurance Plans (AHIP). Over 70 organizations are members of the CQMC, including CMS, health insurance providers, primary care and specialty societies, and consumer and employer groups. This group is working to reduce measurement burden by facilitating cross-payer measure alignment through the development and adoption of core measure sets to assess the quality of US healthcare.

The Measure Applications Partnership (MAP), convened by NQF since its inception in 2011, provides guidance on the use of performance measures in federal healthcare quality programs. These recommendations are made by MAP through its pre-rulemaking process, which enables a multistakeholder dialogue, with both the public and private sectors, to assess measurement priorities for these programs. MAP reviews measures that CMS is considering for implementation and provides guidance on their acceptability and value to stakeholders. This review focuses on the selection of high quality measures that optimally address health system improvement priorities, fill critical measurement gaps, and increase alignment.

Gaps in Endorsed Quality and Efficiency Measures

Multistakeholder committees continue to discuss and identify gaps that exist in current measure portfolios and the impact on quality of care. In addition to its role of recommending measures for potential inclusion into federal programs, MAP also provides guidance on identified measurement gaps at the individual federal program level. MAP specifically addressed the high-priority domains CMS identified in each of the federal programs for future measure consideration.

Gaps in Evidence and Targeted Research Needs

NQF's foundational frameworks identify and address measurement gaps in important healthcare areas, underpin future efforts to improve quality through metrics, and ensure safer, patient-centered, and cost-effective care that reflects current science and evidence. In 2020, NQF undertook several projects to create strategic approaches, or frameworks, to measure quality in areas critical to improving health and healthcare for the nation but for which quality measures are too few, underdeveloped, or nonexistent. Efforts included measurement frameworks for maternal morbidity and mortality, person-centered planning and practice, measure feedback loop, patient-reported outcomes (PROs), electronic health record (EHR) data quality, common formats for patient safety, and reducing diagnostic error. In

addition, NQF initiated work on five new strategic measurement frameworks addressing attribution, rural health, opioids and behavioral health, EHR-sourced measures for care coordination, and patient-reported outcome performance measures (PRO-PMs).

Taken together, NQF's quality work continues to be foundational to efforts to achieve a cost-efficient, high quality, and value-based healthcare system that ensures the best care for Americans and the best use of the nation's healthcare dollars. The deliverables NQF produced under contract with HHS in 2020 are referenced throughout this report, and a full list is included in [Appendix A](#).

II. NQF Funding and Operations

In 2018, the Bipartisan Budget Act amended the requirements of this annual report to include, in addition to the previous requirements set forth, new contract, financial, and operational information related to the Consensus-Based Entity (CBE). *Section 1890(b)(5)(A) of the Social Security Act is amended by adding the following financial and operations information in the Annual Report to Congress and the Secretary —*

- *an itemization of financial information for the fiscal year ending September 30 of the preceding year, including:*
 - *Annual revenues of the entity (including any government funding, private sector contributions, grants, membership revenues, and investment revenue)*
 - *Annual expenses of the entity (including grants paid, benefits paid, salaries and other compensation, fundraising expenses, and overhead costs); and*
 - *a breakdown of the amount awarded per contracted task order and the specific projects funded in each task order assigned to the entity*
- *Any updates or modifications of internal policies and procedures of the entity as they relate to the duties of the entity under this section, including (i) specifically identifying any modifications to the disclosure of interest and conflicts of interests for committees, work groups, task forces, and advisory panels of the entity; and (ii) information on external stakeholder participation in the duties of the entity under this section (including complete rosters for all committees, work groups, task forces, and advisory panels funded through government contracts, descriptions of relevant interests and any conflicts of interests for members of all committees, work groups, task forces and advisory panels, and total percentage by health care sector of all convened committees, work groups, task forces, and advisory panels.*

NQF's revenues for FY 2020 were \$21,881,093 million, including federal funds authorized under SSA 1890(d), private-sector contributions, membership revenue, and investment revenue. NQF's expenses for FY 2020 were \$19,286,448 million. These expenses include grants and benefits paid, salaries and other compensations, fundraising expenses, and overhead costs.

A complete breakdown of the amount awarded per contract is available in [Appendix A](#). Additionally, NQF continues to institute its conflict of interest process. All multistakeholder groups (committee, workgroups, task force, and advisory panels) must disclose any potential bias or conflicts of interest prior to being appointed. In 2020, NQF has made no updates or modifications to its disclosure of interest and [conflict of interest policies](#). Rosters of committees and workgroups funded under the CBE contract are available in [Appendix B](#).

III. Recommendations on the National Quality Strategy and Priorities

Section 1890(b)(1) of the Social Security Act (the Act) mandates that the CBE shall synthesize evidence and convene key stakeholders to make recommendations . . . on an integrated national strategy and priorities for health care performance measurement in all applicable settings. In making such recommendations, the CBE shall ensure that priority is given to measures: (i) that address the health care provided to patients with prevalent, high-cost chronic diseases; (ii) with the greatest potential for improving the quality, efficiency, and patient-centeredness of health care; and (iii) that may be implemented rapidly due to existing evidence, standards of care, or other reasons. In addition, the CBE is to “take into account measures that: (i) may assist consumers and patients in making informed health care decisions; (ii) address health disparities across groups and areas; and (iii) address the continuum of care a patient receives, including services furnished by multiple health care providers or practitioners and across multiple settings.” The CBE is required to describe this activity in this report pursuant to section 1890(b)(5)(A)(i)(II) of the Act.

The NQS, first published in 2011, was established as a coordinated approach for quality improvement in healthcare. This strategy outlined three aims used to guide and assess local, state, and national efforts to improve health and the quality of healthcare; six priorities focused on reducing harm, engaging families, improving coordination of care, and making quality care more affordable. Using NQS as a foundation, CMS established a [Meaningful Measures](#) initiative, which identifies specific priorities addressing core topics that are critical to providing high quality care and improving individual outcomes. NQF aligned work and efforts in 2020 with the CMS Meaningful Measures framework, specifically the meaningful measure areas of equity of care, prevention and treatment of opioid and substance use disorder, patient’s experience of care, and transfer of health information and interoperability. Several NQF projects focused on targeting these areas and are referenced through four major themes – COVID-19 and NQF Response, Patient-Directed Outcomes, Digital Measurement, and Aligning Quality Measurement.

Impact of COVID-19 and NQF Response

NQF gathered data, through several multistakeholder discussions, on the impact of the COVID-19 pandemic as it relates to quality measurement and reporting. These findings highlighted the immediate challenges facing active NQF endorsement and maintenance activities. Committee members responding to the COVID-19 pandemic (e.g., front-line clinicians) were faced with competing priorities, which limited their ability to actively participate on committees. NQF member organizations began focusing their resources to target the negative impact of the pandemic, while measure developers faced challenging timelines with limited staff time and access to testing sites. To address these challenges while balancing multiple stakeholders’ needs and continuing this important work, NQF provided greater flexibility for stakeholders active in the endorsement process. This included extending public commenting periods and creating two timeline tracks for submitting measures to promote optimal participation.

Additionally, NQF issued a [statement](#) encouraging end-users to work closely with measure developers to think through optimal temporary adjustment strategies in order to preserve validity, reliability, and risk adjustment appropriateness. To that end, NQF will not review any temporary changes to measure specifications in 2020 and is committed to providing more guidance, if needed, as the situation evolves.

Lastly, in 2020, NQF received funding for a series of projects that would help to tackle some of the challenges the healthcare community has faced since the onset of this pandemic.

Best Practices for Developing and Testing Risk Adjustment Models

COVID-19 has disproportionately affected racial/ethnic minority groups and exacerbated existing disparities confronting the medically underserved. Compared to Medicare-only beneficiaries (Centers for Medicare & Medicaid Services, 2020), dual-eligibles have a considerably higher number of hospitalizations across racial, ethnic, and gender categories during the COVID-19 pandemic thus far. This demonstrates that race, gender, and clinical factors may not fully explain the difference in health outcomes. The First Report from the Assistant Secretary for Planning and Evaluation (ASPE) to Congress found that functional status is also an important indicator of poor outcomes but is not always included in measure risk adjustment (US Department of Health & Human Services, 2020). This further underscores the importance of exploring and appropriately adjusting or stratifying for all applicable social and functional risk factors so that providers can be accurately assessed and not inappropriately penalized financially just because their patient populations are sicker or have special healthcare needs.

COVID-19 has also revealed opportunities to improve access to care for those socially disadvantaged. Assessing risk factor interactions, such as access to coronavirus testing and socioeconomic status, are important considerations in the development of a standard social risk adjustment process. This newly funded project will review current best practices for developing and testing risk adjustment models for quality measurement.

Addressing Opioid-Related Outcomes Among Individuals With Co-occurring Behavioral Health Conditions

The ongoing opioid epidemic has been compounded by COVID-19 with research indicating increases in opioid-associated morbidity and mortality (Williams, 2020). People who have been battling addiction have found themselves increasingly isolated and with fewer distractions from dependency behaviors due to COVID-19 social restrictions, placing them at increased risk for recovery setbacks (Blum Alexander B. et al., 2014; Franks & Fiscella, 2002). COVID-19 has also resulted in decreased access to treatment for opioid and other substance dependencies. With increasing use of telemedicine, clinicians are challenged to ensure appropriate drug screening is conducted during routine appointments (Silva & Kelly, 2020)

This newly funded project will develop an environmental scan to assess the current state of opioid-related healthcare quality measurement. NQF will also convene a Committee to help identify gaps and provide recommendations on the inclusion of measures in various federal programs and future measure development efforts regarding challenges posed by opioid use in the United States (US).

Attribution for Critical Illness and Injury

The COVID-19 pandemic has presented situations in which opportunities for time-sensitive care are often based on geography rather than health system network affiliation. Localized emergencies and nationwide threats to public health require population-level responses, including timely diagnosis, tracking, interventions, and coordination to achieve the best outcomes for all patients. A new approach in measurement attribution is needed for quality measurement to reflect the reality and challenges of improving health outcomes during emergencies.

The ongoing pandemic has underscored the challenges of making accurate attribution of the patient's coronavirus infection-related health outcomes to providers. An individual who seeks coronavirus testing or treatment may receive care from a stand-alone urgent care center, a neighborhood pharmacy, first responders, emergency department (ED) clinicians or intensive care units of more than one hospital, and multiple nurses and specialists. Where patients can receive care is contingent on factors such as the ED's or hospital's surge capacity, availability of ventilators, a patient's means of transportation to testing sites, and availability of coronavirus tests in the patient's community or state of residence. Providers involved in a patient's care may not belong to the same network and may not be able to communicate with each other using interoperable EHRs about the individual's healthcare needs. As a result, primary care providers, who usually assume the role of care coordinator, may or may not be aware of their patients' coronavirus-related ED visits or inpatient stays. These factors represent important examples of why geographic or population-based measure attribution models are needed to support team-based, coordinated emergency responses.

NQF will convene a multistakeholder Committee to make recommendations for developing geographical/population-based attribution models applicable to the quality measurement of high-acuity emergency care sensitive conditions (ECSCs) resulting from mass casualty incidents, such as the COVID-19 pandemic, trauma resulting from mass shooting or bombing, natural disasters (e.g., hurricanes, wildfires, and earthquakes), and other public health emergencies.

Patient-Directed Outcomes

Patient and family engagement are increasingly acknowledged as key components of a comprehensive strategy, along with performance improvement and accountability to achieve a high quality, affordable health system. Emerging evidence affirms that patients who are engaged in their care tend to experience better outcomes and choose less costly but effective interventions, such as physical therapy for low back pain, after participating in a process of shared decision making.

NQF continues to strategically focus on including the patient perspective within the Consensus Development Process (CDP) and during the review and evaluation of measures, in addition to expanding upon measurement for PROs. Highlighted below are two CMS-funded projects that emphasize efforts to address patient outcomes.

Patient and Caregiver Engagement (PACE) Advisory Group

NQF values the patient and caregiver voice in the endorsement process, which resulted in the convening of the Patient and Caregiver Engagement (PACE) Advisory Group to provide guidance on NQF's initiatives to enhance patient and caregiver engagement on NQF Standing Committees, such as providing assistance with recruiting patients/caregivers during the CDP nominations cycle, developing a patient/caregiver CDP orientation session, and developing a pilot mentorship program to support new patients/caregivers on CDP Standing Committees. The PACE Advisory Group, composed of 15 patient and caregiver representatives, provided input on strategies for recruiting patients and caregivers, reducing barriers to patient and caregiver participation, and preparing patients and caregivers to participate successfully in Committee discussions. To support new patients and caregivers on Committees, NQF instituted a mentorship program for new patients and caregivers that was implemented for the fall 2020 endorsement measure evaluation cycle. NQF also worked with Standing Committee co-chairs to actively engage patients and caregivers in meetings to provide their perspective, enhancing Committee deliberations and supporting stakeholder diversity.

Patient-Reported Outcomes (PROs): Best Practices on Selection and Data Collection

This CMS funded project addressed the barriers faced in the adoption of patient-reported outcomes (PROs) and patient-reported outcome performance measures (PRO-PMs). The project reviewed five commonly used PRO categories, then presented four best practices for PRO selection in clinical care. Identified in the report are ways to engage patients in a multistakeholder selection process as the voice of patients, family members, and caregivers is critical to the PRO selection process. Also outlined in the report is guidance to clinicians and organizations that can be used in addressing barriers in care management and planning, barriers that affect the selection and implementation of PROs and PRO-PMs. The [final report](#) reviews commonly used PRO categories and discusses best practices for PRO selection.

Building a Roadmap From Patient-Reported Outcome Measures to Patient-Reported Outcome-Performance Measures

Commencing in late 2020, the project will convene a multistakeholder Technical Expert Panel (TEP) to help identify attributes of high quality patient-reported outcome measures (PROMs) and to provide guidance to measure developers on how to develop digital PRO-PMs based on those PROMs through a step-by-step roadmap. The TEP will include patient representatives who have lived experience with chronic pain and functional limitations, two condition areas that have a significant number of existing, validated PROMs.

EHR-Sourced Measures

NQF has identified the ability of EHR systems to connect and exchange data as an important aspect of quality healthcare. However, electronic clinical quality measures (eCQMs) and EHR data are not enough to enable automated quality measurement. Currently, NQF has endorsed nearly 540 healthcare performance measures with only 34 of these being eCQMs. Although the number of endorsed eCQMs is low, several measures in NQF's portfolio are quality measures that rely on data that come from an EHR, which NQF refers to as EHR-sourced measures. As evolving technologies emerge, there will be a greater need to promote the transformation of these EHR-sourced measures to digital health and support the adoption of digital quality measures, or dQMs.

However, to better understand the potential of improving quality measurement with the use of EHR data for clinical quality measures, or CQMs, it is important to examine the current state of EHR data quality. To that end, CMS funded a new initiative that focuses on the need to coordinate care using EHR-sourced quality measurement.

Leveraging Electronic Health Record (EHR)-Sourced Measures to Improve Care Communication and Coordination

Measuring care communication and coordination has been challenging because of the array of approaches and interventions; difficulties in measuring specific activities and in generalizing program success; and linking approaches to improved outcomes. This need for increased care communication and coordination has been underscored by the challenges of social distancing and the number of patients seeking telehealth services due to COVID-19. Care coordination is an effective tool to streamline communication between each clinician, patient, and caregiver throughout the continuum of care. In coordinated care, healthcare teams should strive to understand and implement a cohesive care

plan in which goals do not change as the patient moves from setting to setting (Williams, 2020) so that they do not experience duplicative testing and treatments that increase patient risks.

EHRs are primarily designed to support patient care and billing, but they also contain tools and specific design features that aid in capturing data for secondary uses, such as care coordination. EHRs have the potential to improve care coordination and how it is measured during the challenges of a pandemic.

In 2020, NQF continued the implementation of an 18-month project (initiated in 2019) to identify the causes, nature, and extent of EHR data quality issues, particularly as they relate to measure development, endorsement, and implementation. This newly funded project will identify best practices to leverage EHR-sourced measures to improve care communication and coordination quality measurement in an all-payer, cross-setting, and fully electronic manner.

IV. Quality and Efficiency Measurement Initiatives (Performance Measurement)

Section 1890(b)(2) and (3) of the Act requires the consensus-based entity (CBE) to endorse standardized healthcare performance measures. The endorsement process must consider whether measures are evidence-based; reliable; valid; verifiable; relevant to enhanced health outcomes; actionable at the caregiver level; feasible for collecting and reporting, responsive to variations in patient characteristics, such as health status, language capabilities, race or ethnicity, and income level; and consistent across types of healthcare providers, including hospitals and physicians. In addition, the CBE must establish and implement a process to ensure that measures endorsed are updated (or retired if obsolete) as new evidence is developed. The CBE is required to describe these duties in this report pursuant to section 1890(b)(5)(A)(i)(III) of the Act.

Cross-Cutting Projects to Improve the Measurement Process

Performance measures rely on evidence-based research and scientific methodology to ensure highly reliable and valid outcomes that represent and influence patient care. To that end, with funding from HHS, NQF undertook new work to expand the science of quality measurement.

Risk Adjustment

The quality measurement enterprise seeks to link payment to quality of care, generally known as value-based purchasing (VBP). For VBP to be successful, patients need accurate and reliable information on provider performance to make informed decisions. In addition, providers need comprehensive, reliable, and timely information to make quality care decisions that result in improved outcomes for patients while being held accountable for those outcomes in a fair and comparable manner. To level the playing field, risk adjustment methods have been applied to many measures, but not all, and not in a standardized method across measures. As part of NQF's COVID-19 response, assessing risk factors continues to be of high importance when considering social risk adjustment.

Risk-adjusting measures to account for differences in patient health status and clinical factors (e.g., comorbidities, severity of illness) that are present at the start of care have been widely accepted and implemented (Blum Alexander B. et al., 2014; Franks & Fiscella, 2002). However, the increased use of outcome and resource use measures in payment models and public reporting programs has raised concerns regarding the adequacy and fairness of the risk adjustment methodologies used in these measures, especially as it relates to functional status and social risk factors, such as income, education, social support, neighborhood deprivation, and rurality (Bernheim et al., 2016; Chatterjee & Werner,

2019). Functional risk factors are important to examine since they may mediate the relationship between social risk, quality outcomes, and resource use. Measure developers have long expressed a need for technical guidance on developing and testing social and/or clinical risk adjustment models for endorsement and maintenance and the appropriateness of a standardized risk adjustment framework (National Quality Forum, 2017). Moreover, risk adjustment of functional status-related factors within quality measurement is under-explored and underutilized for comparing provider performance between health outcomes and resource use.

For this effort, NQF will build upon several years of work on developing guidance for risk adjustment model development, including NQF's [Disparities Project](#) and the [Social Risk Trial](#). In late 2020, NQF assembled a TEP to work toward consensus decisions that yielded a scholarly environmental scan report regarding the current state of data sources used for risk adjustment, functional or social risk factors available for testing, and approaches to conceptual and statistical methods for risk adjustment. In 2021, the TEP will use the results of the scan to develop technical guidance for measure developers that includes emerging good and best practices on when and how to adjust for functional and social risk factors in measure development.

Social Risk Trial

In 2014, NQF published a [report](#) recommending that performance measures should account for factors outside the provider's control, such as a patient's age, gender, comorbid conditions, and other social determinants of health. Often, healthcare outcomes are not solely the results of the quality of care received but can be influenced by social risk factors. Beginning in 2015, NQF implemented the first Social Risk Trial, a two-year effort between 2015 and 2017. During this period, NQF relaxed the policy against social risk adjustment in reviewing outcome measures submitted for endorsement or re-endorsement. Soon after the trial, NQF released a [final report](#) in August 2017, reaffirming the recommendation in their 2014 report that performance measures should be risk-adjusted for social risk factors when conceptual reasons and empirical evidence demonstrate it is appropriate. Also, stakeholders called for continuous efforts to examine some of the technical issues that remained inconclusive at the end of the first trial. In response to stakeholders' concerns, HHS has funded NQF to implement the second Social Risk Trial, a three-year effort that began in May 2018 and will conclude in May 2021.

As part of this funded work, NQF has continued working with the Disparities Standing Committee and the work of the Social Risk Trial, building upon the lessons of the initial NQF-funded initiative. In 2020, the Disparities Committee met during two virtual meetings to review the risk-adjusted measures for the spring 2020 cycle submissions, review the risk models in use, and interpret results. The graphic below (Figure 1) provides a breakdown of the total measures reviewed, including the number of outcome measures, those measures with a conceptual rationale for inclusion of social risk, and a final number of measures that used some form of risk adjustment.

Figure 1. Breakdown of Total Number of Measures Reviewed

Breakdown of Total Number of Measures Reviewed (Spring 2020)



The conceptual rationale to support the potential impact of social risk factors was established through literature reviews, internal data analysis, or expert group consensus. Some of the social risk factors that have been considered include race/ethnicity, payer, Agency for Healthcare Research and Quality (AHRQ) Socioeconomic Status (SES) Index, education, employment status, zip code, rural/urban, relationship status, income, and language. Reasons cited for not adjusting included negligible impact of SES adjustment, potential to mask poor performance and disparities in care, and relatively constant distribution of patients with risk factors.

Since 2017, there have been 317 measures submitted; 125 of those used some form of risk adjustment, and 120 measures had a conceptual model outlining the impact of social risk. Most of the measures submitted were process measures (45 percent), and the overall portfolio of measures included other measure types, such as composite measures, efficiency, intermediate outcome, outcome, PRO-PM, resource use, and structure measures.

The Disparities Standing Committee also began to identify clear recommendations for risk adjustment of social factors for quality measurement. The final report for this project will explore the impact of social risk factors on the results of measures and the appropriateness of including social risk factors in the risk adjustment models of measures submitted for endorsement review, if there is a conceptual basis and empirical evidence to support doing so. In addition, this report is expected to advance the science of risk adjustment and provide expert guidance to address the challenges and opportunities related to including social risk factors in risk adjustment models. The final report for this project will be completed in July 2021.

Current State of the NQF Measure Portfolio

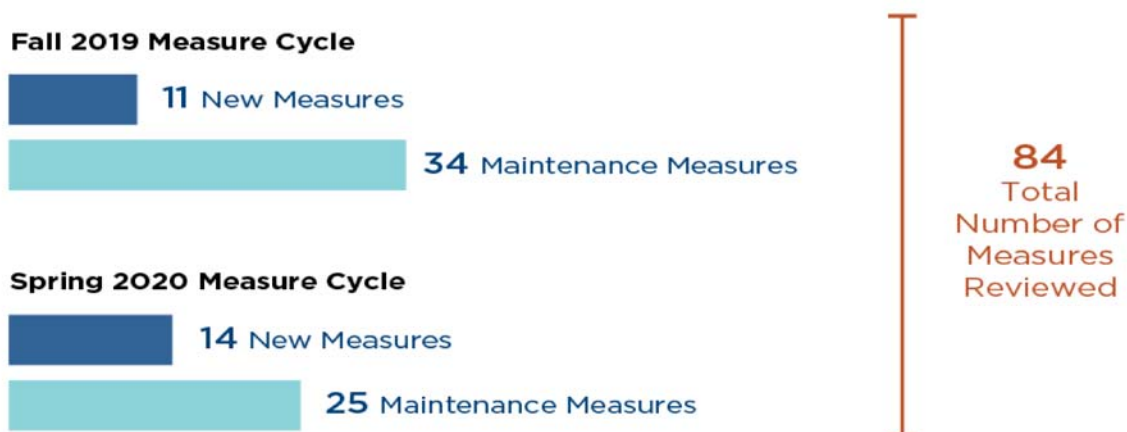
NQF encourages measure developers to submit measures that can drive meaningful improvements in care and fill known measure gaps that align with healthcare improvement priorities. NQF brings together multistakeholder Committees to evaluate measures for endorsement twice a year, with submission opportunities in the spring and fall of each year. This frequent review process allows measure developers to receive a timely review of their measures, in addition to reducing Committee downtime between review cycles.

NQF's endorsed measure portfolio undergoes an evaluation for maintenance of endorsement approximately every three years. The maintenance process ensures that NQF-endorsed measures represent current clinical evidence, continue to have a meaningful opportunity to improve, and have been implemented without negative, unintended consequences. In a maintenance review, NQF

Committees review previously endorsed measures to determine if they still meet NQF criteria for endorsement. This maintenance review may result in removing endorsement for measures that no longer meet rigorous criteria, facilitating measure harmonization among competing or similar measures, or retiring measures that no longer provide significant opportunities for improvement.

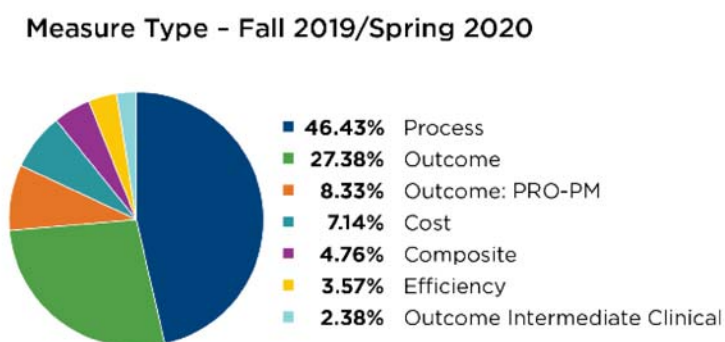
This year, NQF reviewed **84** measures, both new and maintenance measures, across a variety of clinical and cross-cutting topic areas (see Figure 2).

Figure 2. Number of Measures Reviewed in the Fall 2019 and Spring 2020 Cycles



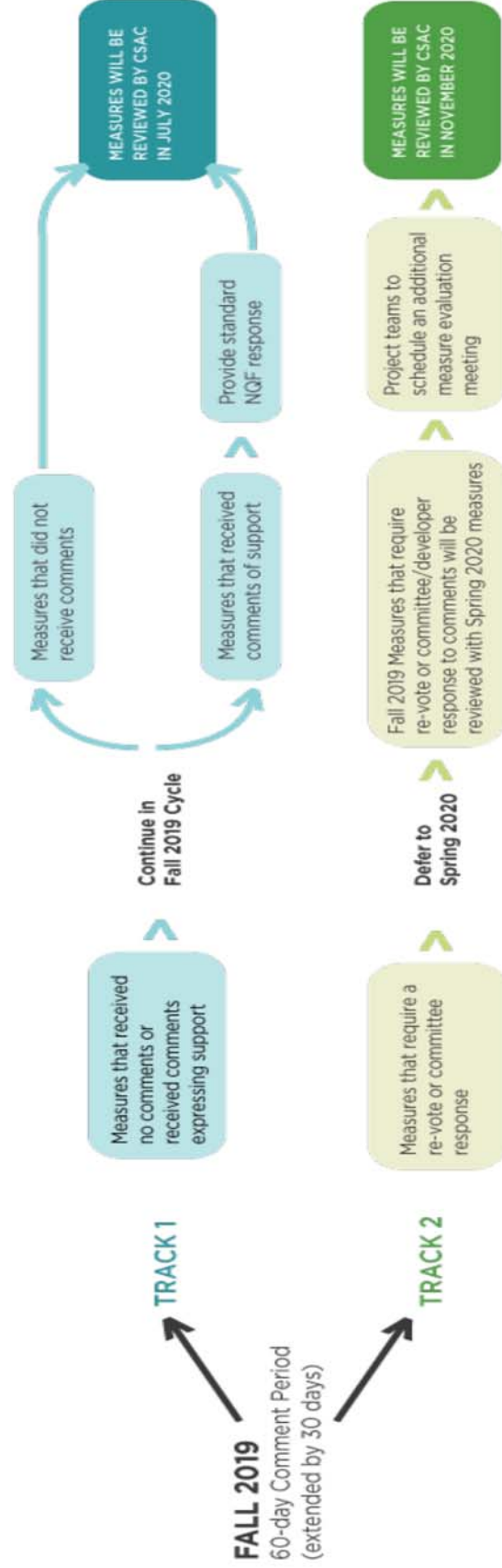
The data highlights a decline in submitted measures compared to previous years (in 2019, there were 127 submitted measures) due in part to circumstances surrounding the COVID-19 global pandemic. However, the measurement community continues to voice the importance of the endorsement process. Among those submitted, 38 percent were outcome measures (Figure 3). Additionally, NQF did see a slight uptake in eCQMs, receiving seven measures during the two cycles (in 2019, there were only five).

Figure 3. Measure Types Reviewed During the Fall 2019 and Spring 2020 Cycles



In response to the pandemic, NQF extended commenting periods for all measures evaluated in the fall 2019 cycle from 30 days to 60 days. Based on the comments received during this 60-day extended commenting period, measures entered one of two timeline tracks:

Figure 4. Measure Review Timeline Track



NQF's multistakeholder Committees, composed of stakeholders from across the healthcare landscape (e.g., consumers, providers, patients, payers, and other experts), review both previously endorsed and new measures submitted using [NQF's measure evaluation criteria](#). All measures submitted for NQF endorsement are evaluated against the following criteria:

- Importance to Measure and Report
- Reliability and Validity—Scientific Acceptability of Measure Properties
- Feasibility
- Usability and Use
- Comparison to Related or Competing Measures

Measure Endorsement and Maintenance Accomplishments

NQF's measure portfolio includes measures from 14 clinical and cross-cutting topic areas. The following paragraph highlights its importance and the outputs from the endorsement process during the spring and fall cycles.

All-Cause Admissions and Readmissions

Unplanned returns to the hospital, including visits to the ED, are costly, common, and potentially avoidable (Auerbach et al., 2016; Collins et al., 2014). Studies have shown that patients discharged from the hospital have an increased risk for being readmitted, and approximately a third of these readmissions are preventable (van Walraven et al., 2011). The Agency for Healthcare Research and Quality (AHRQ) found that roughly 3.3 million US readmissions in 2011 occurred within 30 days of discharge and contributed to a total cost of \$41.3 billion across all payers (Hines et al., 2014). Furthermore, studies have shown that patients discharged from an inpatient hospitalization are at an increased risk of an ED encounter (Hastings et al., 2008). From 2006-2016, the annual number of ED visits in the US increased by nearly 25 percent, representing an opportunity to improve care transitions that avoid an unnecessary escalation of a patient's condition (Rui et al., 2016).

The review and evaluation of admissions and readmissions measures continue to be a priority, specifically the endorsement of hospital-wide and condition-specific measures (e.g., renal, cardiovascular, and surgery) for various care settings, including hospitals, home health, skilled nursing facilities, long-term care facilities, inpatient rehab facilities, inpatient psychiatric facilities, and hospital outpatient/ambulatory surgery centers. Currently, there are 34 NQF-endorsed measures in the All-Cause Admissions and Readmissions portfolio, many of which are part of several federal quality improvement programs.

The All-Cause Admissions and Readmissions Standing Committee evaluated one new measure against NQF's measure evaluation criteria during the [fall 2019 cycle](#). This measure was initially submitted for review during the spring 2019 cycle. However, due to concerns with Committee quorum and a lack of clarity on measure testing information presented during the spring 2019 post-comment call, this measure was deferred to the fall 2019 cycle. The measure was ultimately endorsed.

In the [spring 2020](#) cycle, the Standing Committee evaluated two newly submitted measures and three measures undergoing maintenance review against NQF's measure evaluation criteria. Four measures were endorsed while one measure did not meet the criteria for endorsement. This was due to concerns around validity and the adequacy of the correlations of the measure score to other renal-focused quality measures.

Nine measures, seven maintenance and two new, were reviewed during the fall 2020 cycle. The final endorsement decisions will be finalized in 2021.

Behavioral Health and Substance Use

Behavioral health is composed of not only mental health, but also substance use disorders (SUDs) and represents a key construct of healthcare across the globe, unified by brain-based etiology and behavioral symptomology. A comprehensive annual report of behavioral health prevalence data is found in the Substance Abuse and Mental Health Services Administration's (SAMHSA) National Survey on Drug Use and Health (NSDUH). Results from the 2018 NSDUH indicated that 19.3 million Americans age 18 years or older suffered from an apparent SUD (not including tobacco dependence), and 47.6 million Americans age 18 years or older suffered from a mental illness. This rate is consistent with other epidemiologic studies that have previously revealed the prevalence of behavioral health conditions in the US (Kamal, 2017). The 2018 NSDUH further discusses an important concern about US behavioral healthcare: Only 10.2 percent of persons age 12 years and older with SUDs reported receiving treatment during that year and only 43.3 percent of persons age 18 years and older with any mental illness reported receiving care for that condition (Bose et al., 2017). These gaps in behavioral health pathology and treatment represent unmet needs among those with behavioral health conditions.

The review and evaluation of behavioral health measures have long been a priority of NQF with endorsement for mental health and SUD measures going back more than a decade. At present, there are 42 NQF-endorsed behavioral health measures.

During the [fall 2019 cycle](#), the Behavioral Health and Substance Use (BHSU) Committee evaluated seven measures for endorsement. The cycle included the evaluation of measures, including the use of physical restraint and seclusion, follow-up after ED visits for two newly submitted measures, and five measures undergoing maintenance review against NQF's standard evaluation criteria. Five measures were endorsed while one measure did not meet the criteria for endorsement. This was due to evidence concerns. Additionally, one measure was withdrawn from consideration by the measure developer. During the [spring 2020 cycle](#), the BHSU Committee evaluated one newly submitted measure and two measures that underwent maintenance review against NQF's evaluation criteria. One measure received endorsement while the other two measures did not meet the criteria due to insufficient evidence supporting one measure and validity concerns associated with exclusion criteria for the other.

Four measures, two maintenance and two new, were reviewed during the fall 2020 cycle. The final endorsement decisions will be finalized in 2021.

Cancer

Cancer is the second most common cause of death in the US, exceeded only by heart disease (Howlander et al., 2020). The National Cancer Institute (NCI) estimates that in 2020, 1.8 million new cases of cancer would be diagnosed in the US and over 600,000 people will die from the disease (Mariotto et al., 2011). Furthermore, nearly 40 percent of all men and women in the US will develop cancer during their lifetime (American Cancer Society, 2020). In addition, diagnosis and treatment of cancer has great economic impact on patients, their families, and the US healthcare system. For 2020, NCI estimates that the costs for cancer care totaled could reach \$174 billion (Mariotto et al., 2011).

The Cancer portfolio contains 18 NQF-endorsed measures that span various types of cancers (e.g., breast cancer, colon cancer, and prostate cancer). The Cancer portfolio also includes measures that focus on pain management, appropriate treatment, and diagnostic imaging.

During the [fall 2019 cycle](#), the Cancer Standing Committee evaluated eight measures undergoing maintenance review against NQF's measure evaluation criteria. All eight measures received endorsement. For the [spring 2020 cycle](#), the Cancer Committee evaluated one measure undergoing maintenance review, which did not meet the criteria for endorsement.

No measures were submitted to the Cancer Standing Committee for the fall 2020 cycle.

Cardiovascular

Cardiovascular disease (CVD), which comprises coronary artery disease (CAD), heart failure (HF), stroke, and hypertension, is a significant burden in the US, leading to approximately one in four deaths per year and affecting 48 percent of adults age 20 years and older (Benjamin et al., 2019; Heron, 2016).

Considering the effect of CVD, measures that assess clinical care performance and patient outcomes are critical to reducing its negative impact. Heart disease is the leading cause of death in the US and stroke is the fifth leading cause (Heron, 2017).

The Cardiovascular portfolio contains 41 NQF-endorsed measures, including measures for acute myocardial infarction (AMI), cardiac catheterization/percutaneous coronary intervention (PCI), CAD/ischemic vascular disease (IVD), HF, hyperlipidemia, and hypertension.

During the [fall 2019 cycle](#), the Cardiovascular Standing Committee evaluated one newly submitted measure and six measures undergoing maintenance review against NQF's measure evaluation criteria. Four measures were endorsed while three measures did not meet the criteria for endorsement. These three measures did not pass the *Performance Gap* criterion due to a lack of performance data. For the [spring 2020 cycle](#), four measures undergoing maintenance review received endorsement.

Two maintenance measures were reviewed during the fall 2020 cycle. The final endorsement decisions will be finalized in 2021.

Cost and Efficiency

In 2018, healthcare spending in the US reached \$3.6 trillion, or approximately \$11,172 per person (Medicare Payment Advisory Commission, 2020). This level of spending accounted for 17.7 percent of gross domestic product (GDP). Forecasts from 2018 to 2027 estimate that healthcare spending will outpace GDP growth by 0.8 percent. This increase will raise the health share of GDP from 17.9 percent in 2017 to 19.4 percent by 2027 (Medicare Payment Advisory Commission, 2020). Spending on the overall Medicare program is growing rapidly as well—from 15 percent of federal spending in 2018 to an expected 17 percent by 2027 (Medicare Payment Advisory Commission, 2020). Improving health system efficiency has the potential to simultaneously reduce the rate of cost growth and improve the quality of care provided. Cost measures are the building blocks to efficiency and value. It is important to note that cost and resource use measures should be used in the context of and reported with quality measures.

The Cost and Efficiency measure portfolio contains 10 measures of cost and/or resource use that are both condition-specific (e.g., payments associated with 30-day episodes of care for pneumonia) and non-condition specific (e.g., Medicare Spending Per Beneficiary).

During the fall 2019 cycle, there were no measures submitted for evaluation. Rather, the Cost and Efficiency Standing Committee held a topical webinar to examine validity testing with respect to cost measurement. For the [spring 2020 cycle](#), the Committee evaluated six new measures. Three measures received endorsement while the other three did not meet the criteria for endorsement.

One maintenance measure was reviewed during the fall 2020 cycle. The final endorsement decision will be finalized in 2021.

Geriatrics and Palliative Care

Improving the quality of both palliative and end-of-life care, and geriatric care more generally, is becoming increasingly important due to factors that have intensified the need for individualized, person-centered care. Some of these factors include the aging US population; the projected increases in the number of Americans with chronic illnesses, disabilities, and functional limitations; and increases in ethnic and cultural diversity (Institute of Medicine, 2014). In 2018, the population age of 65 years and older numbered 52.4 million individuals (16 percent of the US population), and this figure is expected to increase to 94.7 million by 2060 (The Administration for Community Living, 2020). Forty-six percent of the noninstitutionalized US population age 65 years or older has two or three chronic conditions, and 15 percent has four or more. Additionally, 46 percent of those who are 75 years of age and older report limitations in physical functioning (The Administration for Community Living, 2020; Ward & Schiller, 2013).

NQF's current portfolio includes 36 endorsed measures addressing experience with care, care planning, pain management, dyspnea management, care preferences, and quality of care at the end of life.

During the [fall 2019 cycle](#), the Geriatric and Palliative Care Standing Committee evaluated two measures undergoing maintenance review against NQF's measure evaluation criteria. One measure was endorsed, while the other did not meet the measure evaluation criteria. The Committee did not evaluate any measures during the spring 2020 cycle.

Four measures, all undergoing maintenance, were reviewed during the fall 2020 cycle. The final endorsement decisions will be finalized in 2021.

Neurology

Neurological conditions and injuries affect millions of Americans each year and take a significant toll on patients, families, and caregivers. Additionally, billions of dollars are spent on treatment, rehabilitation, and lost or reduced earnings (Centers for Disease Control and Prevention, 2020b). Stroke, a leading cause of neurological injury, is the fifth leading cause of death and disability in the US and is ranked as the second-leading cause of death worldwide (Centers for Disease Control and Prevention, 2020b). Stroke remains a persistent public health concern and continues to present considerable sociodemographic and economic implications nationally. Alzheimer's disease is the most common form of dementia, with an estimated five million Americans living with the disease. An estimated 14 million people will have Alzheimer's by 2050.

NQF's current Neurology portfolio includes 12 endorsed measures on the diagnosis and treatment of stroke and subarachnoid hemorrhage, as well as carotid artery stenosis management.

During the [fall 2019 cycle](#), the Neurology Standing Committee reviewed two maintenance measures and recommended both measures for continued endorsement. The Committee did not review any measures in the spring 2020 cycle. Therefore, NQF held a spring 2020 topical webinar to provide an update on the state of the current neurology portfolio.

One new measure was reviewed during the fall 2020 cycle. The final endorsement decision will be finalized in 2021.

Patient Experience and Function

The implementation of patient-centered measures is one of the most important approaches to ensure that healthcare in the US reflects the goals, preferences, and values of care recipients. Patient- and family-engaged care is planned, delivered, managed, and continually improved in active partnership with patients and their families (or care partners as defined by the patient). As such, effective engaged care must adapt readily to individual and family circumstances, as well as differing cultures, languages, disabilities, health literacy levels, and socioeconomic backgrounds (Agency for Healthcare Research and Quality, 2018; Frampton et al., 2017). The coordination of care is an essential component to the improvement of patient experiences and outcomes. Poorly coordinated and fragmented care not only compromises the quality of care patients receive, but may also lead to negative unintended consequences, including medication errors and preventable hospital admissions (Schultz et al., 2013). For patients living with multiple chronic conditions, including more than two-thirds of Medicare beneficiaries, poor care transitions between different providers can contribute to poor outcomes and hospitalizations (Centers for Medicare & Medicaid Services, 2019a).

The NQF Patient Experience and Function (PEF) Committee was established to evaluate measures within this topic area for NQF endorsement. NQF has endorsed over 50 measures addressing patient experience of care, patient functional status, mobility and self-care, shared decision making, patient activation, and care coordination.

For the [fall 2019 cycle](#), the PEF Committee reviewed two maintenance measures. The Committee recommended one measure for continued endorsement and did not recommend the second measure due to concerns related to data element level reliability. During the [spring 2020 cycle](#), the Committee evaluated one newly submitted measure and three measures undergoing maintenance review against NQF's measure evaluation criteria. All four measures received endorsement.

Two new measures were reviewed during the fall 2020 cycle. The final endorsement decisions will be finalized in 2021.

Patient Safety

The Institute of Medicine (IOM) report, *To Err Is Human: Building a Safer Health System*, published in 2000, created a movement by individuals and institutions to closely examine the avoidable harms in healthcare (Institute of Medicine (US) Committee on Quality of Health Care in America, 2000). These included hospital-based medical errors, adverse drug events, injuries from surgery, falls, pressure ulcers, and other causes of preventable morbidity and mortality. Despite 20 years of progress since the publication of that report, medical errors and other patient safety events remain common across all settings of care. There has been demonstrated improvement in specific areas, including the reduction of hospital-acquired infections. However, the scale of improvements in patient safety has been limited. Many interventions to improve patient safety have been effective, but many others have proven ineffective, and the effectiveness of many interventions is unclear. Nevertheless, the US healthcare system is not a high-reliability system. Today, patients commonly experience potentially preventable harm, and it is estimated that medical errors are the third leading cause of deaths in the US, accounting for more than 250,000 deaths per year (Makary & Daniel, 2016).

The NQF portfolio of safety measures contains 60 measures, spanning a variety of topical areas and includes outcomes as well as important, measurable processes in healthcare that are associated with patient safety. Public accountability and quality improvement programs use many measures from the

NQF portfolio. Over more than a decade, NQF's portfolio has expanded to address current and evolving public health issues, such as the opioid crisis. As EHRs have become increasingly prevalent in healthcare, it is important to develop measures that monitor and improve safety events that may be caused by the technology itself.

For the [fall 2019 cycle](#), the Patient Safety Standing Committee evaluated one newly submitted measure and three measures undergoing maintenance review against NQF's standard evaluation criteria. The Committee recommended all four measures for endorsement. For the [spring 2020 cycle](#), the Patient Safety Standing Committee evaluated one newly submitted measure and one measure undergoing maintenance review. Both measures received endorsement.

Eight maintenance measures were reviewed during the fall 2020 cycle. The final endorsement decisions will be finalized in 2021.

Perinatal and Women's Health

Access to high quality care for women of reproductive age before and between pregnancies—including pregnancy planning, contraception, and preconception care—can significantly reduce the risk of pregnancy-related complications, such as maternal and infant mortality, and improve the overall health of women and children. Access is vitally important as the maternal mortality rate for Black women in 2018 was more than double that of White women and three times the rate for Hispanic women (Hoyert & Miniño, 2020). Black patients also experience significantly more severe maternal morbidities than White patients (Howell et al., 2016).

The Perinatal and Women's Health portfolio includes 18 endorsed measures on contraceptive care, reproductive health, pregnancy, labor and delivery, postpartum care for newborns, and childbirth-related issues for women.

During the [fall 2019 cycle](#), the Perinatal and Women's Health Standing Committee reviewed one measure for endorsement, which focused on contraceptive care. This measure received endorsement. For the [spring 2020 cycle](#), the Committee evaluated six measures related to care delivered immediately before and after birth, including labor and delivery care, practices to promote positive health outcomes for mothers and infants, and unexpected negative infant health outcomes. All six measures received endorsement.

One maintenance measure was reviewed during the fall 2020 cycle. The final endorsement decision will be finalized in 2021.

Prevention and Population Health

Traditionally, medical care has been the primary focus of efforts to improve the health and well-being of individuals and populations. As a result, nearly all national health expenditures have been attributed to healthcare services. Yet, medical care has a relatively small influence on health outcomes when compared to interventions that address smoking, lower educational attainment, poverty, poor diet, and physical environmental hazards (e.g., unsafe housing and polluted air) (Eggleston & Finkelstein, 2014). There is growing recognition of the role of social determinants of health (SDOH) in influencing health outcomes. Maintaining and improving the health and well-being of individuals and populations will require a multidisciplinary, multifactorial approach to address SDOH (Office of Disease Prevention and Health Promotion, 2020). Performance measures are needed to assess improvements in population health, as well as the extent to which healthcare stakeholders are using evidence-based strategies (e.g.,

prevention programs, screening, and assessments for community needs). To support this effort, NQF endorses and maintains performance measures related to prevention and population health through a multistakeholder Consensus Development Process (CDP).

The NQF Prevention and Population Health's portfolio of measures includes measures for health-related behaviors to promote healthy living; community-level indicators of health and disease; social, economic, and environmental determinants of health; primary prevention and/or screening; and oral health.

During the [fall 2019 cycle](#), the Committee reviewed one maintenance measure and two new composite measures for endorsement. One measure was endorsed while the other measure did not meet the must-pass criteria of the *Quality Construct of Composite*. For the [spring 2020 cycle](#), the Committee reviewed two measures for maintenance of endorsement. One measure was endorsed; however, the second measure did not pass on validity, a must-pass criterion.

One new composite measure was reviewed during the fall 2020 cycle. The final endorsement decision will be finalized in 2021.

Primary Care and Chronic Illness

Primary care providers serve as the most common healthcare contact point for many people within the US. As such, primary care has a central role in improving the health of people and populations. Primary care practitioners work with each patient to manage the health of that individual. In the primary care setting, the diagnosis and treatment of the patient focus on the health of the entire patient and not a single disease. Chronic illnesses are long-lasting, or persistent health conditions or diseases that patients and providers must manage on an ongoing basis. The incidence, impact, and cost of chronic disease is increasing in the US. For example, more than 30 million Americans (9.4 percent) are living with diabetes, and in 2017, the US spent \$237 billion on diabetes care, making it one of the most expensive health conditions (Centers for Disease Control and Prevention, 2017). In addition, studies have estimated the yearly costs for glaucoma, rheumatoid arthritis, and hepatitis C at \$5.8 billion, \$19.3 billion, and \$6.5 billion, respectively (Birnbaum et al., 2010).

The review and evaluation of measures affecting primary care and dealing with chronic illness have long been a priority of NQF, with endorsement for such measures going back to its inception. At present, there are 48 NQF-endorsed Primary Care and Chronic Illness (PCCI) measures. The PCCI Committee oversees the measurement portfolio used to advance accountability and quality in the delivery of primary care services.

During the [fall 2019 cycle](#), the PCCI Committee reviewed six maintenance measures for continued NQF endorsement. All six measures retained endorsement. During the [spring 2020 cycle](#), the Committee reviewed three new measures against NQF's measure evaluation criteria. All three measures did not meet validity, a must-pass criterion. This was due to concerns of a lack of upper age limits for one measure, feasibility concerns related to a lack of options for primary care providers to meet one measure's numerator, and concerns related to the evidence base to support another measure.

Seven measures, three maintenance and four new measures, were reviewed during the fall 2020 cycle. The final endorsement decisions will be finalized in 2021.

Renal

Renal disease is a leading cause of morbidity and mortality in the US. More than 36 million adults (14 percent of the adult population) have chronic kidney disease (CKD) (McCullough et al., 2019). Left

untreated, CKD can progress to an advanced state of kidney dysfunction known as end-stage renal disease (ESRD) and a host of other health complications, such as CVD, hyperlipidemia, anemia, and metabolic bone disease. Currently, over half a million people in the US have received a diagnosis of ESRD (Saran et al., 2019). Considering the high mortality rates and high healthcare utilization and costs associated with ESRD, the need to focus on quality measures for patients with renal disease is of the highest importance. Quality measurement plays a central role in facilitating improvement in the quality of care received by CKD patients, especially those on hemodialysis (HD). NQF-endorsed kidney care measures are used in several quality and performance improvement programs administered by CMS, such as Dialysis Facility Compare and the ESRD Quality Incentive Program (ESRD QIP).

The NQF Renal Committee seeks to identify and endorse performance measures for accountability and quality improvement that address conditions, treatments, interventions, or procedures relating to kidney disease. The Committee's portfolio of 21 measures consists of metrics focused on hemodialysis access, monitoring, and outcomes, as well as various kidney-related treatments and safety considerations.

During the [fall 2019 cycle](#), the Renal Committee evaluated one maintenance measure for continued NQF endorsement. This measure retained its endorsement status. For the [spring 2020 cycle](#), the Standing Committee evaluated three measures undergoing maintenance review against NQF's standard evaluation criteria. Two measures were endorsed, while one measure did not receive endorsement due to insufficient evidence to support the measure focus.

Two measures, one new and one maintenance, were reviewed during the fall 2020 cycle. The final endorsement decisions will be finalized in 2021.

Surgery

In 2014, there were 17.2 million hospital visits that included at least one surgery. Of these surgeries, over half of them occurred in a hospital-owned ambulatory surgical center (Steiner et al., 2020). Quality measurement in surgery is essential to improve outcomes for the millions of individuals undergoing surgery and surgical procedures each year. The Surgery measure portfolio includes 66 measures that address surgical care, including perioperative safety, general surgery, and a range of specialty surgeries.

During the [fall 2019 cycle](#), the Surgery Committee evaluated one measure undergoing maintenance review against NQF's measure evaluation criteria. This measure was endorsed. For the [spring 2020 cycle](#), the Committee evaluated one measure undergoing maintenance review. This measure retained its endorsement status.

Eight measures, all undergoing maintenance, were reviewed during the fall 2020 cycle. The final endorsement decisions will be finalized in 2021.

V. Stakeholder Recommendations on Quality and Efficiency Measures and National Priorities

Section 1890(b)(7)(A)(i) of the Act requires the CBE to convene multistakeholder groups to provide input on the selection of certain quality and efficiency measures from among: (i) such measures that have been endorsed by the CBE; and (ii) such measures that have not been considered for endorsement by the CBE but are used or proposed to be used by the Secretary for the collection or reporting of quality and

efficiency measures. Additionally, CBE must convene multistakeholder groups to provide input on national priorities for improvement in population health and in delivery of health care services for consideration under the National Quality Strategy. The CBE is required to describe these duties in this report pursuant to section 1890(b)(5)(A)(i)(VI) of the Act.

Measure Applications Partnership

Under section 1890A(a) of the Act, HHS is required to establish a pre-rulemaking process under which the CBE would convene multistakeholder groups to provide input to the Secretary on the selection of quality and efficiency measures for use in certain federal programs. The list of quality and efficiency measures HHS is considering for selection is to be publicly published no later than December 1 of each year. No later than February 1 of each year, the CBE is to report the input of the multistakeholder groups, which will be considered by HHS in the selection of quality and efficiency measures.

Since its inception in 2011, NQF has convened the Measure Applications Partnership (MAP) to provide guidance on the use of performance measures in federal healthcare quality programs. These recommendations are made by MAP through its pre-rulemaking process, which enables a multistakeholder dialogue to assess measurement priorities for these programs. MAP includes representation from both the public and private sectors and includes patients, clinicians, providers, purchasers, and payers. MAP reviews measures that CMS is considering for implementation and provides guidance on their acceptability and value to stakeholders.

MAP is composed of three setting-specific workgroups (Hospital, Clinician, and Post-Acute/Long-Term Care), one population-specific workgroup (Rural Health), and a Coordinating Committee that provides strategic guidance and oversight to the workgroups and recommendations. MAP membership is representative of users of performance measures and over 135 healthcare leaders from 90 organizations. MAP conducts its pre-rulemaking work in an open and transparent process; as the list of Measures Under Consideration (MUCs) is posted publicly, MAP deliberations are open to the public, and the process allows for the submission of both oral and written public comments to inform MAP considerations.

MAP's aim is to provide input to CMS that ensures the measures used in federal programs are meaningful to all stakeholders. MAP focuses on recommending measures that empower patients to be active healthcare consumers and supports their decision making; are not overly burdensome on providers; and can support the transition to a system that pays for value of care. MAP strives to recommend measures that will enhance quality for all Americans while ensuring that the transition to value-based payment (VBP) and alternative payment models (APMs) brings better care and access while reducing costs for all.

MAP 2019-2020 Pre-Rulemaking Recommendations

MAP published the results of its 2019-2020 pre-rulemaking deliberations in a series of [reports](#) delivered in February and March 2020. MAP made recommendations on 18 measures under consideration for nine CMS quality reporting and VBP programs covering ambulatory, acute, and post-acute/long-term care settings. A summary of this work is provided below. In addition, MAP began its 2020-2021 pre-rulemaking efforts in December 2020 to provide input on 20 measures under consideration for eight CMS programs. Final recommendations along with a detailed report are expected in February 2021.

MAP's pre-rulemaking recommendations reflect its [Measure Selection Criteria](#) and how well MAP believes a measure under consideration (MUC) fits the needs of the specified program. The MAP Measure Selection Criteria are designed to demonstrate the characteristics of an ideal set of performance measures. MAP underscores the need for evidence-based, scientifically sound measures while minimizing the burden of measurement by fostering alignment and ensuring measures are feasible. Moreover, MAP promotes alignment across the public and private sectors, person-centered measurement, and the reduction of healthcare disparities.

MAP Rural Health Workgroup

As recommended in the 2015 NQF report on Rural Health, NQF reconvened the MAP Rural Health Workgroup in the fall of 2019 to provide input into the CMS annual pre-rulemaking process. This workgroup consists of experts in rural health, frontline healthcare providers who serve in rural and frontier areas, including tribal areas and patients from these areas. The role of the workgroup is to provide rural perspectives on measure selection for CMS program use. This includes noting measures that are challenges for rural providers to collect data on or report about and any unintended consequences for rural providers and residents. The Rural Workgroup reviewed and discussed this year's MUCs for various CMS quality programs. NQF provided a written summary of the workgroup's feedback to the Hospital, Clinician, and PAC/LTC Workgroups to aid in their review of the measures. To provide additional input and represent the rural perspective, a liaison from the Rural Workgroup attended each of the setting-specific workgroup meetings. Several themes emerged that should be considered when assessing quality in the rural settings: a shortage of behavioral health specialists creating a challenge for ensuring timely follow-up for behavioral health appointments, difficulties in information exchange at some rural facilities due to a lack of integrated data systems, cost of eCQM reporting infrastructure, and reporting rules that are difficult for rural providers to meet. Additionally, the workgroup noted that there may be a lack of transportation options for patients in rural settings, so telehealth options for medical visits are especially pertinent for patients in this setting. Low case-volume continues to be a challenge for performance measurement in rural areas.

MAP Clinician Workgroup

The MAP Clinician Workgroup reviewed 10 MUCs from the 2019 list for three programs (listed below) addressing health plan, clinician, or accountable care organization (ACO) measurement, making the following recommendations organized by program.

Merit-Based Incentive Payment System (MIPS) - MIPS was established by section 101(c) of the Medicare Access and CHIP Reauthorization Act of 2015 (MACRA). MIPS is a pay-for-performance program for eligible clinicians and applies positive, neutral, and negative adjustments to Part B payments for covered professional services furnished by MIPS eligible clinicians based on performance in four categories: quality, cost, promoting interoperability, and improvement activities. MIPS is one of two tracks in the Quality Payment Program (QPP).

MAP reviewed four measures for MIPS and made the following recommendations:

- Support. MAP supported one measure for rulemaking related to total hip and total knee arthroplasty.
- Conditional Support. MAP conditionally supported two measures pending receipt of NQF endorsement. The two measures were related to all-cause hospital admissions and appropriate vascular access for hemodialysis.

- No Support With Potential for Mitigation. There was one measure considered that MAP did not support for rulemaking with potential for mitigation. This measure was associated with hospital admissions for patients with multiple chronic conditions.

Within the MIPS measure set, MAP identified several gaps, specifically in the areas of primary care, access, continuity, comprehension, and care coordination. MAP also suggested that CMS consider adding measures that determine whether a course of therapy is indeed the best for the patient to optimize reductions in cost and harm. MAP also emphasized measures of diagnostic accuracy and primary care PROMs.

Measures for MIPS on the 2019 MUC list were under consideration for potential implementation in the 2021 measure set, affecting the 2023 payment year and future years.

Medicare Shared Savings Program - Section 3022 of the Affordable Care Act (ACA) created the Medicare Shared Savings Program. The Shared Savings Program creates a voluntary opportunity for providers and suppliers to longitudinally manage the care and costs of Medicare beneficiaries under an ACO model. An ACO is responsible for the cost and quality of care for an assigned population of Medicare fee-for-service beneficiaries. The Shared Savings Program aims to promote accountability for a patient population, care coordination, and the use of high quality and efficient services. ACOs have multiple options for participation tracks within the Shared Savings Program, allowing for variation in organizational capability to assume risk.

In its 2019-2020 pre-rulemaking work, MAP considered one measure for the Shared Savings Program. MAP conditionally supported a measure related to hospital admissions for patients with multiple chronic conditions, pending NQF endorsement.

Medicare Part C and D Star Ratings - Each year, CMS publishes the Medicare Part C and D Star Ratings that measure the quality of the Medicare Advantage (MA) (or Part C plans) and Prescription Drug Plans (PDPs or Part D plans). These Star Ratings serve several purposes, including to provide comparative information to beneficiaries about the plans, to provide quality ratings used to determine eligibility of Part C plans for quality bonuses, and to provide a means to evaluate and oversee overall compliance with certain regulatory provisions. The Star Ratings also reflect the experiences of beneficiaries and assist beneficiaries in finding the best plan for them. The Star Ratings support CMS' efforts to put the patient first. As part of this effort, patients should be empowered to work with their healthcare providers to make healthcare decisions that are best for them. An important component of this effort is to provide Medicare beneficiaries and their family members with meaningful information about quality and cost to assist them in becoming informed and active healthcare consumers. In 2019, approximately 66 million Americans were enrolled in Medicare, with 34 percent of beneficiaries in a Part C plan. The Part C and D Star Rating Program consists of 48 quality and performance measures; MA-only contracts (without prescription drug coverage) are rated on up to 34 measures and stand-alone PDP contracts are rated on up to 14 measures. Each year, CMS conducts a comprehensive review of the measures that make up the Star Ratings by assessing the reliability of the data, clinical recommendations, and feedback received from stakeholders. Star Ratings are used for purposes, including public reporting on Medicare Plan Finder, health plan quality improvement, marketing, and enrollment, as well as for financial incentives. Per the ACA, CMS makes quality bonus payments (QBPs) to MA organizations that meet certain quality ratings measured using a five-star quality rating system. MA rebate levels for plans are tied to the contract's Star Rating. QBPs are not connected to the PDP program, only MA.

During this inaugural year of MAP's review of Part C and D measures under consideration, MAP discussed five measures with the following recommendations:

- Support. MAP supported two measures for rulemaking related to opioid prescribing practices.
- Conditional Support. MAP conditionally supported two measures pending receipt of NQF endorsement. The two measures were related to follow-up after ED care and care transitions.
- No Support. There was one measure considered that MAP did not support related to opioid prescribing practices.

Key Themes From the Clinician Workgroup Pre-Rulemaking Review Process – Two key overarching themes emerged from MAP's pre-rulemaking recommendations for measures in the MIPS, the Shared Savings Program and the Part C and D Star Ratings.

First, MAP emphasized the importance of shared accountability for performance measures of avoidable hospital admissions, readmissions, and ED use that are incorporated into public reporting and payment programs. Clinicians and health systems have the potential to implement care interventions that can offset disease progression and reduce high-cost, low-efficiency healthcare. Measures of patient outcomes require balancing the goals of shared accountability of clinicians and health systems, and appropriate attribution of outcomes that can be influenced by each entity. MAP expressed concern that many care coordination measures are process measures that assess steps along a patient episode of care but do not measure if all care is coordinated through a centralized and shared care plan for the patient. MAP also acknowledged that these measures may be appropriate in early stages of transition toward truly coordinated, holistic, and individualized care. MAP recognized that addressing social determinants is a critical element to effective care coordination for patient transitions. However, MAP also noted the challenges with addressing these social determinants through measurement. Patient outcomes may be influenced by a patient's health status and sociodemographic factors, in addition to healthcare services, treatments, and interventions. MAP acknowledged that data limitations and data collection burden may limit risk adjustment, but measures of accountability should monitor for any incorrect inferences about provider performance. Clinicians and health systems need information to understand differences in outcomes among patient cohorts to drive improvement, but MAP suggested caution on performance assessments involving social determinants.

Second, MAP discussed the need for appropriate measures to address the opioid crisis. MAP noted that the current phase of the opioid crisis is predominantly driven by an increased uptake of fentanyl-laced heroin, leading to increases in overdose and death. MAP acknowledged an important shared responsibility for individual providers, health systems, and health plans to address issues of pain management and function as well as to identify and address issues associated with opioid use disorder (OUD). MAP emphasized that the proper metrics need to be applied across the US healthcare system such that opioid overdose deaths continue to decline in a manner that is verifiable. Furthermore, the metrics applied must minimize undesirable consequences, such as needless suffering from pain, increases in other substance use disorders, or transitioning from prescription to illegal drugs because of being unable to obtain appropriate pain medication. This includes the need for increased, appropriate co-prescribing of Naloxone with opioids (for pain or for persons with OUD). Similarly, MAP called for better initial prescribing measures to balance appropriate use of opioids for pain management with associated risks. Additionally, MAP identified the need in federal quality and performance programs to include new measures that assess patient-centered analgesia treatment planning, including appropriate

tapering strategies to reasonably decrease or discontinue opioid treatment, measures of long-term recovery from OUD, and measures of physical and mental health comorbidities with OUD. These overarching themes emphasize the significance of care coordination and attribution as well as appropriate opioid measurement.

MAP Hospital Workgroup

The MAP Hospital Workgroup reviewed six MUCs from the 2019 list for four hospital and other setting-specific programs, making the following recommendations.

End-Stage Renal Disease (ESRD) Quality Improvement Program - The End-Stage Renal Disease Quality Incentive Program (ESRD QIP) is a VBP program established to promote the provision of high quality renal dialysis services by dialysis facilities. Payments to a dialysis facility under the ESRD Prospective Payment System (PPS) are reduced for a calendar year if the facility does not meet or exceed the minimum total performance score that applies to the program year. Payment reductions are made on a sliding scale depending on the facility's performance, with a maximum two percent reduction per year.

MAP reviewed a single measure for the program and offered conditional support pending NQF endorsement. The measure is related to transfusion ratios for patients on dialysis and calculates a risk-adjusted standardized transfusion ration (STrR) for each dialysis facility specified for all adult dialysis patients.

Inpatient Psychiatric Facility Quality Improvement Program - The Inpatient Psychiatric Facility Quality Reporting Program (IPFQR) is a pay-for-reporting program. The program's goal is to provide consumers with quality-of-care information to make informed decisions about healthcare options and to encourage hospitals and clinicians to improve the quality of inpatient psychiatric care by ensuring that providers are aware of and reporting on best practices.

MAP considered a single measure for potential inclusion in the IPFQR program related to follow-up after psychiatric discharge. MAP conditionally supported the measure for rulemaking pending NQF endorsement.

Hospital Inpatient Quality Reporting (IQR) Program - The Hospital Inpatient Quality Reporting (IQR) Program is a pay-for-reporting program that requires hospitals paid under the Inpatient Prospective Payment System (IPPS) to report on various measures; this includes process, structure, outcome, and patient perspective on care, efficiency, and costs-of-care measures. Hospitals that do not participate or meet program requirements have an applicable percentage increase that is reduced by one-quarter. The goals of the Hospital IQR Program are two-fold: (1) to provide an incentive for hospitals to report quality information about their services and (2) to provide consumers with information about hospital quality so that they can make informed choices about their care.

MAP reviewed two measures under consideration for the Hospital IQR Program related to hospital harm and maternal morbidity and offered conditional support for both pending NQF review and endorsement.

MAP did not review any measures for the Medicare and Medicaid EHR Promoting Interoperability Program for Eligible Hospitals and Critical Access Hospitals for endorsement.

PPS-Exempt Cancer Hospital Quality Reporting Program - The Prospective Payment System (PPS)-Exempt Cancer Hospital Quality Reporting (PCHQR) Program is a quality reporting program for PPS-exempt cancer hospitals. The program's goal is to provide information about the quality of care in the 11 cancer hospitals that are exempt from the Medicare Inpatient Prospective Payment System.

In its 2019-2020 pre-rulemaking deliberations, MAP reviewed two patient safety measures under consideration for the PCHQR program related to infections from central lines and catheters. MAP supported both measures for rulemaking.

Key Themes From the Hospital Workgroup Pre-Rulemaking Review Process – Major themes from the MAP Hospital Workgroup discussions centered around the need for patient safety measures and the importance of a systems view for measurement.

MAP highlighted the need for patient safety measures for each of the hospital and setting-specific program discussions. Patient safety-related events occur across healthcare settings and include healthcare-associated infections, medication errors, and other potentially avoidable events. The measures considered by MAP spanned a variety of patient safety topic areas, including preventable infection, preventable blood transfusion, reducing maternal morbidity, reducing hyperglycemia events, and preventing harm through follow-up post-discharge. MAP emphasized that patients and consumers value patient safety measures in public accountability programs, and facilities can improve patient safety through quality improvement programs. Even for measures MAP considered this cycle but ultimately did not support, MAP members stressed the importance of each overall patient safety quality concept and the quality improvement activities that the measure would encourage.

MAP also discussed the need for using a system-level measurement approach to capture the patient episode of care, identifying priorities in measurement across settings and determining the appropriate accountable entity and setting. Measures specified for a single care setting that address system-level issues with shared accountability, such as follow-up visits and transitions of care, pose challenges in determining which entity should be measured and how. MAP concluded that while it is necessary to review measures using a setting-specific approach, there is also a need to examine measures from a system-level perspective. MAP noted that a system-level approach also requires the transfer of health information and use of eCQMs. MAP supported CMS' efforts to drive towards digital measures and cited eCQMs as one tool to assist in the reduction of measurement burden.

MAP PAC/LTC Workgroup

MAP reviewed two measures under consideration from the 2019 list for two setting-specific federal programs addressing post-acute care (PAC) and long-term care (LTC). Four programs did not have measures for review. MAP made the following recommendations.

Home Health Quality Reporting Program (HH QRP) - Established in accordance with section 1895(b)(3)(B)(v) of the Social Security Act, the Home Health Quality Reporting Program (HH QRP) requires home health agencies (HHAs) to submit HH QRP data appropriate for the measurement of healthcare quality. Sources of this data may include the Outcome and Assessment Information Set (OASIS) and the Home Health Care Consumer Assessment of Healthcare Providers and Systems survey (HH CAHPS®). HHAs that do not submit the data are subject to a two percent reduction in the annual home health market basket percentage increase.

MAP reviewed one measure under consideration for the HH QRP: *Home Health Within-Stay Potentially Preventable Hospitalization*. MAP conditionally supported this measure pending NQF endorsement. MAP noted that the measure adds value to the HH QRP measure set by adding an assessment of potentially preventable hospitalizations and observation stays that may occur at any point in the home health stay. No measure in the program currently provides this information. The measure supports alignment for the measure focus area of admissions and readmissions across care settings and providers. MAP encouraged consideration of including MA patients in future iterations of the measure.

Hospice Quality Reporting Program (HQRP) - The Hospice Quality Reporting Program (HQRP) was established under section 3004 of the ACA and applies to all hospices, regardless of setting. Under this program, hospice providers must submit quality reporting data from sources such as the Hospice Consumer Assessment of Healthcare Providers and Systems survey (CAHPS Hospice survey) and the Hospice Item Set (HIS) data collection tool, or be subject to a two percent reduction in the applicable annual payment update.

MAP reviewed one measure under consideration for the HQRP: *Hospice Visits in the Last Days of Life*. MAP conditionally supported this measure pending NQF endorsement and the removal of the existing hospice visit measures from the program. Generally, MAP agreed that collecting information about hospice staff visits will encourage hospices to visit patients and caregivers, provide services that will address their care needs, and improve quality of life during the patient's last days of life. MAP observed that the measure under consideration performed better in validity and reliability testing and has lower provider burden than the existing program measures because it is reported using claims data. MAP agreed that the goal of hospice is comfort. MAP suggested that future iterations of this measure consider the quality of provider visits in addition to the quantity of visits.

Key Themes From the PAC/LTC Workgroup Pre-Rulemaking Review Process - MAP noted that patients requiring post-acute and long-term care are clinically complex, and therefore may frequently transition across sites of care. MAP's discussion of the PAC/LTC settings and programs focused on the following themes: capturing the voice of patients through PRO-PMs, making EHRs and eQMs more useful, and identifying measurement opportunities for the PAC/LTC population.

MAP identified PROs as one of the most important priorities for PAC/LTC programs. Thoughtfully soliciting and incorporating the voice of the patient into quality measurement will contribute to the alignment of care with patient goals and preferences. MAP members noted that traditional care goals focusing on improvement in function and health status may not be appropriate for the entire PAC/LTC population. The goal of care may be maintaining current functional status, limiting decline, and/or maximizing comfort. Assessment and measurement of patient goals should be an important focus in this population. MAP recommended thoughtful consideration around the burden associated with PRO completion. This burden should be balanced with the goal of providing information that is useful to patients in selecting providers and for providers to understand how to improve care.

Patients who receive care from PAC and LTC providers frequently transition among multiple sites of care. Patients may move among their homes, the hospital, and other PAC or LTC settings as their health and functional status change. Improving care coordination and quality-of-care transitions is essential to improving PAC and LTC. MAP identified care coordination as the highest priority measure gap for PAC/LTC programs. MAP pointed out the potential of health information technology (IT) to improve quality and minimize the burden of measurement. MAP members noted that EHR adoption in PAC/LTC

settings often lags other care settings since PAC/LTC settings have had fewer incentives to implement new technology. Increased use of technology could help to improve transitions and the exchange of information across providers. MAP supported CMS in its effort to improve standardization and promote interoperability, specifically Health Level Seven's (HL7) Fast Health Interoperability Resources (FHIR) standards. MAP recommended that CMS work with vendors to improve EHR interoperability. Prioritizing interoperability across care settings will maximize its impact by allowing more organizations to share and receive data. MAP members also cautioned about potential burden introduced through technology. Specifically, MAP encouraged CMS to monitor the impact of auto-populating EHRs to fulfill regulatory or other nonclinical requirements. This additional auto-populated information can crowd out or obscure critical clinical information.

MAP identified nine concepts for measurement within all PAC/LTC programs: (1) access to care, (2) care coordination, (3) chronic illness care (quality of life), (4) interoperability, (5) mental health, (6) pain management, (7) PROs, (8) social determinants, and (9) serious illness. MAP then prioritized the list, allowing each voting member to present two votes. The voting identified care coordination, interoperability, and PROs as the most important priorities for measurement for PAC/LTC programs. These key overarching themes highlight the importance of including the voice of the patient and patient-centered goals, the impact of technology and interoperability, and measurement opportunities for the PAC/LTC population.

Core Quality Measures Collaborative-Private and Public Alignment

Using performance measures as part of value-based models incentivizes the delivery of high quality care. Increasing the use of measure in various models, however, has also led to measure proliferation, operational difficulties, and confusion in interpreting measure results. The Core Quality Measures Collaborative (CQMC) is working to reduce measurement burden by facilitating cross-payer measure alignment through the development and adoption of [core measure sets](#) to assess the quality of US healthcare. The CQMC is a membership-driven initiative with over 70 organizations, including CMS, health insurance providers, primary care and specialty societies, and consumer and employer groups. In 2020, NQF convened 11 multistakeholder workgroups to update eight current core sets, create two new core sets in priority clinical areas, and develop an [implementation guide](#) to support adoption across payers. NQF also analyzed core set measure gaps to support actions and priorities of the CQMC for coming years.

The CQMC defines a core measure set as a parsimonious group of scientifically sound measures that efficiently promote a patient-centered assessment of quality and should be prioritized for adoption in VBP programs and APMs. To date, the CQMC has chosen to focus on clinician measurement, primarily in the outpatient setting, and to identify core sets that could support multiple care delivery models. Core sets are updated to include high-priority, evidence-based measures that are feasible to implement and that can drive the most improvement. The CQMC prioritizes outcome measures, including patient-reported measures, and digital measure and aims to continue to advance alignment of private and public payer models that use these measure types. In 2020, NQF updated the following eight core sets using a multistakeholder process and [measure selection principles](#):

1. Accountable Care Organizations (ACOs), Patient Centered Medical Homes (PCMH) and Primary Care
2. Cardiology
3. Gastroenterology

4. HIV and Hepatitis C
5. Medical Oncology
6. Obstetrics and Gynecology
7. Orthopedics
8. Pediatrics

In 2020, new core sets were developed for Behavioral Health and Neurology clinical areas. While progress has been made updating the core sets and creating new ones, several areas in measurement gaps remain. The CQMC published a [Gaps Analysis report](#) to highlight cross-cutting gaps across the core sets as well as specific gap areas relevant to each clinical topic area.

The CQMC Implementation Guide identifies key components of successful value-based payment programs and synthesizes strategies and resources to help organizations succeed in their adoption. This guide outlines four elements of successful value-based payment implementation: (1) Leadership and Planning; (2) Stakeholder Engagement and Partnership; (3) Measure Alignment; and (4) Data and Quality Improvement Support. Payers and other stakeholders can use the implementation strategies to design, refine, strengthen, and extend value-based payment initiatives.

The CQMC's activities will continue into 2021. This work will address gaps (e.g., digital quality measures), continue to advance the core sets by including new measures and removing measures as needed, and focus on measurement of cross-cutting topics (e.g., safety, access). In addition, the CQMC will create strategies for measurement model alignment to promote greater communication and reporting of core set measures.

More information on the Collaborative can be found at the website:

<http://www.qualityforum.org/cqmc/>.

VI. Gaps in Endorsed Quality and Efficiency Measures

Under section 1890(b)(5)(A)(i)(IV) of the Act, the CBE is required to describe in this report gaps in endorsed quality and efficiency measures, including measures within priority areas identified by HHS under the agency's National Quality Strategy, and where quality and efficiency measures are unavailable or inadequate to identify or address such gaps.

Gaps Identified in 2020 Completed Projects

During their deliberations, NQF's endorsement Standing Committees discussed and identified gaps that exist in current project measure portfolios. A list of the gaps identified by these Committees in 2020 can be found in [Appendix G](#).

Measure Applications Partnership: Identifying and Filling Measure Gaps

In addition to its role of recommending measures for potential inclusion into federal programs, MAP also provides guidance on identified measurement gaps at the individual federal program level. In its 2019-2020 pre-rulemaking deliberations, MAP specifically addressed the high-priority domains CMS identified in each of the federal programs for future measure consideration. A list of gaps identified by CMS program can be found in [Appendix H](#).

VII. Gaps in Evidence and Targeted Research Needs

Under section 1890(b)(5)(A)(i)(V) of the Act, the CBE is required to describe areas in which evidence is insufficient to support endorsement of quality and efficiency measures in priority areas identified by the Secretary under the National Quality Strategy and where targeted research may address such gaps.

NQF undertook several projects in 2020 to create strategic approaches, or frameworks, to measure quality in areas critical to improving health and healthcare for the nation but for which quality measures are too few, underdeveloped, or nonexistent.

A measurement framework is a conceptual model for organizing ideas that are important to measure for a topic area and for describing how measurement should take place (i.e., whose performance should be measured, care settings where measurement is needed, when measurement should occur, or which individuals should be included in measurement). Frameworks provide a structure for organizing currently available measures, areas where gaps exist, and prioritization for future measure development.

NQF's foundational frameworks identify and address measurement gaps in important healthcare areas; underpin future efforts to improve quality through metrics; and ensure safer, patient-centered, and cost-effective care that reflects current science and evidence. In 2020, NQF continued efforts on several projects focused on creating strategic measurement frameworks for maternal morbidity and mortality, person-centered planning and practice, measure feedback loop, PROs, EHR data quality, common formats for patient safety, and reducing diagnostic error. In addition, NQF initiated work on five new strategic measurement frameworks addressing attribution, rural health, opioids, behavioral health, EHR-sourced measures for care coordination, and PRO-PMs.

Attribution-Critical Illness/Injury

As mentioned earlier, the Attribution for Critical Illness and Injury project seeks to address the challenges of improving health outcomes during emergencies. While the healthcare system moves towards value-based design, measurement attribution approaches must continue to evolve. Attribution is defined as the methodology used to assign patients, and their quality outcomes, to providers or clinicians (National Quality Forum, 2016). To date, attribution models mainly focus on care for chronic conditions coordinated through a central unit, when most patients usually seek care from a usual source. High-acuity emergency care-sensitive conditions (ECSCs) (Carr et al., 2010), such as critical illness or injury, infectious diseases, and other public health emergencies that result in mass casualty and sudden surge of severely injured or infected patients, require prompt, team-based care. The COVID-19 pandemic underscores the complexities associated with attributing patients during public health emergencies. Factors such as resource availability, different entities providing care, communication of test results and patient needs, and orders that aim to minimize infection spread may all affect health outcomes. These attribution models may not be applicable to care delivery in public health emergencies. Identifying all providers who took part in treatment, differentiating their performance, and linking it to patient outcomes is technically complex. As evidence to support the best models of attribution for ECSCs is limited, defining the elements of such models and developing consensus-based recommendations will help advance the measurement field. This project aims to provide foundational guidance for attributing care and payment in areas that have not previously been addressed.

This work builds upon previously CMS funded work, [NQF's 2016 Attribution: Principles and Approaches](#) (National Quality Forum, 2016) and [2018 Improving Attribution Models](#) (National Quality Forum, 2018),

as well as the Health Care Payment Learning & Action Network (HCP-LAN)'s 2016 Report on Patient Attribution (Health Care Payment Learning and Action Network, 2016). It will consider NQF's 2019 [Healthcare System Readiness Measurement Framework](#) that puts forth approaches to assess care delivery and the organization of resources prior to, during, and after emergencies (National Quality Forum, 2019).

NQF convened a multistakeholder Committee in late 2020. In 2021, the Committee will develop recommendations to guide future development of population-based attribution models for high-acuity ECSCs that can be used to strengthen accountability at the system level to improve patient outcomes.

Leveraging Electronic Health Record (EHR)-Sourced Measures to Improve Care Communication and Coordination

The goals of care communication and coordination efforts are to ensure that patient care that is delivered across multiple clinicians is synchronized and efficient. Effective care coordination involves seamless communication between each clinician, patient, and caregiver, as well as their families, particularly at transitions in care. In coordinated care, healthcare teams should strive to understand and implement a cohesive care plan where goals do not change as the patient moves from setting to setting (Williams, 2020).

Unfortunately, much of American healthcare today is not well coordinated. Patients often experience poor transitions in care between settings. There also may be duplicative testing and treatment plans that increase patient risks, including drug interactions. Clinicians may observe that a patient is directed to the incorrect place in the healthcare system or experiences a poor outcome from inadequate information exchange between clinicians. They may also experience unreasonable levels of effort to accomplish coordination during transitions in care. It has also been noted that healthcare organizations implement coordinated care unevenly and inconsistently. A recent survey found that only seven percent of patient care is coordinated across settings (Abbaszade et al., 2020).

In the 2014 Agency for Health Research and Quality (AHRQ), the Care Coordination Measurement Framework stated that care coordination can be measured through the presence or absence of specific coordination activities (e.g., creating a plan of care) or broad approaches (e.g., using care management) (Agency for Healthcare Research and Quality, 2014). The effects of care coordination can be measured as the presence or absence of a clinical event (e.g., a diagnostic error) or perception of coordination of care from the perspective of patients, clinicians, or health systems (Weston et al., 2017). However, measuring care coordination has been challenging with existing quality measures. Measurement thus far has focused on isolated coordination processes or activities as these processes or activities may be difficult to precisely replicate across settings as their success may be context dependent (i.e., working in one setting but not another). Additionally, there is a paucity of outcome-based measures in care coordination against which to measure program success.

EHRs have emerged as an important data source for quality measures as the ability of EHR systems to connect and exchange data is an important aspect of quality healthcare that has not been fully realized. EHR data are primarily designed to support patient care and billing, not necessarily capture data for secondary uses, such as quality measurement. However, within EHRs, technology tools and specific design features have been effectively deployed to help facilitate care coordination. This allows EHRs to serve as a way to improve both care coordination and how it is measured. Under this task order, NQF will convene a multistakeholder Committee to identify best practices to leverage EHR-sourced measures

to improve care communication and coordination quality measurement in an all-payer, cross-setting, and fully electronic manner.

In the initial year, NQF will perform an environmental scan to review, analyze, and synthesize the information from a literature review, expert interviews, and measure review to produce an environmental scan report. The report will define care communication and care coordination, discuss the impact of care communication and care coordination on health outcomes, define social determinants of health and discuss how they can affect care coordination, and highlight the opportunities and challenges associated with leveraging EHR-sourced data to improve care communication and coordination. This report will be high-level and engaging, communicating the findings of the environmental scan to a broad audience who may or may not have healthcare expertise but who are interested in understanding the relationship between clinical data and care coordination.

If funded, the environmental scan report will be followed by two reports of final recommendations that will outline how EHRs could better facilitate care communication and coordination and how EHR-sourced measures can be used to improve care communication and coordination, as well as possible EHR-sourced care communication and coordination measure concepts or specific areas of measurement within care communication and coordination.

In late 2020, NQF solicited nominations for experts to seat on a Committee and begin the environmental scan, including literature and measure reviews as well as expert interviews.

Rural Health Perspective

Rural-Relevant Measures Core Set

Low case-volume poses a measurement challenge for many healthcare providers in rural areas. Low population density, in combination with limited access to care, can reduce the number of patients eligible for inclusion in healthcare quality measures in Medicare public reporting and VBP programs. Low case-volume affects the reliability and validity of measure scores, making it difficult to compare performance between providers or track changes in quality over time. CMS, through rulemaking, sets minimum case requirements for its quality reporting and VBP programs. As CMS continues to expand the use of outcome measures in its programs, low case-volume among rural providers would increasingly limit CMS' ability to leverage outcome measures to encourage improvement in quality of care among rural providers, and to provide meaningful information to rural consumers to make informed decisions for their healthcare.

In 2018, NQF convened a multistakeholder Rural Health Workgroup to establish a [Core Set of Rural-Relevant Measures \(Core Set\)](#) that identified performance measures that are high impact and meaningful to rural Americans, feasible for providers to report to Medicare programs, and resistant to low case-volume challenges. To further advance measurement science related to low case-volume, CMS tasked NQF to also convene a TEP that would provide input on promising statistical approaches that could be used to address the low case-volume challenge.

Starting in fall 2019 through 2020, NQF worked to identify a list of high-priority, rural-relevant measures susceptible to low case-volume, reporting challenges for future testing of the TEP's recommended statistical approaches. NQF reconvened the Rural Health Workgroup to conduct an environmental scan of rural-relevant quality measures included in Medicare quality reporting and VBP programs, as well as develop a priority measure list and discuss reporting challenges specific to measurement in rural areas.

The Workgroup then recommended topic areas and measure attributes that would be used to identify suitable candidates for the statistical testing. Through in-depth discussion, voting, and responding to public comments on a preliminary short list of candidate measures, the Workgroup selected 15 measures susceptible to low case-volume and recommended they be prioritized for future testing of statistical approaches to overcome this challenge. The list of prioritized measures reflects a mix of measure attributes (e.g., type, analysis level, and care setting) and topic areas relevant to rural populations, including patient experience, access to care, behavioral health, chronic obstructive pulmonary disease, healthcare-associated infections, perinatal care, readmissions, transitions of care, and sepsis.

If future testing to overcome low case-volume challenges proves successful, this measure list may represent a key source of rural-relevant measures that can be considered for use in measurement programs. The creation of this prioritized list is an important step towards achieving high quality and high-volume outcomes for all Americans, regardless of whether their area of residence is rural or geographically remote.

Impact of Telehealth on Rural Healthcare System Readiness and Health Outcomes

Telehealth offers tremendous potential to transform the healthcare delivery system by overcoming geographic distance, enhancing access to care, and building efficiencies. The promise of telehealth has been particularly important in the wake of the COVID-19 pandemic, which has severely limited the ability of many Americans to see their healthcare providers in person. The COVID-19 pandemic has also brought the unique challenges faced by rural Americans into focus. Compared to urban dwellers, rural residents may be hit harder by the pandemic because of the continuous weakening of rural healthcare infrastructure. Rural communities have long been plagued by a lack of resources, closing of rural hospitals and other healthcare facilities, healthcare professional shortages, lack of transportation options, and limited availability of medical specialists. The prevalence of chronic conditions among rural Americans could further exacerbate the impact of the pandemic. Most US rural residents tend to be poorer, older, and sicker than non-rural residents, making the rural residents more vulnerable to infectious diseases than non-rural residents. Even for rural residents who are not infected, those with ambulatory care-sensitive chronic conditions—who normally depend on regular monitoring to keep their symptoms under control—may be confronted by even higher barriers to care during disaster events and other public emergencies. While telehealth may be an important part of the solution, there has been a lack of empirical evidence in the literature related to the experience of using telehealth to support surge capacity or strengthen system readiness in times of pandemics, natural disasters, mass violence, or other public emergencies. This moment provides an excellent opportunity to identify measures or measure concepts that may be appropriate for assessing the potential impact of telehealth on rural healthcare system readiness.

HHS has tasked NQF with developing a measurement framework linking quality of care provided by telehealth, system readiness, and rural health outcomes in a disaster. For this effort, NQF will build on foundational efforts in 2017, [Creating a Framework to Support Measure Development for Telehealth](#), and a 2019 framework identifying key considerations for measuring and reporting the quality of [Healthcare System Readiness](#). In late 2020, NQF assembled a new multistakeholder Committee of experts who will lead efforts of project activities through 2021. Specifically, Committee members will explore what capabilities telehealth requires to save lives in rural areas during a national emergency, what health outcomes in a national emergency can be fairly attributed to quality of care delivered by

telehealth, and what other factors (e.g., infrastructure, financial, and type of emergency) should be accounted for in assessing the impact of telehealth on health outcomes in a disaster. The Committee will need to be especially considerate of recent changes in telehealth technology, policy, and practice to ensure that the new measurement framework is high quality and meets the needs and contours of the current telehealth environment.

Opioids and Behavioral Health

Opioid-related overdose deaths and morbidity have emerged as a complex and evolving challenge for the US healthcare system. The March 20, 2020 Morbidity and Mortality Weekly Report confirmed that in 2018, there were nearly 47,000 US deaths attributable to opioid use, both prescription and illicit (Wilson et al., 2020). Moreover, a large proportion of those deaths are tied to heroin that is laced with illegally manufactured synthetic and semi-synthetic opioids. While this represents a decrease from 2017 in deaths involving all opioids by two percent, heroin by four percent, and prescription opioids by 14 percent, death rates associated with synthetic opioids increased by 10 percent (Barry, 2018). Quality measures related to opioid use are a key component to holding care providers, payers, and policymakers accountable as direct purveyors or indirect sponsors of the best possible care regarding pain management and substance use dependence treatment and prevention.

Under section 6093 of the 2018 Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities (SUPPORT) Act (section 1890A(g) of the Social Security Act), CMS funded NQF to convene a 28-member TEP composed of physicians, nurses, patients, pharmacists, and others with expertise in pain management and OUD to address opioid measurement challenges from 2019–2020. The [TEP](#) made a series of recommendations related to identifying and prioritizing gaps in quality measures that needed to be filled to reduce OUD and opioid overdose deaths without undermining effective pain management. In addition, the TEP made recommendations for appropriate opioid-related measures and measure concepts to be deployed in five federal quality and performance programs administered by CMS (National Quality Forum, 2020). The Opioid TEP recognized an emerging “fourth wave” of the opioid epidemic related to polysubstance use. Increasingly, individuals with OUD are more likely to use psychostimulants such as amphetamines, use opioids with other substances during the same use period, and suffer from concomitant psychiatric conditions, such as anxiety, depression, and suicidal ideation (Snyder et al., 2019). In 63 percent of opioid overdose deaths, evidence of co-occurring prescription or illicit drug use was also present (Gladden et al., 2019). Because of the clear connection between concomitant behavioral health (BH) conditions with OUD and the impact of polysubstance use on opioid mortality and morbidity, the TEP prioritized the identification and development of measures that address comorbidities of OUD with psychiatric conditions and substance use disorder (SUD).

In late 2020, NQF convened a new Committee for Opioids and Behavioral Health (OBH) to address the priority identified by the Opioid TEP. The OBH Committee will conduct an environmental scan of currently available, all-payer measures or measure concepts that address overdose and mortality resulting from polysubstance use involving synthetic or semi-synthetic opioids among individuals with co-occurring behavioral health conditions. CMS has an interest in all-payer measures to facilitate alignment across payers and programs, to promote focus on commonly held quality priorities, and to reduce provider burden associated with measure reporting. CMS has also expressed an interest in outcome measures, including PRO-PMs, as well as digital measures that draw on low-burden data sources. The Committee will be especially cognizant of measures that address pertinent social

determinants of health related to OUD. The Committee is particularly interested in measures or measure concepts related to non-medical levers or non-medical partnerships. Measure gaps identified will also be discussed and prioritized.

In 2021, the Committee plans to develop a measurement framework based on the environmental scan.

Common Formats for Patient Safety¹

The Common Formats for Patient Safety is a project that began in 2013 and is supported by AHRQ to obtain comments from stakeholders about the Common Formats authorized by the Patient Safety and Quality Improvement Act of 2005 (Patient Safety Act) (Health and Human Services, Office for Civil Rights, 2008) that authorizes AHRQ to designate Patient Safety Organizations (PSOs) that work with providers. To support PSOs in reporting data in a standard way, AHRQ created “Common Formats”—the common definitions and reporting formats—that standardize the method for healthcare providers and PSOs to collect and exchange information for any patient safety event. The objectives of the Common Formats tools are to standardize patient safety event data collection, permit aggregation of collected data for pattern analysis, and learn about trends in patient safety concerns. AHRQ first released Common Formats in 2008 to support event reporting in hospitals and has since developed Common Formats for event reporting within nursing homes and community pharmacies, as well as Common Formats for hospital surveillance. The Common Formats for event reporting apply to all patient safety concerns, including incidents, near misses or close calls, and unsafe conditions.

NQF, on behalf of AHRQ, coordinates a process to obtain comments from stakeholders about the Common Formats and facilitates feedback on those comments via an NQF-convened Expert Panel. In 2020, NQF continued to collect comments on all elements (including, but not limited to, device or medical/surgical supply, falls, medication or other substance, perinatal, surgery, and pressure injury) of the Common Formats, including the most recent release, [Hospital Common Formats](#) Version 0.3 Beta. The public has an opportunity to comment on all elements of the Common Formats modules using commenting tools developed and maintained by NQF. In 2020, NQF also upgraded the technology platform supporting the Common Formats commenting tool and filled several vacancies on the Expert Panel.

Person-Centered Planning and Practice

Person-centered planning is a facilitated, individual-directed, positive approach to the planning and coordination of a person’s services and supports based on individual aspirations, needs, preferences, and values. The goal of person-centered planning is to create a plan that will optimize the person’s self-defined quality of life, choice, control, and self-determination through meaningful exploration and discovery of unique preferences, needs, and wants in areas including, but not limited to, health and well-being, relationships, safety, communication, residence, technology, community, resources, and assistance.

From 2019–2020, NQF convened a multistakeholder Committee to address Person-Centered Planning (PCP) in long-term services and supports (LTSS) systems. Committee members represented a variety of stakeholders, including self-advocates, caregivers, purchasers, providers, health professionals, health plans, suppliers, and experts in community and public health and healthcare quality. The Committee included experts in PCP, family-centered care, shared decision making, self-advocacy, consumer

¹ This project is not funded under section 1890/1890A of the Social Security Act.

engagement, home, and community-based services (HCBS), facility-based care, community inclusion, and Medicaid. The diversity of people who use LTSS required representation of self-advocates from the mental health, nursing home, dementia, and disability communities. The Committee reflected the diversity of experience and insight, as well as the historical experience of being marginalized and underserved. Its diverse membership underscores the need to find similarities and maximize inclusiveness to move the field forward.

Through a consensus-building process, stakeholders representing a variety of diverse perspectives met throughout the project to refine the current definition for PCP; develop a set of core competencies for performing PCP facilitation; make recommendations to HHS on system characteristics that support PCP; conduct a scan that includes historical development of PCP in LTSS systems; develop a conceptual framework for PCP measurement; and create a research agenda for future PCP research.

Throughout their deliberations, the Committee considered the focus on the person and the context of their life to be at the center of the PCP process. The plan that emerged and its implementation is influenced by the competencies exhibited by the facilitator of the planning, the existing characteristics of the person's healthcare system environment, and the quality measurement and improvement efforts directly associated with each step of the PCP. The final recommendations of the PCP Committee are provided within a [summary report](#).

Maternal Morbidity and Mortality

Maternal morbidity and mortality have been identified as primary indicators of women's health and quality of healthcare globally. The Healthy People 2020 target goal for the US maternal mortality rate is 11.4 maternal deaths (per 100,000 live births), but as of 2018 the US rate is 17.4 maternal deaths (per 100,000 live births) (Centers for Disease Control and Prevention, 2020c). This rate is much higher than other high-income countries, with more than 700 women dying annually from pregnancy-related causes. The leading causes of overall maternal mortality can be attributed to increased rates of CVD, hemorrhage, and infection (Centers for Disease Control and Prevention, 2020a). Women with poor maternal outcomes are at increased risk for recurrence in their next pregnancy and are at increased risk of chronic illness later in life. While the postpartum period presents an opportunity to intervene to improve this trajectory, many women still face barriers, such as cost, transportation, lack of provider availability, loss of insurance, childcare, psychological distress, challenges communicating with a provider, and health literacy.

In fall 2019, NQF convened a 35-person multistakeholder Maternal Morbidity and Mortality Committee to provide input and guidance on the identification of two measurement frameworks: (1) measure concepts and (2) actionable measurement approaches addressing facets of maternal morbidity and mortality. This project includes the development of an environmental scan, two measurement frameworks addressing maternal morbidity and mortality separately, a recommendation for an actionable maternal mortality measure concept, and recommendations for actionable measurement approaches for morbidity and mortality.

During 2020, the Committee was convened through seven web meetings to discuss the content of the environmental scan, measurement frameworks, and mortality measure concept(s). The environmental scan focused on prevalence, incidence, risk factors (medical and non-medical), measure concepts, fully developed measures, measures in use, processes for maternal care delivery, maternal health outcomes (e.g., postpartum readmissions, infections, injuries, and other pregnancy complications in addition to

mortality) and other factors/areas influencing outcomes, including health disparities. It also highlighted innovations in measurement methodologies, limitations or gaps in measurement and considerations regarding measurement data sources. As presented in the environmental scan, the Committee discussed the importance of influencing factors related to maternal morbidity and mortality, including both clinical and nonclinical components across the continuum of care. These influencing factors were further defined by individual levels (e.g., age, education, knowledge, beliefs, and behaviors); societal/community factors (e.g., social network, built environment, and housing); hospital factors (e.g., implicit bias, cultural competence, and communication); and system-level factors (e.g., access, structural racism, and policy). These factors are interrelated and contributors to each other; they emphasize the importance of the pregnancy and childbirth experience along the continuum of a woman's life. This notion underscores the need to broaden the viewpoint to include a comprehensive assessment of medical and nonmedical risk factors to better understand the larger context of influencers and contributors for adverse outcomes beyond traditional hospital risk factors. The environmental scan highlighted several nonclinical influencing factors, which included healthcare disparities, race and racism, discrimination, residential segregation, implicit bias, language barriers in healthcare, health literacy, rural communities, and other social determinants of health. The full copy of the [environmental scan](#) also expands upon specific contributors to severe maternal morbidity and maternal mortality along with innovations in measure methodologies and a list of existing measures.

The Committee continues to discuss the two separate measurement frameworks for maternal morbidity and mortality as well as identify an actional mortality measure concept. The final recommendations report will include these frameworks as well as short- and long-term innovative actionable approaches to improve maternal morbidity and mortality measurement across various healthcare settings and detail how to use the measurement to improve maternal health outcomes. The final recommendations report is expected in August 2021.

Measure Feedback Loop

Measure feedback is essential to the quality improvement enterprise. Feedback on quality measures provides an important opportunity to understand the extent to which data for the measures is being captured without undue burden; how, where, and who is using the measures; what, if any, unintended consequences arise from using the measures after they receive NQF-endorsement on providers, payers, consumers, caregivers, measured populations, and others; and, ultimately, whether measures are having their intended effect on improving the quality of care and health outcomes for individuals and populations.

The NQF measure feedback loop refers to the process of providing feedback from those who use measures to measure developers and Standing Committee members who may have recommended that the measure receive or maintain NQF-endorsement or be selected for use in a federal quality program through MAP. To close the loop, responses to the feedback should be shared back with those who submit feedback. Gathering meaningful, timely, comprehensive, and actionable feedback on measures after they are implemented also helps NQF and quality measurement stakeholders to engage in continuous quality improvement of the quality improvement enterprise.

For the Measure Feedback Loop project, NQF convened a multistakeholder Committee to understand NQF Standing Committee needs for measure feedback and to elicit ideas for innovative, efficient, and effective approaches to integrate measure feedback into the measure endorsement process and maintenance of endorsed measures. This multistep effort was aimed at improving NQF's measure

feedback loop by identifying a set of strategies that can be piloted to improve the ways in which NQF solicits, collects, facilitates, and shares measure feedback among stakeholders within NQF's endorsement and maintenance processes.

In June 2020, NQF delivered the final report for the project that focused on a proposal implementation plan to pilot and evaluate strategies to improve the measure feedback loop that align with the Committee's goals for the measure feedback loop pilot to minimize burden for those providing feedback; ensure relevant stakeholders know how to provide measure feedback to NQF; ensure NQF Standing Committees receive meaningful and adequate information to apply the feedback to the relevant measure evaluation criteria and make informed recommendations for endorsement; ensure developers receive timely, meaningful, and actionable measure feedback; ensure those who provide feedback hear back about how feedback was or was not addressed; and define a standard pathway for generating and collecting measure feedback.

The proposed plan for the measure feedback loop pilot implementation consists of three steps: (1) generate meaningful and actionable feedback from measure users; (2) standardize and streamline the NQF Measure Feedback Tool and measure feedback process; and (3) support stakeholders to apply the measure feedback collected through prior steps. These steps include strategies and tactics that the Committee rated as having high-potential benefit while being at low- to medium-resource intensity to support the feasibility of implementing successful strategies beyond the pilot. Continuous efforts to improve the measure feedback loop is vital to the success of the quality improvement enterprise and requires the buy-in and participation of key stakeholders from the healthcare community, including measure users, measure developers, and NQF Standing Committee members.

Patient-Reported Outcomes: Best Practices on Selection and Data Collection

Prior work by NQF created structured recommendations around patient-reported outcomes (PROs), patient-reported outcome measures (PROMs), and patient reported outcome performance measures (PRO-PMs) (National Quality Forum, 2012b). While the differences between these are subtle (e.g., in the context of knee replacement, post-surgical symptoms, such as pain, are considered PROs), a patient-reported survey of the knee injury and osteoarthritis outcome is considered a PROM, and the provider performance managing the post-surgical knee pain is an example of a PRO-PM. Unfortunately, both the widespread use and adoption of PROs and PROMs have faced barriers, as have the development, endorsement, and implementation of PRO-PMs (Philpot et al., 2018). Currently, NQF's measure endorsement portfolio includes seven PRO-PM measures. These barriers may stem from clinician and patient concerns about upstream factors of PRO-PM development, namely the value and choices of PROs and the selection and implementation of PROMs. Limited relevance of some PROs to patient goals, clinicians' concerns about the limited value of some PROs to care planning, a lack of guidance for clinicians on how to interpret PRO data, and burden of PROM implementation and incompatibility with workflow have all inhibited efforts to develop and expand the use of PRO-PMs in informing quality improvement. To increase broad-based acceptance of PRO-PMs, it would be important to address these *upstream* hurdles related to PROs and PROMs. An [environmental scan](#) was published in December 2019, providing a current assessment of PRO use within healthcare.

The [final technical report](#), released in September 2020, built on the environmental scan by providing guidance from the TEP that clinicians and organizations can use in addressing barriers that affect the selection and implementation of PROs and PROMs. The final report reviews commonly used

PRO categories and discusses best practices for PRO selection in clinical care. Patient, family member, and caregiver involvement are critical components of PRO selection to ensure the information is meaningful, and this perspective should accompany a multistakeholder selection process that also includes clinicians, researchers, and other experts. Key takeaways include the importance of identifying the overarching clinical goals that PROs should meet and the importance of keeping actionability and feasibility in mind throughout the selection process.

The final report also discusses how to select the correct PROM for an organization in order to collect data and generate usable information to help inform patient care. The multistakeholder selection team should understand that PROMs exist on a continuum of specificity and range from disease-agnostic to disease-specific, each with its unique set of advantages. Patients bring important perspectives to questions around burden (e.g., how long it takes to complete each PROM), modes (e.g., whether a PROM is self-administered or completed via interview), and methods (e.g., whether a PROM is completed via paper, email, or patient portal). Involvement by providers and other experts is also critical when selecting PROMs, as these stakeholders can inform the perceived value of different PROMs in improving care. The final report reviews and expands upon the attributes of PROMs that were discussed in past literature and that should be considered during the selection process. Five best practices for PROM selection are introduced, and an attribute grid is presented as a tool to aid in comparing and selecting them.

The final technical report explores best and promising practices related to the implementation of PROMs. Buy-in from patients, clinicians, leadership, and other key stakeholders is arguably the most critical aspect of implementation, and the report offers guidance on securing buy-in. The burden of data collection affects both clinical staff and patients, and recommendations are provided to minimize this burden. Workflow implementation is addressed, including the opportunities to delegate tasks around the collection, interpretation, and communication of outcomes data appropriately across clinical and support staff. Clinicians must be able to accurately interpret scores and communicate effectively with patients about what the scores mean, and recommendations are included to improve interpretation and communication. Promising practices are explored around the integration of PROMs with EHRs, as are the implications of using return-on-investment and patient- and physician-incentives as a primary way to measure the cost, value, and benefit of PROMs. Using three clinical scenarios (burns and trauma, heart failure, and joint replacement) as examples, the project examined key elements of PROMs and assessed use cases for different people involved in the selection process.

Building a Roadmap From Patient-Reported Outcome Measures to Patient-Reported Outcome Performance Measures

In the foreseeable future, measure developers will create digital PRO-PMs that are based on high quality PROMs. EHR systems will not only collect data for those PRO-PMs, but will also calculate and submit aggregate scores for regulatory and reimbursement purposes. For this to occur, measure developers need step-by-step guidance to help identify attributes of high quality PROMs and create digital PRO-PMs that are based on those PROMs. NQF will create this guidance, or roadmap, by convening a TEP that consists of measure developers; health IT experts; clinicians and representatives of professional societies; professionals involved in payment, reimbursement, and purchasing; and patients. This work will be viewed through the lens of chronic pain and functional limitations, two areas with deep knowledge of patient-reported measures.

In late 2020, NQF solicited nominations to convene a TEP. This panel of experts will be finalized in early 2021 and will be charged with developing an environmental scan report that will review literature related to high quality PROMs and how they can affect the development of PRO-PMs, specifically electronic or digital PRO-PMs. Because of the novel nature of this initiative, NQF staff have also been exploring other resources, such as PRO-PMs that have undergone the NQF endorsement process (either successfully or unsuccessfully), bodies that review and recommend PROMs, and any PROMs and/or PRO-PMs that are used by CMS VBP Programs or APMs. NQF aims to present its initial environmental scan findings at the first TEP meeting in January 2021.

Electronic Health Record Data Quality

One of the promises of EHRs is that they enable automated clinical quality measure reporting. EHR systems are primarily designed to support patient care and billing, not necessarily capture additional data to support quality measurement (Centers for Medicare & Medicaid Services, 2019b). However, since EHR data are routinely collected for patient care that can be used for clinical quality measures, they can be reused to reduce provider burden associated with public reporting and VBP programs (Eisenberg et al., 2013). Despite high adoption rates in multiple care settings, the promises of EHRs have not yet been fully realized because of considerable variation in data quality.

NQF defines electronic clinical quality measures (eCQMs) as measures that are specified using the industry accepted eCQM technical specifications, which include, but are not limited to, health quality measure format (HQMF), the Quality Data Model (QDM), Clinical Quality Language (CQL), and value sets vetted through the National Library of Medicine's Value Set Authority Center (VSAC) (National Quality Forum, 2012a). Using EHRs as a source of data, eCQMs were designed to enable automated reporting of measures using structured data. With the use of structured data, eCQMs have the potential to provide timely and accurate information pertinent to clinical decision support and facilitate timely and regular monitoring of service utilization and health outcomes (Bailey et al., 2014). Currently, NQF has endorsed nearly 540 healthcare performance measures with only 34 of these being eCQMs. Although the number of endorsed eCQMs is low, several measures in NQF's portfolio are quality measures that rely on data that come from an EHR, which NQF refers to as EHR-sourced measures. NQF has identified the ability of EHR systems to connect and exchange data as an important aspect of quality healthcare. However, eCQMs and EHR data are not enough to enable automated quality measurement. To better understand the potential of improving quality measurement with the use of EHR data for clinical quality measures, it is important to examine the current state of EHR data quality.

In 2020, NQF continued the implementation of an 18-month project that was initiated in 2019 to identify the causes, nature, and extent of EHR data quality issues, particularly as they relate to measure development, endorsement, and implementation. This multistep effort was aimed at identifying a set of strategies for addressing issues hindering EHR data quality and focused on how well EHR data can be used to support automated clinical quality measurement. To achieve this, NQF convened a 21-member multistakeholder TEP over a series of web meetings to guide and provide input on the work.

Additionally, NQF completed an environmental scan that was delivered to CMS in May 2020 and identified currently available information on EHR data quality issues, current efforts to address these issues, and key stakeholders' perspectives and input based on their experiences. The current state assessment from the environmental scan set the foundation for the development of a final report that will be delivered to CMS in December 2020, which offers recommendations on how to advance EHR data in ways that better support the development, endorsement, and implementation of eCQMs. An

overarching issue of EHR data quality identified by the TEP is the challenge of eliciting multiple stakeholders (e.g., vendors and providers) to participate with measure developers early and throughout the development life cycle in a way that balances the cost of participation with the downstream benefit of reducing workflow and implementation costs once the tested measure is in each program. Although the final report focuses on opportunities for HHS, CMS and NQF, additional work in this area does not only lie with these stakeholder groups. It is recommended that future work should focus on opportunities for other stakeholders who can have an impact on EHR data quality issues beyond HHS, CMS, and NQF. Until then, NQF will share the recommendations in the final report with HHS, CMS, and other external stakeholders for consideration and potential implementation.

Reducing Diagnostic Error

The delivery of high quality healthcare is predicated upon an accurate and timely diagnosis. Diagnostic errors, which are defined as the failure to establish or communicate an accurate and timely assessment of a patient's health problem, contribute to an estimated 40,000-80,000 deaths each year (Leape et al., 2002). Approximately 12 million Americans suffer a diagnostic error each year, and the National Academies of Science, Engineering, and Medicine (NASEM) Committee on Diagnostic Error in Health Care suggested that most people will experience at least one diagnostic error in their lifetime (Singh et al., 2014).

In 2017, NQF convened a multistakeholder Expert Committee to develop a conceptual framework for measuring diagnostic quality and safety and to identify priorities for future measure development. The 2017 Measurement Framework included three domains: (1) Patients, Families, Caregivers; (2) Diagnostic Process and Outcomes; and (3) Organization and Policy Opportunities. To further advance patient safety and reduce diagnostic error, NQF convened a new multistakeholder Committee in 2019 to revisit and build on the previous Committee's work.

The Improving Diagnostic Quality & Safety/Reducing Diagnostic Error: Measurement Considerations Committee first reviewed the Diagnostic Process and Outcomes domain of the 2017 Measurement Framework to identify any needed updates. The Committee also identified high-priority measures, measure concepts, current performance measures, and areas for future measure development that have emerged since the initial development of the 2017 Measurement Framework. Informed by these activities and over a series of web meetings—five of which occurred in 2020—the Committee developed practical guidance, including specific use cases to demonstrate how the framework can be operationalized in practice, as well as detailed recommendations for measuring and reducing diagnostic error.

The Committee designed four use cases to support the practical application of the Diagnostic Process and Outcomes domain of the 2017 Measurement Framework. The use cases were developed by the Committee as an opportunity to identify comprehensive resolutions to specific types of diagnostic errors. The four use case topics selected (i.e., missed subtle clinical findings, communication failures, information overload, and dismissed patients) reflect high-priority problems and examples of diagnostic errors that cause patient harm. Each use case describes a type of diagnostic error, its causal factors, key stakeholders who can help overcome and prevent the error, and global and granular solutions to the error. The solutions within the use cases reflect opportunities for stakeholders to reduce diagnostic errors in the subdomains of the Diagnostic Process and Outcomes domain of the 2017 Measurement Framework, allowing for stakeholders to drive improvement in multiple areas, including information gathering and documentation, information integration, information interpretation, diagnostic efficiency,

diagnostic accuracy, and follow-up. Use cases also include snapshots of case exemplars to demonstrate how the specific solutions can be implemented in practice. The case exemplars range across settings and populations. Each use case concludes with a description of the impact of the identified solutions on patient safety, as well as a section on measurement approaches and measure concepts.

The Committee also identified a series of comprehensive, broad-scope, actionable, and specific recommendations for applying the Diagnostic Process and Outcomes domain of the 2017 Measurement Framework and for measuring and reducing diagnostic error. Recommendations for applying the Diagnostic Process and Outcomes domain highlight implementing quality improvement activities to identify and reduce errors to prevent them from occurring, including specific recommendations related to engaging patients, educating clinicians, developing, and deploying clinical protocols, leveraging technology, supporting a culture of teamwork, and improving information sharing. Each recommendation for applying the 2017 Measurement Framework aligns with a specific recommendation for measuring and reducing diagnostic error. These measurement-focused recommendations are centered around using patient-reported measures; assessing, providing, and obtaining feedback on clinician diagnostic performance and adherence to diagnostic protocols; evaluating the impact of technology and leveraging technology to reduce errors; measuring communication and teamwork; assessing the appropriate use of laboratory testing and radiology; and measuring the total cost, time, and impacts of diagnostic odysseys. Each recommendation has related actions for diverse stakeholders to measure and evaluate current processes and outcomes, including the identification of prioritized measure concepts.

In October 2020, NQF delivered the final report for this project, which includes the Committee's recommendations for the practical application of the Diagnostic Process and Outcomes domain of the 2017 Diagnostic Quality and Safety Measurement Framework, measuring and reducing diagnostic error, and measuring and improving patient safety. The final report incorporates feedback received from the public during the 30-day public commenting period that occurred from July to August 2020. Diverse stakeholders (e.g., healthcare organizations, clinicians, patients, payers, measure developers, EHR vendors, policymakers, and others) can use the practical guidance and recommendations in the report to reduce diagnostic errors. Stakeholders can use existing measures and measurement concepts, as well as the future measurement approaches, to identify specific opportunities for reducing diagnostic error and improving patient safety. The implementation strategies and solutions within the report can subsequently be used to drive improvement in diagnostic processes and outcomes. Organizations and stakeholders can also use existing measures, measure concepts, and future measurement approaches to measure the effectiveness of the interventions and solutions. Diverse stakeholders can implement the broad-scope, comprehensive recommendations included in the report to apply the 2017 Measurement Framework, and to measure and reduce diagnostic error, ultimately improving patient safety.

VIII. Conclusion

Now more than ever, national health priorities continue to highlight the need for improvement of quality measurement. Promoting effective communication, prevention, and treatment of chronic disease, working with communities to promote best practices of healthy living, and making care affordable are all still at the forefront when driving to deliver better health and healthcare outcomes.

The COVID-19 pandemic, a national priority, underscored the immense need to work collaboratively to raise healthcare quality to the next level through measurable health improvements. NQF received funding for a series of projects that would help to tackle some of the challenges highlighted as a result of the pandemic. These projects focused on addressing the opioid-related outcome, attribution-critical illness and injury, and identifying best practices for developing and testing risk adjustment models. CMS and NQF together have recognized the need to further address these topic areas and will continue to work together to address some immediate challenges to pave the way to close these gap areas.

This year, NQF sought to maintain a coordinated effort across public and private payers by facilitating alignment through the development and adoption of core measure sets, as well as expanding the clinical topics during 2020 to include behavioral health and neurology. The increased reliance upon performance measures has led to expansion in the number of measures being used and an increase in burden on providers collecting the data, confusion among consumers and purchasers seeing conflicting measure results, and operational difficulties among payers.

NQF's Measure Applications Partnership (MAP) is composed of stakeholders from across the healthcare system, including patients, clinicians, providers, purchasers, and payers, who continue to recommend measures for use in federal programs and provide strategic guidance. Through its eight years of pre-rulemaking reviews, MAP has aimed to lower costs while improving quality, promote the use of meaningful measures, reduce the burden of measurement by promoting alignment and avoiding unnecessary data collection, and empower patients to become active consumers by ensuring they have the information necessary to support their healthcare decisions. MAP's work that concluded in 2020 included a review of 18 performance measures under consideration for use in nine HHS quality reporting and value-based payment programs covering clinician, hospital, and post-acute/long-term care settings.

NQF's work in evolving the science of performance measurement has also expanded over the years, and recent projects focus on challenges that stand in the way of achieving high value outcome and cost measures, as well as bringing new kinds of providers into accountability programs.

NQF continued to bring together experts through multistakeholder Committees to identify evidence-based performance measures. NQF's work to review and endorse performance measures provides stakeholders with valuable information to improve care delivery and transform the healthcare system. NQF-endorsed measures enable healthcare providers to understand if they are providing high quality care and where improvement efforts remain. NQF maintains a portfolio of evidence-based measures that address a wide range of clinical and cross-cutting topic areas. In 2020, NQF reviewed 84 measures across two cycles for each of the 14 topic areas. In addition, NQF's Standing Committees surfaced important measurement gaps in areas such as behavioral health and substance use and perinatal and women's health. NQF remains committed to ensuring the endorsement process is transparent and objective through the two-cycle review that occurs every year.

NQF also undertook several projects in 2020 to create strategic approaches, or frameworks, to measure quality in areas critical to improving health and healthcare. These projects spanned across several topics, including maternal health, person-centered planning, improving EHR-sourced measures, rural health, closing the measure feedback loop, PROs, common formats for patient safety, and reducing diagnostic error.

In 2021, NQF looks forward to partnering with CMS to address other issues that may hinder collective efforts to address measurement science challenges and further the efforts in delivery of care.

IX. References

- Abbaszade, A., Assarroudi, A., Armat, M. R., Stewart, J. J., Rakhshani, M. H., Sefidi, N., & Sahebkar, M. (2020). Evaluation of the Impact of Handoff Based on the SBAR Technique on Quality of Nursing Care. *Journal of Nursing Care Quality*. <https://doi.org/10.1097/NCQ.0000000000000498>
- Agency for Healthcare Research and Quality. (2014). *Chapter 3. Care Coordination Measurement Framework*. <http://www.ahrq.gov/ncepcr/care/coordination/atlas/chapter3.html>
- Agency for Healthcare Research and Quality. (2018). *Priorities of the National Quality Strategy*. <https://www.ahrq.gov/research/findings/nhqrdr/nhqrdr15/priorities.html>
- American Cancer Society. (2020). *Cancer Facts & Figures 2020*. 76.
- Auerbach, A. D., Kripalani, S., Vasilevskis, E. E., Sehgal, N., Lindenauer, P. K., Metlay, J. P., Fletcher, G., Ruhnke, G. W., Flanders, S. A., Kim, C., Williams, M. V., Thomas, L., Giang, V., Herzig, S. J., Patel, K., Boscardin, W. J., Robinson, E. J., & Schnipper, J. L. (2016). Preventability and Causes of Readmissions in a National Cohort of General Medicine Patients. *JAMA Internal Medicine*, 176(4), 484–493. <https://doi.org/10.1001/jamainternmed.2015.7863>
- Bailey, L. C., Mistry, K. B., Tinoco, A., Earls, M., Rallins, M. C., Hanley, K., Christensen, K., Jones, M., & Woods, D. (2014). Addressing electronic clinical information in the construction of quality measures. *Academic Pediatrics*, 14(5 Suppl), S82–89. <https://doi.org/10.1016/j.acap.2014.06.006>
- Barry, C. L. (2018). Fentanyl and the evolving opioid epidemic: What strategies should policy makers consider? *Psychiatric Services (Washington, D.C.)*, 69(1), 100–103. <https://doi.org/10.1176/appi.ps.201700235>
- Benjamin, E. J., Muntner, P., & Alonso, A. (2019). *Heart Disease and Stroke Statistics—2019 Update: A Report From the American Heart Association*. American Heart Association. <https://doi.org/10.1161/CIR.0000000000000659>
- Bernheim, S. M., Parzynski, C. S., Horwitz, L., Lin, Z., Araas, M. J., Ross, J. S., Drye, E. E., Suter, L. G., Normand, S.-L. T., & Krumholz, H. M. (2016). Accounting For Patients' Socioeconomic Status Does Not Change Hospital Readmission Rates. *Health Affairs (Project Hope)*, 35(8), 1461–1470. <https://doi.org/10.1377/hlthaff.2015.0394>
- Birnbaum, H., Pike, C., Kaufman, R., Maynchenko, M., Kidolezi, Y., & Cifaldi, M. (2010). Societal cost of rheumatoid arthritis patients in the US. *Current Medical Research and Opinion*, 26(1), 77–90. <https://doi.org/10.1185/03007990903422307>
- Blum Alexander B., Egorova Natalia N., Sosunov Eugene A., Gelijns Annetine C., DuPree Erin, Moskowitz Alan J., Federman Alex D., Ascheim Deborah D., & Keyhani Salomeh. (2014). Impact of Socioeconomic Status Measures on Hospital Profiling in New York City. *Circulation: Cardiovascular Quality and Outcomes*, 7(3), 391–397. <https://doi.org/10.1161/CIRCOUTCOMES.113.000520>
- Bose, J., Hedden, S. L., Lipari, R. N., & Park-Lee, E. (2017). *Key Substance Use and Mental Health Indicators in the United States: Results from the 2017 National Survey on Drug Use and Health*. 124.
- Carr, B. G., Conway, P. H., Meisel, Z. F., Steiner, C. A., & Clancy, C. (2010). Defining the emergency care sensitive condition: A health policy research agenda in emergency medicine. *Annals of Emergency Medicine*, 56(1), 49–51. <https://doi.org/10.1016/j.annemergmed.2009.12.013>
- Centers for Disease Control and Prevention. (2017). *National Diabetes Statistics Report, 2017*. 20.
- Centers for Disease Control and Prevention. (2020a, January 31). *Severe Maternal Morbidity in the United States*. <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/severematernalmorbidity.html>

- Centers for Disease Control and Prevention. (2020b, September 9). *Stroke Facts*.
<https://www.cdc.gov/stroke/facts.htm>
- Centers for Disease Control and Prevention. (2020c, November 9). *NVSS - Maternal Mortality—Homepage*. <https://www.cdc.gov/nchs/maternal-mortality/index.htm>
- Centers for Medicare & Medicaid Services. (2019a). *Medicare Beneficiary Characteristics*.
https://www.cms.gov/Research-Statistics-Data-and-Systems/Statistics-Trends-and-Reports/Chronic-Conditions/Medicare_Beneficiary_Characteristics
- Centers for Medicare & Medicaid Services. (2019b, March 4). *Medicare and Medicaid Programs; Patient Protection and Affordable Care Act; Interoperability and Patient Access for Medicare Advantage Organization and Medicaid Managed Care Plans, State Medicaid Agencies, CHIP Agencies and CHIP Managed Care Entities, Issuers of Qualified Health Plans in the Federally-Facilitated Exchanges and Health Care Providers*. Federal Register.
<https://www.federalregister.gov/documents/2019/03/04/2019-02200/medicare-and-medicicaid-programs-patient-protection-and-affordable-care-act-interoperability-and>
- Centers for Medicare & Medicaid Services. (2020). *Preliminary Medicare COVID-19 Data Snapshot*.
<https://www.cms.gov/files/document/medicare-covid-19-data-snapshot-fact-sheet.pdf>
- Chatterjee, P., & Werner, R. M. (2019). The hospital readmission reduction program and social risk. *Health Services Research*, 54(2), 324–326. <https://doi.org/10.1111/1475-6773.13131>
- Collins, A. J., Foley, R. N., Chavers, B., Gilbertson, D., Herzog, C., Ishani, A., & Johansen, K. (2014). *US Renal Data System 2013 Annual Data Report*. 18.
- Eggleston, E. M., & Finkelstein, J. A. (2014). Finding the Role of Health Care in Population Health. *JAMA*, 311(8), 797–798. <https://doi.org/10.1001/jama.2014.163>
- Eisenberg, F., Lasome, C., Advani, A., Martins, R., Craig, P. A., & Sprenger, S. (2013). A Study Of The Impact Of Meaningful Use Clinical Quality Measures. *American Hospital Association*.
- Frampton, S. B., Guastello, S., Hoy, L., Naylor, M., Sheridan, S., & Johnston-Fleece, and M. (2017). Harnessing Evidence and Experience to Change Culture: A Guiding Framework for Patient and Family Engaged Care. *NAM Perspectives*. <https://doi.org/10.31478/201701f>
- Franks, P., & Fiscella, K. (2002). Effect of patient socioeconomic status on physician profiles for prevention, disease management, and diagnostic testing costs. *Medical Care*, 40(8), 717–724. <https://doi.org/10.1097/00005650-200208000-00011>
- Gladden, R. M., O'Donnell, J., Mattson, C. L., & Seth, P. (2019). Changes in Opioid-Involved Overdose Deaths by Opioid Type and Presence of Benzodiazepines, Cocaine, and Methamphetamine—25 States, July–December 2017 to January–June 2018. *MMWR. Morbidity and Mortality Weekly Report*, 68. <https://doi.org/10.15585/mmwr.mm6834a2>
- Hastings, S. N., Oddone, E. Z., Fillenbaum, G., Sloane, R. J., & Schmader, K. E. (2008). Frequency and predictors of adverse health outcomes in older Medicare beneficiaries discharged from the emergency department. *Medical Care*, 46(8), 771–777. <https://doi.org/10.1097/MLR.0b013e3181791a2d>
- Health and Human Services, Office for Civil Rights. (2008, May 7). *Patient Safety and Quality Improvement Act of 2005 Statute and Rule* [Text]. HHS.Gov. <https://www.hhs.gov/hipaa/for-professionals/patient-safety/statute-and-rule/index.html>
- Health Care Payment Learning and Action Network. (2016). *Accelerating and Aligning Population-Based Payment Models: Patient Attribution*. The MITRE Corporation.

- Heron, M. (2016). Deaths: Leading Causes for 2014. *Natl Vital Stat Rep.* 2016 Jun, 96.
- Heron, M. (2017). Deaths: Leading Causes for 2017. *Natl Vital Stat Syst.*, 77.
- Hines, A. L., Barrett, M. S., Jiang, J., & Steiner, C. A. (2014). *Conditions With the Largest Number of Adult Hospital Readmissions by Payer, 2011—Statistical Brief #172*. Agency for Healthcare Research and Quality. <https://www.hcup-us.ahrq.gov/reports/statbriefs/sb172-Conditions-Readmissions-Payer.jsp>
- Howell, E. A., Egoroca, N., Balbierz, A., Zeitlin, J., & Herbert, P. L. (2016). Black-White Differences in Severe Maternal Morbidity and Site of Care. *American Journal of Obstetrics and Gynecology*, 214(1), 122.e1-122.e7. <https://doi.org/10.1016/j.ajog.2015.08.019>
- Howlader, N., Noone, A. M., Krapcho, M., Miller, D., Brest, A., Yu, M., & Ruhl, J. (2020). *SEER Cancer Statistics Review, 1975-2017*. SEER. https://seer.cancer.gov/csr/1975_2017/index.html
- Hoyert, D., & Miniño, A. M. (2020, July 15). *Maternal Mortality in the United States: Changes in Coding, Publication, and Data Release, 2018*. <https://www.cdc.gov/nchs/maternal-mortality/index.htm>
- Institute of Medicine. (2014). *Dying in America: Improving Quality and Honoring Individual Preferences Near the End of Life*. <https://doi.org/10.17226/18748>
- Institute of Medicine (US) Committee on Quality of Health Care in America. (2000). *To Err is Human: Building a Safer Health System*. National Academies Press (US). <http://www.ncbi.nlm.nih.gov/books/NBK225182/>
- Kamal, R. (2017). *What are the current costs and outcomes related to mental health and substance use disorders?* Peterson-KFF Health System Tracker. <https://www.healthsystemtracker.org/chart-collection/current-costs-outcomes-related-mental-health-substance-abuse-disorders/>
- Leape, L., Berwick, D., & Bates, D. (2002). Counting Deaths Due to Medical Errors—Reply. *JAMA : The Journal of the American Medical Association*, 288, 2405. <https://doi.org/10.1001/jama.288.19.2405-JLT1120-2-3>
- Makary, M. A., & Daniel, M. (2016). Medical error—The third leading cause of death in the US. *BMJ*, 353, i2139. <https://doi.org/10.1136/bmj.i2139>
- Mariotto, A. B., Yabroff, K. R., Shao, Y., Feuer, E. J., & Brown, M. L. (2011). *Cancer Prevalence and Cost of Care Projections*. National Cancer Institute. <https://costprojections.cancer.gov/>
- McCullough, K. P., Morgenstern, H., Saran, R., Herman, W. H., & Robinson, B. M. (2019). Projecting ESRD Incidence and Prevalence in the United States through 2030. *Journal of the American Society of Nephrology: JASN*, 30(1), 127–135. <https://doi.org/10.1681/ASN.2018050531>
- Medicare Payment Advisory Commission. (2020). *Medicare Payment Advisory Commission's (MedPAC) March 2020 Report to the Congress: Medicare Payment Policy—Context for Medicare Payment Policy (Chp 1)*. http://www.medpac.gov/docs/default-source/reports/mar20_medpac_ch1_sec.pdf?sfvrsn=0
- National Quality Forum. (2012a). *NQF: Measure Evaluation Criteria*. http://www.qualityforum.org/Measuring_Performance/Submitting_Standards/Measure_Evaluation_Criteria.aspx
- National Quality Forum. (2012b). *Patient-Reported Outcomes in Performance Measurement*. https://www.qualityforum.org/Publications/2012/12/Patient-Reported_Outcomes_in_Performance_Measurement.aspx

- National Quality Forum. (2016). *Attribution—Principles and Approaches*.
https://www.qualityforum.org/Publications/2016/12/Attribution_-_Principles_and_Approaches.aspx
- National Quality Forum. (2017). *NQF: Social Risk Trial Final Report*.
https://www.qualityforum.org/Publications/2017/07/Social_Risk_Trial_Final_Report.aspx
- National Quality Forum. (2018). *2018 Improving Attribution Models Final Report*.
https://www.qualityforum.org/Publications/2018/08/Improving_Attribution_Models_Final_Report.aspx
- National Quality Forum. (2019). *Healthcare System Readiness Final Report*.
http://www.qualityforum.org/Publications/2019/06/Healthcare_System_Readiness_Final_Report.aspx
- National Quality Forum. (2020). *Opioids and Opioid Use Disorder: Quality Measurement Priorities Final Report*.
http://www.qualityforum.org/Publications/2020/02/Opioids_and_Opioid_Use_Disorder__Quality_Measurement_Priorities.aspx
- Office of Disease Prevention and Health Promotion. (2020). *Social Determinants of Health*.
<https://www.healthypeople.gov/2020/topics-objectives/topic/social-determinants-of-health>
- Philpot, L. M., Barnes, S. A., Brown, R. M., Austin, J. A., James, C. S., Stanford, R. H., & Ebbert, J. O. (2018). Barriers and Benefits to the Use of Patient-Reported Outcome Measures in Routine Clinical Care: A Qualitative Study. *American Journal of Medical Quality: The Official Journal of the American College of Medical Quality*, 33(4), 359–364. <https://doi.org/10.1177/1062860617745986>
- Rui, P., Kang, K., & Ashman, J. J. (2016). *National Hospital Ambulatory Medical Care Survey: 2016 Emergency Department Summary Tables*. 38.
- Saran, R., Robinson, B., Abbott, K. C., Agodoa, L. Y. C., Bragg-Gresham, J., Balkrishnan, R., Bhawe, N., Dietrich, X., Ding, Z., Eggers, P. W., Gaipov, A., Gillen, D., Gipson, D., Gu, H., Guro, P., Haggerty, D., Han, Y., He, K., Herman, W., ... Shahinian, V. (2019). US Renal Data System 2018 Annual Data Report: Epidemiology of Kidney Disease in the United States. *American Journal of Kidney Diseases*, 73(3), A7–A8. <https://doi.org/10.1053/j.ajkd.2019.01.001>
- Schultz, E. M., Pineda, N., Lonhart, J., Davies, S. M., & McDonald, K. M. (2013). A systematic review of the care coordination measurement landscape. *BMC Health Services Research*, 13(1), 119. <https://doi.org/10.1186/1472-6963-13-119>
- Silva, M. J., & Kelly, Z. (2020). *The Escalation of the Opioid Epidemic Due to COVID-19 and Resulting Lessons About Treatment Alternatives*. AJMC. <https://www.ajmc.com/view/the-escalation-of-the-opioid-epidemic-due-to-covid19-and-resulting-lessons-about-treatment-alternatives>
- Singh, H., Meyer, A. N. D., & Thomas, E. J. (2014). The frequency of diagnostic errors in outpatient care: Estimations from three large observational studies involving US adult populations. *BMJ Quality & Safety*, 23(9), 727–731. <https://doi.org/10.1136/bmjqs-2013-002627>
- Snyder, S. M., Morse, S. A., & Bride, B. E. (2019). A comparison of 2013 and 2017 baseline characteristics among treatment-seeking patients who used opioids with co-occurring disorders. *Journal of Substance Abuse Treatment*, 99, 134–138. <https://doi.org/10.1016/j.jsat.2019.01.023>
- Steiner, C. A., Karaca, Z., Moore, B. J., Imshaug, M. C., & Pickens, G. (2020). Surgeries in Hospital-Based Ambulatory Surgery and Hospital Inpatient Settings, 2014. In *Healthcare Cost and Utilization Project (HCUP) Statistical Briefs*. Agency for Healthcare Research and Quality (US).
<http://www.ncbi.nlm.nih.gov/books/NBK442035/>

The Administration for Community Living. (2020). *2019 Profile of Older Americans*. 26.

Throughout this report, the relevant statutory language appears in italicized text. (n.d.).

US Department of Health & Human Services. (2020). *Report to Congress: Social Risk Factors and Performance in Medicare's Value-Based Purchasing Program*.

<https://aspe.hhs.gov/system/files/pdf/263676/Social-Risk-in-Medicare%E2%80%99s-VBP-2nd-Report-Executive-Summary.pdf>

van Walraven, C., Bennett, C., Jennings, A., Austin, P. C., & Forster, A. J. (2011). Proportion of hospital readmissions deemed avoidable: A systematic review. *CMAJ: Canadian Medical Association Journal = Journal de l'Association Medicale Canadienne*, 183(7), E391-402.

<https://doi.org/10.1503/cmaj.101860>

Ward, B. W., & Schiller, J. S. (2013). Prevalence of multiple chronic conditions among US adults: Estimates from the National Health Interview Survey, 2010. *Preventing Chronic Disease*, 10, E65.

<https://doi.org/10.5888/pcd10.120203>

Weston, C. M., Yune, S., Bass, E. B., Berkowitz, S. A., Brotman, D. J., Deutschendorf, A., Howell, E. E., Richardson, M. B., Sylvester, C., & Wu, A. W. (2017). A Concise Tool for Measuring Care Coordination from the Provider's Perspective in the Hospital Setting. *Journal of Hospital Medicine*, 12(10), 811–817. <https://doi.org/10.12788/jhm.2795>

Williams, M. D. (2020). Practical and measurable definitions of care coordination, care management, and case management. *Translational Behavioral Medicine*, 10(3), 664–666.

<https://doi.org/10.1093/tbm/ibaa001>

Wilson, N., Seth, P., Smith IV, H., & Davis, N. L. (2020). Drug and Opioid-Involved Overdose Deaths—United States, 2017–2018. *MMWR. Morbidity and Mortality Weekly Report*, 69.

<https://doi.org/10.15585/mmwr.mm6911a4>

Appendix A: 2020 Activities Performed Under Contract With HHS

1. Federally Funded Contracts Awarded in FY 2020

IDIQ Contract	Contract Number	Task Order Name	Description	Period of Performance	Negotiated Contract Amount for FY 2020
HHSM-500-2017-00060I	HHSM-500-T0003	Measure Applications Partnerships	Provide recommendations related to multistakeholder group input on the selection of quality and efficiency measures for payment and public-reported programs.	March 27, 2020 - March 26, 2021 (Option Year 2)	\$1,393,823
HHSM-500-2017-00060I	75FCMC18F0001	Social Risk Trial	Review outcome measures for endorsement or maintenance; elicit recommendations for disparity-sensitive measures; and identify sources and standards for patient-level social risk factor information for measuring equity.	May 15, 2020 - May 14, 2021 (Option Year 2)	\$418,163
HHSM-500-2017-00060I	75FCMC20F0001	Best Practices for Developing & Testing Risk Adjustment Methods	Develop technical guidance on social and functional status-related risk adjustment in quality measurement.	June 15, 2020 - September 14, 2021 (Base Year)	\$1,096,931
HHSM-500-2017-00060I	75FCMC20F0002	Measurement Framework for Addressing Opioid-Related Outcomes Among Individuals With Co-occurring Behavioral Health Conditions	Develop a measurement framework that addresses polysubstance use involving synthetic or semi-synthetic opioids (SSO) among individuals with co-occurring Behavioral Health (BH) conditions.	June 30, 2020 - September 29, 2021 (Base Year)	\$655,345

IDIQ Contract	Contract Number	Task Order Name	Description	Period of Performance	Negotiated Contract Amount for FY 2020
HHSM-500-2017-00060I	75FCMC20F0003	Patient-Reported Outcome Measures to Digital PRO Performance Measures	Identify the attributes of high quality patient-reported outcome measures (PROMs) and create step-by-step guidance for using these PROMs as the foundation for developing digital patient-reported outcome performance measures (PRO-PMs).	September 1, 2020 - November 30, 2021 (Base Year)	\$774,625
HHSM-500-2017-00060I	75FCMC18F0009	Core Quality Measures Collaborative	Identify and align high value, high-impact, evidence-based measures across public and private payers that promote better patient outcomes and provide useful information for improvement, decision making, and payment.	September 14, 2020 - September 13, 2021 (Option Year 2)	\$264,013
HHSM-500-2017-00060I	75FCMC20F0004	Leveraging Electronic Health Record-Sourced Measures	Identify the causes, nature, and extent of EHR data quality issues and recommend best practices for addressing these issues to increase scientific acceptability (i.e., reliability, validity), use and usability, and feasibility of eQMs.	September 25, 2020 - September 24, 2021 (Base Year)	\$774,999
HHSM-500-2017-00060I	HHSM-500-T0001	Consensus-Based Endorsement and Maintenance of Performance Measures	Endorsement and maintenance of endorsement of standardized healthcare performance measures	September 27, 2020 - September 26, 2021 (Option Year 3)	\$9,956,081
HHSM-500-2017-00060I	HHSM-500-T0002	Annual Report to Congress	Report to Congress and the Secretary that highlights the implementation of quality and efficiency measurement initiatives under the Social Security Act	September 27, 2020 - September 26, 2021 (Option Year 3)	\$133,543

IDIQ Contract	Contract Number	Task Order Name	Description	Period of Performance	Negotiated Contract Amount for FY 2020
HHSM-500-2017-00060I	75FCMC20F0005	Attribution for Critical Illness and Injury	Develop recommendations for developing geographical/population-based attribution models applicable to quality measurement of high-acuity emergency care sensitive conditions (ECSCs).	September 28, 2020 - September 27, 2021 (Base Year)	\$780,472
HHSM-500-2017-00060I	75FCMC19F0007	Leveraging Quality Measurement to Improve Rural Health	Develop a measurement framework linking quality of care delivered by telehealth, healthcare system readiness, and health outcomes in a disaster.	September 6, 2020 - July 5, 2021 (Option Year 1)	\$486,058
TOTAL Negotiated Contract Value					\$ 16,734,053

2. NQF Financial Information for FY 2020 *(unaudited)*

Contributions and Grants	20,882,064
Program Service Revenue	325,000
Investment Income	277,013
Other Revenue	397,016
TOTAL REVENUE	\$21,881,093
Grants and Similar Amounts Paid	---
Benefits Paid to or for Members	---
Salaries, Other Compensation, Employee Benefits	11,620,015
Other Expenses ¹	7,666,433
TOTAL EXPENSES	\$19,286,448

Appendix B: Multistakeholder Group Rosters: Committee, Workgroups, Task Forces, and Advisory Panels

NQF ensures there is broad representation from the healthcare sector across all its convened committees, workgroups, task forces, and advisory panels. As a consensus-based entity, all multistakeholder representatives must undergo a disclosure of interest process prior to being appointed. This allows for a fair, open, and transparent process. During this time, NQF did not identify any known conflicts of interest that would undermine the objectivity of the deliberations mentioned above.

Consensus Development Process Standing Committees

All-Cause Admissions and Readmissions

CO-CHAIRS

John Bulger, DO, MBA

Geisinger Health

Cristie Travis, MSHHA

Memphis Business Group on Health

MEMBERS

Frank Briggs, PharmD, MPH

West Virginia University Healthcare

Mae Centeno, DNP, RN, CCRN, CCNS,

ACNS-BC

Baylor Health Care System

Helen Chen, MD

Hebrew SeniorLife

Edward Davidson, PharmD, MPH,

FASCP

Insight Therapeutics

Richard James Dom Dera, MD, FAAFP

Ohio Family Practice Centers and

NewHealth Collaborative

Paula Minton Foltz, RN, MSN

Patient Care Services

Brian Foy

Q-Centrix, LLC

Lisa Freeman

Connecticut Center for Patient Safety

Faith Green, MSN, RN, CPHQ, CPC-A

Humana

Leslie Kelly Hall

Healthwise

Michelle Lin, MD, MPH, MS

Icahn School of Medicine at Mount

Sinai

Dheeraj Mahajan, MD, CIC, CMD

Chicago Internal Medicine Practice

and Research (CIMPAP, SC)

Kenneth McConnochie, MD, MPH

University of Rochester Medical

Center

Zeyno Nixon, PhD, MPH

Washington State Health Care

Authority

Amy O'Linn, DO, FHM, FACP

Cleveland Clinic Enterprise

Readmission Reduction

Gaither Pennington, RN, BSN

Bravado Health

Carole Pulaski, MSA, BSN, CPHQ

Centene

Pamela Roberts, PhD, MSHA, ORT/L,

SCFES, FAOTA, CPHQ, FNAP, FACRM

Cedars-Sinai Medical Center

Sheila Roman, MD, MPH

Johns Hopkins Medical Institutions

Tori Shoulder, RN, BSN, MHA, CPHQ,

CPC

BayCare Health System

Chloe Slocum, MD, MPH

Harvard Medical School

Anthony White

Patients Partnering with Health

Systems

Behavioral Health and Substance Use Standing Committee

CO-CHAIRS

Peter Briss, MD, MPH

Centers for Disease Control and

Prevention, National Center for

Chronic Disease Prevention and

Health Promotion

Harold Pincus, MD

NewYork-Presbyterian Hospital, The

University Hospital of Columbia and

Cornell

MEMBERS

Mady Chalk, PhD, MSW

The Chalk Group

David Einzig, MD

Children's

Hospital and Clinics of Minnesota

Julie Goldstein Grumet, PhD

Education Development

Center/Suicide Prevention Resource

Center/National Action Alliance for

Suicide Prevention

Constance Horgan, ScD

The Heller School for Social Policy and

Management, Brandeis University

Lisa Jensen, DNP, APRN

Office of Nursing Services, Veterans

Health Administration North

Dolores (Dodi) Kelleher, MS, DMH

D Kelleher Consulting

Kraig Knudsen, PhD

Ohio Department of Mental Health
and Addiction Services

Michael R. Lardieri, LCSW

Northwell Health, Behavioral Health

Services Line

Tami Mark, PhD, MBA

RTI International

Raquel Mazon Jeffers, MPH, MIA

The Nicholson Foundation

Bernadette Melnyk, PhD, RN,

CPNP/FAANP, FNAP, FAAN

The Ohio State University

Laurence Miller, MD

University of Arkansas for Medical

Sciences

Brooke Parish, MD

Blue Cross Blue Shield of New

Mexico

David Pating, MD

Kaiser Permanente San Francisco

Vanita Pindolia, PharmD, MBA

Henry Ford Health System

Lisa Shea, MD, DFAPA

Lifespan

Andrew Sperling, JD

National Alliance on Mental Illness

Jeffery Susman, MD

Northeast Ohio Medical University

Michael Trangle, MD

HealthPartners Medical Group

Bonnie Zima, MD, MPH

University of California, Los Angeles

(UCLA) Semel Institute for

Neuroscience and Human Behavior

Leslie S. Zun, MD, MBA

Sinai Health System

Cancer Standing Committee

CO-CHAIRS

Karen Fields, MD

Moffitt Cancer Center

Shelley Fuld Nasso, MPP, CEO

National Coalition for Cancer

Survivorship

MEMBERS

Afsaneh Barzi, MD, PhD

USC-Norris Cancer Center

Gregary Bocsi, DO, FCAP

University of Colorado Hospital
Clinical Laboratory
Brent Braveman, Ph.D, OTR/L, FAOTA
University of Texas M.D. Anderson
Cancer Center
Steven Chen, MD, MBA, FACS
OasisMD
Matthew Facktor, MD, FACS (Inactive)
Geisinger Medical Center
Heidi Floyd
Patient Advocate
Bradford Hirsch, MD
SIGNALPATH
Jette Hogenmiller, PhD, MN, APRN/ARNP, CDE, NTP, TNCC, CEE
Oncology Nurse Practitioner
Wenora Johnson
Fight Colorectal Cancer
J. Leonard Lichtenfeld, MD, MACP
American Cancer Society
Stephen Lovell, MS
Seattle Cancer Care Alliance Patient
and Advisory Council
Jennifer Malin, MD, PhD
Anthem, Inc.
Jodi Maranchie, MD, FACS
University of Pittsburgh
Denise Morse, MBA
City of Hope Cancer Center
Benjamin Movsas, MD
Henry Ford Health System
Beverly Reigle, PhD, RN
University of Cincinnati College of
Nursing
David J. Sher, MD, MPH
UT Southwestern Medical Center
Danielle Ziernicki, PharmD
Dedham Group

Cardiovascular Standing Committee

CO-CHAIRS
Mary George, MD, MSPH, FACS, FAHA
Centers for Disease Control and
Prevention (CDC)
Thomas Kottke, MD, MSPH
Consulting Cardiologist,
HealthPartners
MEMBERS
Linda Briggs, DNP
George Washington University,
School of Nursing
Leslie Cho, MD
Cleveland Clinic
Helene Clayton-Jeter, OD
CrossOver Healthcare Ministry
Joseph Cleveland, MD
University of Colorado
Michael Crouch, MD, MSPH, FAAFP
Texas A & M University School of
Medicine
Tim Dewhrust, MD, FACC
Kaiser Permanente

Kumar Dharmarajan, MD, MBA
Clover Health
William Downey, MD
Carolinas HealthCare System
Howard Eisen, MD
Mechanical Circulatory Support and
Advanced Heart Failure
Naftali Zvi Frankel, MS
Déclore Consulting
Ellen Hillegass, PT, EdD, CCS, FAACVPR, FAPTA
American Physical Therapy
Association
Charles Mahan, PharmD, PhC, RPh
Presbyterian Healthcare Services and
University of New Mexico
Soeren Matke, MD, DSc
University of Southern California
Gwen Mayes, JD, MMSc
Patient Story Coach/Writer
Kristi Mitchell, MPH
Avalere Health, LLC
Jason Spangler, MD, MPH, FACP
Amgen, Inc.
Susan Strong
Heart Value Voice Colorado
Mladen Vidovich, MD
University of Illinois at Chicago, Jesse
Brown VA Medical Center
David Waxman, MD, PhD, FACC
University of California

Cost and Efficiency Standing Committee

CO-CHAIRS
Kristine Martin Anderson, MBA
Booz Allen Hamilton
Sunny Jhamnani, MD
Dignity Health & Banner
MEMBERS
Robert Bailey, MD
Johnson & Johnson Health Care
Systems, Inc.
Bijan Borah, MSc, PhD
Mayo Clinic College of Medicine
Cory Byrd
Humana, Inc.
Amy Chin, MS
Greater New York Hospital
Association
Cheryl Damberg, PhD
RAND Corporation
Lindsay Erickson, MPH
Integrated Healthcare Association
(IHA)
Risha Gidwani, DrPH
RAND Corporation/UCLA School of
Public Health
Emma Hoo
Pacific Business Group on Health
(PBGH)
Sean Hopkins, BS
New Jersey Hospital Association
Jonathan Jaffrey, MD, MS, MMM
University of Wisconsin School of
Medicine and Public Health

Dinesh Kalra
Rush University
Donald Klitgaard, MD, FAAFP
MedLink Advantage
Suman Majumdar, PhD
Washington State Health Care
Authority
Alefiyah Mesiwala, MS, MPH
UPMC Health Plan
Pamela Roberts, PhD, OTR/L, SCFES, FAOTA, CPHQ, FNAP, FACRM
Cedars-Sinai Medical Center
Mahil Senathirajah, MBA
IBM Watson Health
Matthew Titmuss, DPT
Hospital for Special Surgery
Sophia Tripoli, MPH
Families USA
Danny van Leewen, RN, MPH
Health Hats

Geriatrics and Palliative Care Standing Committee

CO-CHAIRS
R. Sean Morrison, MD
Patty and Jay Baker National Palliative
Care Center; National Palliative Care
Research Center; Hertzberg Palliative
Care Institute, Icahn School of
Medicine at Mount Sinai
Deborah Waldrop, PhD, LMSW, ACSW
University of Buffalo, School of Social
Work
MEMBERS
Margie Atkinson, DMin, BCC
Morton Plant Mease/Bay Care Health
System
Sree Battu, MD
Mayo Clinic
Samira Beckwith, LCSW, FACHE, LHD
Hope Healthcare Services
Amy J. Berman, RN
John A. Hartford Foundation
Cleanne Cass, DO, FAAHPM, FAAFP
Hospice of Dayton
Marian Grant, DNP, CRNP
Coalition to Transform Advanced Care
(C-TAC)
George Handzo, BCC, CSSBB
HealthCare Chaplaincy
Arif H. Kamal, MD, MBA, MHS, FACP, FAAHPM
Duke Cancer Institute
Suzanne Johnson, MPH, RN
National Hospice and Palliative Care
Organization
Janice Knebl, DO, MBA, FACOI, FACP
University of North Texas Health
Science Center at Fort Worth
Christopher Laxton, CAE
The Society for Post-Acute and Long-
Term Care Medicine
Katherine Lichtenberg, DO, MPH, FAAFP

Anthem Blue Cross and Blue Shield
Kelly Michaelson, MD, MPH, FCCM, FAP

Northwestern University Feinberg
School of Medicine/Ann and Robert
H. Lurie Children's Hospital

Douglas Nee, PharmD, MS

Clinical Pharmacist, Self-Employed

Laura Porter, MD

Colon Cancer Alliance

Lynn Reinke, PhD, ARNP, FAAN

VA Puget Sound Health Care System

Tracy Schroepfer, PhD, MSW

University of Wisconsin, Madison,
School of Social Work

Linda Schwimmer, JD

New Jersey Health Care Quality
Institute

Christine Seel Ritchie, MD, MSPH

University of California San Francisco,
Jewish Home of San Francisco Center
for Research on Aging

Janelle Shearer, RN, BSN, MA, CPHQ
Stratis Health

**Paul E. Tatum, MD, MSPH, CMD,
FAAHPM, AGSF**

Dell Seton Medical Center at
University of Texas, Austin

**Sarah Thirlwell, MSc, MSc(A), RN,
CHPN, CHPCA, AOCNS**

H. Lee Moffitt Cancer Center and
Research Institute Hospital, Inc.

Neurology Standing Committee

CO-CHAIRS

David Knowlton, MA

Retired

David Tirschwell, MD, MSc

University of Washington, Harborview
Medical Center

MEMBERS

Mary Kay Ballasiotes, MD

International Alliance for Pediatric
Stroke

Jocelyn Bautista, MD

Cleveland Clinic Neurological Institute
Epilepsy Center

James Burke, MD

University of Michigan

**Valerie Cotter, DrNP, AGPCNP-BC,
FAANP**

John Hopkins School of Nursing

Rebecca Desroscher, MS

Health Resources and Services
Administration

Bradford Dickerson, MD, MMSC

Massachusetts General Hospital

Charlotte Jones, MD, PhD, MSPH

Food and Drug Administration

Melody Ryan, PharmD, MPH

University of Kentucky College of
Pharmacy

Jane Sullivan, PT, DHS, MS

Northwestern University

Kelly Sullivan, PhD

Georgia Southern University

Ross Zafonte, DO

Harvard Medical School

Patient Experience and Function Standing Committee

CO-CHAIRS

Gerri Lamb, PhD, RN, FAAN

Arizona State University

Lee Partridge

United Hospital Fund

Christopher Stille, MD, MPH, FAAP

University of Colorado School of
Medicine & Children's Hospital

MEMBERS

Richard Antonelli, MD, MS

Boston Children's Hospital, Harvard
Medical School

Adrienne Boissy, MD, MA

Cleveland Clinic

Donald Casey, MD, MPH, MBA, FACP,

FAHA, FAAPL, DFACMQ

American College of Medical Quality,
(ACMQ)

Ariel Cole, MD

Florida State University College of
Medicine Orlando Campus

Ryan Collier, MD, MPH

University of Wisconsin-Madison

Sharon Cross, LISW-S

The Ohio State University Wexner
Medical Center

Christopher Dezii, MBA, RN, CPHQ

Bristol-Myers Squibb Company

Shari Erickson, MPH

Bristol-Myers Squibb Company

Dawn Hohl, RN, BSN, MS, PhD

Johns Hopkins Home Care Group

Sherrie Kaplan, PhD, MPH

University of California Irvine School
of Medicine

Tracey Kusnir, MBA

Seattle Cancer Care Alliance

Brenda Leath, MHSA, PMP

Westat

Brian Lindberg, BSW, MMHS

Consumer Coalition for Quality Health
Care

Lisa Morrise, MA

Patient & Family Engagement Affinity
Group National Partnership for
Patients

Rando Oster, MBA

Help Me Health

Charissa Pacella, MD

University of Pittsburgh Medical
Center (UPMC)

Lenard Parisi, RN, MA, CPHQ,

FNAHQ

Metropolitan Jewish Health System

Debra Saliba, MD, MPH

UCLA/JH Borun Center, VA GRECC,

RAND Health

Ellen Schultz, MS

American Institutes for Research

Peter Thomas, JD

Pyles, Sutter & Verville, P.C.

Patient Safety Standing Committee

CO-CHAIRS

Ed Septimus, MD

Medical Director Infection Prevention
and Epidemiology HCA and Professor
of Internal Medicine Texas A&M
Health Science Center College of
Medicine, Hospital Corporation of
America

Iona Thraen, PhD, ACSW

Patient Safety Director, Utah
Department of Health

MEMBERS

Jason Adelman, MD, MS

York-Presbyterian Hospital/Columbia
University Medical Center

Emily Aaronson, MD

Massachusetts General Hospital

Elissa Charbonneau, DO, MS

Encompass Health Corporation

Curtis Collins, PharmD, MS

St. Joseph Mercy Health System

Melissa Danforth, BA

The Leapfrog Group

Theresa Edelstein, MPH, LNHA

New Jersey Hospital Association

Terry Fairbanks, MD, MS, FACEP

MedStar Health

Lillee Gelinis, MSN, RN, CPPS, FAAN

SaferCare Texas, University of North
Texas Health Science Center

John James, PhD

Patient Safety America

**Stephen Lawless, MD, MBA, FAAP,
FCCM**

Nemours Children's Health System

Lisa McGiffert

Safe Patient Project, Consumers
Union

**Susan Moffat-Bruce, MD, PhD, MBA,
FACS**

Ohio State University's Wexner
Medical Center

Anne Myrka, RPh, MAT

Island Peer Review Organization
(IPRO)

Jamie Roney, DNP, NPD-BC, CCRN-K

Covenant Health System

David Seidenwurm, MD, FACP

Sutter Health

Geeta Sood, MD, ScM

The Society for Healthcare
Epidemiology of America

David Stockwell, MD, MBA

John Hopkins University, Pascal
Metrics

Tracy Wang, MPH

Anthem, Inc.

Kendall Webb, MD, FACEP

University of Florida Health Systems,
University of Florida Health -
Jacksonville

Donald Yealy, MD, FACEP
University of Pittsburgh
Yanling Yu, PhD
Washington Advocate for Patient
Safety

Perinatal and Women's Health Standing Committee

CO-CHAIRS

Kimberly Gregory, MD, MPH
Cedars-Sinai Medical Center
Carol Sakala, PhD, MSPH
National Partnership for Women &
Families

MEMBERS

Jill Arnold
Maternal Safety Foundation
J. Matthew Austin, PhD
Faculty Johns Hopkins School of
Medicine
Jennifer Bailit, MD, MPH
Metrohealth Medical Center
**Amy Bell, DNP, RNC-OB, NEA-BC,
CPHQ**
Women's and Children's Services and
Levine Cancer Institute, Atrium
Health
**Martha Carter, DHSc, MBA, APRN,
CNM**
WomenCare, Inc.
Tracy Flanagan, MD
Kaiser Permanente
Ashley Hirai, PhD
Health Resources and Services
Administration
Mambarambath Jaleel, MD
Parkland NICU, University of Texas,
Southwestern Medical Center
Diana Jolles, CNM, MS, PhD
American College of Nurse- Midwives
Deborah Kilday, MSN
Premier Inc.
Sarah McNeil, MD
Contra Costa Medical Center
Jennifer Moore, PhD, RN
Institute for Medicaid Innovation
Kristi Nelson, MBA, BSN
Intermountain Healthcare
Juliet M. Nevins, MD, MPA
Aetna
**Sheila Owens-Collins, MD, MPH,
MBA**
Johns Hopkins Healthcare, LLC
Cynthia Pellegrini
March of Dimes
Diana E. Ramos, MD, MPH, FACOG
Los Angeles County Public Health
Department
Naomi Schapiro, RN, PhD, CPNP
Step 2 School of Nursing, University of
California, San Francisco

Prevention and Population Health Standing Committee

CO-CHAIRS

Thomas McInerney, MD
Retired
Amir Qaseem, MD, PhD, MHA
American College of Physicians
MEMBERS

John Auerbach, MBA
Trust for America's Health
Philip Alberti, PhD
Association of American Medical
Colleges
Jayaram Brindala, MD, MBA, MPH
AdventHealth
Ron Bialek, MPP, CQIA
Public Health Foundation
J. Emilio Carrillo, MD, MPH
Weill Cornell Medicine
Gigi Chawla, MD, MHA
Children's Minnesota
Larry Curley
National Indian Council on Aging
Barry-Lewis Harris, II, MD
Corizon Health
Catherine Hill, DNP, APRN
Texas Health Resources
**Amy Nguyen-Howell, MD, MBA,
FAAFP**
America's Physician Groups
Ronald Inge, DDS
Delta Dental of Missouri
Julia Logan, MD, MPH
California Department of Health Care
Services

Patricia McKane, DVM, MPH
Michigan Department of Community
Health
Amy Minnich, RN, MHSA
Geisinger Health System
Brice K. Muma, MD, FACP
Henry Ford Physician Network
Jason Spangler, MD, MPH
Amgen, Inc.
**Rosalyn Carr Stephens, RN, MSN,
CCM**
AmeriHealth Caritas
Matt Stiefel, MPA, MS
Kaiser Permanente
Michael Stoto, PhD
Georgetown University
Arjun Venkatesh, MD, MBA
Yale University School of Medicine
Renee Walk, MPH
Wisconsin Department of Employee
Trust Funds
**Whitney Bowman-Zatzkin, MPA,
MSR**
Rare Dots Consulting

Primary Care and Chronic Illness Standing Committee

CO-CHAIRS

Dale Bratzler, DO, MPH
University of Oklahoma Health
Sciences Center-College of Public
Health

Adam Thompson, BA
Kennedy Health Alliance
MEMBERS
**Lindsay Botsford, MD, MBA,
MBA/FAAFP**
Physicians at Sugar Creek
William Curry, MD, MS
Penn State Hershey Medical Center
Kim Elliott, PhD
Health Services Advisory Group, Inc.
Scott Friedman, MD
Florida Retina Consultants
Donald Goldmann, MD
Institute for Healthcare Improvement
V. Katherine Gray, PhD
Sage Health Management Solutions
Faith Green, MSN, RN, CPHQ, CPC-A
Humana
Daniel Greninger, MD
The Permanente Medical Group
**Starlin Haydon-Greathing, MS, BS,
Pharm, FAPhA**
Illinois Pharmacists Association
Jeffrey Lewis, BA
El Rio Community Health Center
Catherine MacLean, MD, PhD
Hospital for Special Surgery
Anna McCollister-Slipp
Galileo Analytics
Sonali Narain, MBBS, MPH
Donald and Barbara Zucker School of
Medicine at Hofstra/Northwell,
Northwell Health
James Rosenzweig, MD
Boston University School of Medicine,
RTI International
Victoria Shanmugam, MD
The George Washington University
Rishi Singh, MD
Cleveland Clinic
William Taylor, MD
Harvard Medical School
John Ventura, DC
American Chiropractic Association

Renal Standing Committee

CO-CHAIRS

Constance Anderson, BSN, MBA
Northwest Kidney Centers
Lorien Dalrymple, MD, MPH
Fresenius Medical Care North
America

MEMBERS

Rajesh Davda, MD, MBA, CPE
Cigna Healthcare
Elizabeth Evans, DNP
American Nurses Association
Michael Fischer, MD, MSPH
Department of Veterans Affairs
Renee Garrick, MD, FACP
Renal Physicians
Association/Westchester Medical
Center, New York Medical College
Stuart Greenstein, MD
Montefiore Medical Center
Mike Guffey

UMB Bank (Board of Directors
Treasurer, Dialysis Patient Citizens)
**Debra Hain, PhD, APRN, ANP-BC,
GNP-BC, FAANP**
American Nephrology Nurses'
Association
University of CA Health Plan
Karilynne Lenning, MHA, LBSW
Telligen West
Franklin Maddux, MD, FACP
Fresenius Medical Care North
America
Andrew Narva, MD, FACP, FASN
National Institute of Diabetes and
Digestive Kidney Diseases –National
Institutes of Health
Jessie Pavlinac, MS, RD, CSR, LD
Oregon Health & Science University
Mark Rutkowski, MD
Southern California Permanente
Medical Group
Michael Somers, MD
American Society of Pediatric
Nephrology/Harvard Medical
School/Boston Children's Hospital
Bobbi Wager, MSN, RN
American Association of Kidney
Patients
John Wagner, MD, MBA
Kings County Hospital Center
Joshua Zaritsky, MD, PhD
Nemours/A.I. duPont Hospital for
Children

Lori Hartwell
Renal Support Network
Frederick Kaskel, MD, PhD
Children's Hospital at Montefiore
Myra Kleinpeter, MD, MPH
Tulane University School of Medicine
**Surgery Standing
Committee**
CO-CHAIRS
Lee Fleisher, MD
University of Pennsylvania/American
Society of Anesthesiologists
William Gunnar, MD, JD
Veterans' Health Administration
MEMBERS
Ashrith Amarnath, MD
Sutter Valley Medical Foundation
Kenya Brown, LCSW-C
Fresenius Medical Care
Temaya Eatmon
Patient Representative
**Elisabeth Erikson, MD, MPH, FACOG,
FACS**
Dartmouth Hitchcock Medical
Center
Frederick Grover, MD
University of Colorado School of
Medicine
John Handy, MD
American College of Chest Physicians
Mark Jarrett, MD, MBA
North Shore-LIJ Health System
Vilma Joseph, MD, MPH, FASA

Alan Kliger, MD
Yale New Haven Health System
**Mahesh Krishnan, MD, MPH, MBA,
FASN**
DaVita Healthcare Partners, Inc.
Lisa Latts, MD, MSPH, MBA, FACP
Albert Einstein College of
Medicine/Montefiore Medical Center
**Clifford Ko, MD, MS, MSHS, FACS,
FASCRS**
UCLA Schools of Medicine and Public
Health
Barbara Levy, MD, FACOG, FACS
American College of Obstetricians and
Gynecologists
Shawn Rangel, MD, MSCE
Boston Children's Hospital
Christopher Saigal, MD, MPH
University of California, Los Angeles
Salvatore T. Scali, MD, FACS, RPVI
University of Florida-Gainesville
Allan Siperstein, MD
Cleveland Clinic
Joshua D. Stein, MD, MS
University of Michigan
Larissa Temple, MD
Memorial Sloan-Kettering Cancer
Center
Kevin Wang, MHA
Hospital for Special Surgery

Appendix C: Scientific Methods Panel Roster

CO-CHAIRS

Christie Teigland, PhD

Avalere Health

David Nerenz, PhD

Henry Ford Health System

MEMBERS

J. Matt Austin, PhD

Armstrong Institute for Patient Safety
and Quality at Johns Hopkins
Medicine

Bijan Borah, MSc, PhD

Mayo Clinic

John Bott, MBA, MSSW

Consumer Reports

Lacy Fabian, PhD

The MITRE Corporation

Marybeth Farquhar, PhD, MSN, RN

American Urological Association

Jeffrey Geppert, EdM, JD

Battelle Memorial Institute

Sherrie Kaplan, PhD, MPH

UC Irvine School of Medicine

Joseph Kunisch, PhD, RN-BC, CPHQ

Memorial Hermann Health System

Paul Kurlansky, MD

Columbia University, College of

Physicians and Surgeons/

Columbia HeartSource

Zhenqiu Lin, PhD

Yale-New Haven Hospital

Jack Needleman, PhD

University of California Los Angeles

Eugene Nuccio, PhD

University of Colorado, Anschutz

Medical Campus

Sean O'Brien, PhD

Duke University Medical Center

Jennifer Perloff, PhD

Brandeis University

Patrick Romano, MD, MPH

University of California Davis

Sam Simon, PhD

Mathematica Policy Research

Alex Sox-Harris, PhD, MS

Stanford University

**Ronald Walters, MD, MBA, MHA,
MS**

University of Texas MD Anderson

Cancer Center

**Terri Warholak, PhD, RPh, CPHQ,
FAPhA**

University of Arizona, College of
Pharmacy

Eric Weinhandl, PhD, MS

Fresenius Medical Care North

America

Susan White, PhD, RHIA, CHDA

The James Cancer Hospital at The

Ohio State University Wexner Medical

Center

Appendix D: MAP Measure Selection Criteria

MAP uses its Measure Selection Criteria (MSC) to guide its review of measures under consideration. The MSC are intended to assist MAP with identifying characteristics that are associated with ideal measure sets used for public reporting and payment programs. The MSC are not absolute rules; rather, they are meant to provide general guidance on measure selection decisions and to complement program-specific statutory and regulatory requirements. The central focus should be on the selection of high quality measures that optimally address health system improvement priorities, fill critical measurement gaps, and increase alignment. Although competing priorities often need to be weighed against one another, the MSC can be used as a reference when evaluating the relative strengths and weaknesses of a program measure set, and how the addition of an individual measure would contribute to the set. The MSC have evolved over time to reflect the input of a wide variety of stakeholders.

To determine whether a measure should be considered for a specified program, MAP evaluates the measures under consideration against the MSC. Additionally, the MSC serve as the basis for the preliminary analysis algorithm. MAP members are expected to familiarize themselves with the criteria and use them to indicate their support for a measure under consideration.

1. NQF-endorsed measures are required for program measure sets, unless no relevant endorsed measures are available to achieve a critical program objective.

Demonstrated by a program measure set that contains measures that meet the NQF endorsement criteria, including importance to measure and report, scientific acceptability of measure properties, feasibility, usability and use, and harmonization of competing and related measures

- Sub-criterion 1.1** *Measures that are not NQF-endorsed should be submitted for endorsement if selected to meet a specific program need.*
- Sub-criterion 1.2** *Measures that have had endorsement removed or have been submitted for endorsement and were not endorsed should be removed from programs.*
- Sub-criterion 1.3** *Measures that are in reserve status (i.e., topped out) should be considered for removal from programs.*

2. Program measure set actively promotes key healthcare improvement priorities, such as those highlighted in CMS' "Meaningful Measures" Framework.

Demonstrated by a program measure set that promotes improvement in key national healthcare priorities, such as CMS' Meaningful Measures Framework

Other potential considerations include addressing emerging public health concerns and ensuring that the set addresses key improvement priorities for all providers.

3. Program measure set is responsive to specific program goals and requirements.

Demonstrated by a program measure set that is "fit for purpose" for the particular program

- Sub-criterion 3.1** *Program measure set includes measures that are applicable to and appropriately tested for the program's intended care setting(s), level(s) of analysis, and population(s).*
- Sub-criterion 3.2** *Measure sets for public reporting programs should be meaningful for*

consumers and purchasers.

- Sub-criterion 3.3** *Measure sets for payment incentive programs should contain measures for which there is broad experience demonstrating usability and usefulness (Note: For some Medicare payment programs, statute requires that measures must first be implemented in a public reporting program for a designated period).*
- Sub-criterion 3.4** *Avoid selection of measures that are likely to create significant adverse consequences when used in a specific program.*
- Sub-criterion 3.5** *Emphasize inclusion of endorsed measures that have eCQM specifications available.*

4. Program measure set includes an appropriate mix of measure types.

Demonstrated by a program measure set that includes an appropriate mix of process, outcome, experience of care, cost/resource use/appropriateness, composite, and structural measures necessary for the specific program

- Sub-criterion 4.1** *In general, preference should be given to measure types that address specific program needs.*
- Sub-criterion 4.2** *Public reporting of program measure sets should emphasize outcomes that matter to patients, including patient- and caregiver-reported outcomes.*
- Sub-criterion 4.3** *Payment program measure sets should include outcome measures and cost measures to capture value.*

5. Program measure set enables measurement of person- and family-centered care and services.

Demonstrated by a program measure set that addresses access, choice, self-determination, and community integration

- Sub-criterion 5.1** *Measure set addresses patient/family/caregiver experience, including aspects of communication and care coordination.*
- Sub-criterion 5.2** *Measure set addresses shared decision making, such as for care and service planning and establishing advance directives.*
- Sub-criterion 5.3** *Measure set enables assessment of the person's care and services across providers, settings, and time.*

6. Program measure set includes considerations for healthcare disparities and cultural competency.

Demonstrated by a program measure set that promotes equitable access and treatment by considering healthcare disparities. Factors include addressing race, ethnicity, socioeconomic status, language, gender, sexual orientation, age, or geographical considerations (e.g., urban vs. rural). Program measure set can also address populations at risk for healthcare disparities (e.g., people with behavioral/mental illness).

- Sub-criterion 6.1** *Program measure set includes measures that directly assess healthcare disparities (e.g., interpreter services).*
- Sub-criterion 6.2** *Program measure set includes measures that are sensitive to disparities measurement (e.g., beta blocker treatment after a heart attack), and that*

facilitate stratification of results to better understand differences among vulnerable populations.

7. Program measure set promotes parsimony and alignment.

Demonstrated by a program measure set that supports efficient use of resources for data collection and reporting and supports alignment across programs. The program measure set should balance the degree of effort associated with measurement and its opportunity to improve quality.

Sub-criterion 7.1 *Program measure set demonstrates efficiency (i.e., minimum number of measures and the least burdensome measures that achieve program goals).*

Sub-criterion 7.2 *Program measure set places strong emphasis on measures that can be used across multiple programs or applications.*

Appendix E: MAP Structure, Members, Criteria for Service, and Rosters

MAP operates through a two-tiered structure. Guided by the priorities and goals of HHS' National Quality Strategy, the MAP Coordinating Committee provides direction and direct input to HHS. MAP's workgroups advise the Coordinating Committee on measures needed for specific care settings, care providers, and patient populations. Time-limited task forces consider more focused topics, such as developing "families of measures"—related measures that cross settings and populations—and provide further information to the MAP Coordinating Committee and workgroups. Each multistakeholder group includes individuals with content expertise and organizations particularly affected by the work. MAP's members are selected based on NQF's Board-adopted selection criteria through an annual nominations process and an open public commenting period. Balance among stakeholder groups is paramount. Due to the complexity of MAP's tasks, individual subject matter experts are included in the groups. Federal government ex officio members are non-voting because federal officials cannot advise themselves. MAP members serve staggered three-year terms.

MAP Coordinating Committee

Committee Co-Chairs (voting)

Bruce Hall, MD, PhD

BJC HealthCare

Charles Kahn, III, MPH

Federation of American Hospitals

Organizational Members

(voting)

America's Health Insurance Plans

American College of Physicians

American Health Care Association

American Hospital Association

American Medical Association

American Nurses Association

Health Care Service Corporation

Humana

The Joint Commission

The Leapfrog Group

Medicare Rights Center

National Business Group on Health

National Committee for Quality

Assurance

National Patient Advocate

Foundation

Network for Regional Healthcare

Improvement

Pacific Business Group on Health

Patient & Family Centered Care

Partners

Individual Subject Matter

Experts (voting)

Harold Pincus, MD

Jeff Schiff, MD, MBA

Ron Walters, MD, MBA, MHA

Federal Government Liaisons

(non-voting)

Agency for Healthcare Research and

Quality (AHRQ)

Centers for Disease Control and

Prevention (CDC)

Centers for Medicare & Medicaid

Services (CMS)

**Office of the National Coordinator
for Health Information
Technology (ONC)**

MAP Rural Health

Workgroup Members

Committee Co-Chairs (voting)

Aaron Garman, MD

Coal Country Community Health
Center

Ira Moscovice, PhD

University of Minnesota School of
Public Health

Organizational

Members (voting)

Alliant Health Solutions

American Academy of Family

Physicians (AAFP)

American Academy of Physician

Assistants (AAPA)

American College of Emergency

Physicians (ACEP)

American Hospital Association (AHA)

American Society of Health-System

Pharmacists (ASHP)

Cardinal Innovations

Geisinger Health

Intermountain Healthcare

Michigan Center for Rural Health

Minnesota Community

Measurement

National Association of Rural Health

Clinics (NARHC)

National Rural Health Association

(NRHA)

National Rural Letter Carriers'

Association (NRLCA)

RUPRI Center for Rural Health Policy

Analysis

Rural Wisconsin Health Cooperative

(RWHC)

Truven Health

Analytics LLC/IBM Watson Health

Company

Individual Subject Matter

Experts (voting)

Michael Fadden, MD

John Gale, MS

Curtis Lowery, MD

Melinda Murphy, RN, MS

Jessica Schumacher, PhD

Ana Verzone, MS, APRN, FNP, CNM

Holly Wolff, MHA

Federal Government Liaisons

(non-voting)

**Federal Office of Rural Health Policy,
DHHS/HRSA**

Center for Medicare and Medicaid

Innovation, Centers for Medicare &

Medicaid Services (CMS)

Indian Health Services, DHH

MAP Clinician Workgroup Members

Committee Co-Chairs (voting)

Bruce Bagley, MD

Organizational Members

(voting)

The Alliance

America's Physician Groups

American Academy of Family

Physicians

American Academy of Pediatrics

American Association of Nurse

Practitioners

American College of Cardiology

American College of Radiology

American Occupational

Therapy Association

Anthem

Atrium Health

Consumers' Checkbook/Center for

the Study of Services

Council of Medical Specialty

Societies

Genentech

HealthPartners, Inc.

Kaiser Permanente

Louise Batz Patient Safety Foundation
 Magellan Health, Inc.
 National Association of ACOs (NAACOS)
 Pacific Business Group on Health
 Patient-Centered Primary Care Collaborative
 Patient Safety Action Network
 St. Louis Area Business Health Coalition
 Individual Subject Matter Experts (voting)
 Nishant “Shaun” Anand
 William Fleischman
 Stephanie Fry
 Federal Government Liaisons (non-voting)
 Centers for Disease Control and Prevention (CDC)
 Centers for Medicare & Medicaid Services (CMS)
 Health Resources and Services Administration (HRSA)

MAP Hospital Workgroup Members

Committee Co-Chairs (voting)
 R. Sean Morrison
 National Coalition for Hospice and Palliative Care
 Cristie Upshaw Travis, MSHHA
 Memphis Business Group on Health
 Organizational Members (voting)
 America’s Essential Hospitals
 American Association of Kidney Patients
 American Case Management Association
 American Society of Anesthesiologists
 American Hospital Association

Association of American Medical Colleges
 City of Hope
 Dialysis Patient Citizens
 Greater New York Hospital Association
 Henry Ford Health Systems
 Intermountain Healthcare
 Medtronic-Minimally Invasive Therapy Group
 Molina Healthcare
 Mothers Against Medical Error
 National Association for Behavioral Healthcare (formerly National Association of Psychiatric Health Systems)
 Pharmacy Quality Alliance
 Premier, Inc.
 Press Ganey
 Project Patient Care
 Service Employees International Union
 Society for Maternal-Fetal Medicine
 UPMC Health Plan
 Individual Subject Matter Experts (voting)
 Andreea Balan-Cohen, PhD
 Lindsey Wisham
 Federal Government Liaisons (non-voting)
 Agency for Healthcare Research and Quality (AHRQ)
 Centers for Disease Control and Prevention (CDC)
 Centers for Medicare & Medicaid Services (CMS)

MAP Post-Acute Care/Long-Term Care Workgroup

Committee Co-Chairs (voting)
 Gerri Lamb, PhD

Arizona State University
 Kurt Merkelz, MD
 Compassus
 Organizational Members (voting)
 AMDA – The Society for Post-Acute and Long-Term Care Medicine
 American Academy of Physical Medicine and Rehabilitation (AAPM&R)
 American Geriatrics Society
 American Occupational Therapy Association
 American Physical Therapy Association
 Centene Corporation
 Kindred Healthcare
 Legal Counsel for the Elderly
 National Hospice and Palliative Care Organization
 National Pressure Ulcer Advisory Panel
 National Transitions of Care Coalition
 Visiting Nurse Associations of America
 Individual Subject Matter Experts (voting)
 Sarah Livesay, DNP, RN, ACNP-BC, CNS-BC
 Rikki Mangrum, MLS
 Paul Mulhausen, MD
 Eugene Nuccio, PhD
 Ashish Trivedi, PharmD
 Federal Government Liaisons (non-voting)
 Center for Disease Control and Prevention (CDC)
 Centers for Medicare & Medicaid Services (CMS)
 Office of the National Coordinator for Health Information Technology (ONC)

Appendix F: Federal Quality Reporting and Performance-Based Payment Programs Considered by MAP

1. Ambulatory Surgical Center Quality Reporting Program
2. End-Stage Renal Disease Quality Improvement Program
3. Home Health Quality Reporting Program
4. Hospice Quality Reporting Program
5. Hospital-Acquired Condition Reduction Program
6. Hospital Inpatient Quality Reporting Program and Medicare and Medicaid Promoting Interoperability Program for Eligible Hospitals and Critical Access Hospitals
7. Hospital Outpatient Quality Reporting Program
8. Hospital Readmissions Reduction Program
9. Hospital Value-Based Purchasing Program
10. Inpatient Psychiatric Facility Quality Reporting Program
11. Inpatient Rehabilitation Facility Quality Reporting Program
12. Long-Term Care Hospital Quality Reporting Program
13. Medicare Shared Savings Program
14. Merit-Based Incentive Payment System
15. Prospective Payment System Exempt Cancer Hospital Quality Reporting
16. Skilled Nursing Facility Quality Reporting Program
17. Skilled Nursing Facility Value-Based Purchasing Program

Appendix G: Identified Gaps by NQF Measure Portfolio

The identification of measure gaps within the NQF topic areas is a process that allows Standing Committees to brainstorm and identify where high value measures are too few or nonexistent to drive improvement. The measurement gaps identified across all portfolios are shared below:

- Measures that focus on disparities and social determinants of health (e.g., adequate housing, employment, and transportation)
- Measures focused on care coordination across the life span
- Measures focused on the pediatric population and neurological conditions (e.g., stroke performance and care, emergency response, long-term functional outcomes, services utilization on a community level, post-acute care, and rehabilitation)
- Measures focused on the consideration of physical and occupational therapy as it relates to neurological conditions
- Measures focused on perinatal and women’s health (e.g., intimate partner violence, postpartum depression, and caregiver burden)
- Measures that focus on provider “burnout”, including those tied to payer-managed care (e.g., prior authorization, treatment limits)
- Measures that focus on care integration between mental health, substance use disorders, and physical health (e.g., primary care)

Appendix H: Medicare Measure Gaps Identified by NQF's Measure Applications Partnership

MAP Clinician Workgroup

Within the Merit-Based Incentive Payment System (MIPS) measure set, MAP identified several gaps, specifically in the areas of primary care, access, continuity, comprehension, and care coordination. MAP also suggested that CMS consider adding measures that determine whether a course of therapy is indeed the best for the patient to optimize reductions in cost and harm. MAP also emphasized measures of diagnostic accuracy and primary care PROMs.

MAP identified several measure gaps within the Shared Savings Program: diagnostic efficiency, measures of cultural change, and additional measures of care coordination and handoffs using eCQMs.

MAP discussed measure gaps associated with the Medicare Part C and D Star Ratings and suggested that CMS add measures of access to provider networks, PROMs related to functional status, and care coordination within care transitions. MAP expressed concern that the medication adherence measures do not capture rational non-adherence and patient preference, and also suggested the removal of older process measures, such as diabetes screening, in favor of measures that beneficiaries might find more useful when selecting a plan, such as out-of-pocket cost. MAP also suggested the inclusion of telehealth into existing measures.

MAP Hospital Workgroup

In consideration of measure gaps, MAP noted that all of the End-Stage Renal Disease (ESRD) Quality Improvement Program (QIP) patient experience measures are composites, and MAP suggested that In-Center Hemodialysis (ICH) CAHPS questions could be broken out and reported separately. MAP also called on CMS to consider how to include more specific patient safety measures beyond the generic question included in CAHPS as well as functional status and quality of life measures, especially given the slated changes in payment policy related to dialysis coverage through Medicare Advantage.

MAP suggested the Hospital Inpatient Quality Reporting (IQR) program would benefit from additional care transitions measures as well as enhanced measures of preventable healthcare harm, such as the PSI 90 composite (NQF #0531). MAP encouraged the development of Medicare spending per beneficiary measures for conditions that align with CMS mortality and readmission measures. MAP also stressed that the program would benefit from additional patient safety measures as well as measures on engagement of patients and families and transfer of information across care settings.

MAP suggested that CMS identify measurement priorities for patient populations within units for inpatient psychiatric facilities, specifically geriatric units for Inpatient Psychiatric Facility Quality Reporting (IPFQR).

MAP noted a gap in measures within Prospective Payment System Exempt Cancer Hospital Quality Reporting (PCHQR) regarding PROs for functional outcomes and quality of life, access to care, and survival. It was also noted that measures are needed to ensure smooth transitions between care settings, especially hospice. MAP also noted the need for measures that encourage the move from standardized approaches within cancer care to increased adoption of personalized medicine and pharmacogenomic testing. MAP encouraged CMS to continue partnerships with existing cancer registries to gather data for future measurement.

MAP did not evaluate any measures for Ambulatory Surgical Center Quality Reporting (ASCQR) during this MAP cycle, but they suggested infection-related measures, metrics that establish the quality and safety of procedures within ambulatory surgery centers previously done in hospital inpatient and outpatient settings, medication safety measures with an emphasis on opioid prescribing and stewardship, and measures of PROs with an emphasis on functional status.

There were no measures for consideration for the MAP during this cycle for the Hospital Acquired Condition (HAC) program. MAP did not identify any specific measure gaps but included comments related to the risk adjustment model for the HAC quality measure. Specifically, MAP noted concern that the risk adjustment model may unfairly penalize hospitals that have more reliable results by using the national average to impute the hospital score for those with smaller case volume. It was also mentioned that a naloxone prescription is not always an indicator that there has been harm but may be appropriate for prescribing.

The 2019 MUC list did not contain any potential Hospital Readmissions Reduction Program (HRRP) measures for MAP to review. In the discussion of gaps for this measure set, MAP suggested evaluating seven-day readmission rates rather than 30-day rates. MAP suggested that there was an issue with attribution, namely that 30-day measures may not solely reflect the performance of the hospital, but a combination of hospital and community care. MAP noted that some of the measures have been in the program for a long time and may have topped out. They called on CMS to examine which measures may have outlived their usefulness. MAP also encouraged CMS to explore the potential interaction between mortality and readmissions, particularly for patients with heart failure.

There were no measures under consideration for Hospital Outpatient Quality Reporting (OQR) this cycle. MAP did not specify any measure gaps for the program during their discussion.

Hospital Value-Based Payment (VBP) had no measures for consideration during this cycle. In MAP dialogue on measure gaps, it was noted that Hospital VBP is a subset of IQR measures. MAP suggested the IQR program would benefit from additional care transitions measures as well as enhanced measures of preventable healthcare harm, such as the PSI-90 composite (NQF #0531). MAP also emphasized making measures more actionable for Hospital VBP, such as by reporting CAHPS scores by unit and by reporting Medicare spending per beneficiary for conditions that match CMS mortality and readmission measures.

MAP PAC/LTC Workgroup

MAP identified potential gaps in the Home Health Quality Reporting Program (HH QRP) measure set. MAP members identified measurement gaps around long-term tracking of activities of daily living and measurement that captures wound care holistically.

In its review of the Hospice Quality Reporting Program measure set, MAP noted a gap in measures addressing safety, particularly around polypharmacy and medication reconciliation; PROs around symptom management; care aligned with the patient's goals; and communication of those goals to the next site of care should the patient leave hospice.

The Inpatient Rehabilitation Facility Quality Reporting Program (IRF QRP) did not have any measures submitted for review during this cycle. MAP noted appropriate clinical prescribing and use of opioids as a potential measurement gap in the IRF QRP measure set.

There were no measures submitted for review for the Long-Term Care Hospital Quality Reporting Program (LTCH QRP) during this cycle. MAP identified the availability of palliative care as a measure gap for LTCH QRP.

While MAP did not have any measures submitted for review for Skilled Nursing Facility Quality Reporting Program (SNF QRP) during this cycle, the group engaged in a robust discussion of measure gaps. MAP identified bidirectional transfer of information, quality and safety of care transitions, patient and family engagement, and care aligned with patients' goals as measure gaps in the program. They noted that the transfer of information should be robust and that measures need to encompass the quality of the information transferred, not just that a transfer took place. They also stressed that accuracy of medication lists and medication reconciliation is a key element in the quality and safety of care transitions.

MAP did not have any measures submitted for review for the Skilled Nursing Facility Value-Based Purchasing (SNF VBP) Program during this cycle. MAP also did not discuss any gaps for the SNF VBP program.

Appendix I: Statutory Requirement of Annual Report Components

As amended by the above laws, the Social Security Act (the Act)—specifically section 1890(b)(5)(A)—mandates that the entity report to Congress and the Secretary of the Department of Health and Human Services (HHS) no later than March 1st of each year.

The report must include descriptions of:

- how NQF has implemented quality and efficiency measurement initiatives under the Act and coordinated these initiatives with those implemented by other payers;*
- NQF’s recommendations with respect to an integrated national strategy and priorities for healthcare performance measurement in all applicable settings;*
- NQF’s performance of the duties required under its contract with HHS ([Appendix A](#));*
- gaps in endorsed quality and efficiency measures, including measures that are within priority areas identified by the Secretary under HHS’ national strategy, and where quality and efficiency measures are unavailable or inadequate to identify or address such gaps;*
- areas in which evidence is insufficient to support endorsement of measures in priority areas identified by the National Quality Strategy, and where targeted research may address such gaps;*
- matters related to convening multistakeholder groups to provide input on: a) the selection of certain quality and efficiency measures, and b) national priorities for improvement in population health and in the delivery of healthcare services for consideration under the National Quality Strategy; (Throughout This Report, the Relevant Statutory Language Appears in Italicized Text., n.d.)*
- an itemization of financial information for the fiscal year ending September 30 of the preceding year, including: (I) annual revenues of the entity (including any government funding, private sector contributions, grants, membership revenues, and investment revenue); (II) annual expenses of the entity (including grants paid, benefits paid, salaries or other compensation, fundraising expenses, and overhead costs); and (III) a breakdown of the amount awarded per contracted task order and the specific projects funded in each task order assigned to the entity; and*
- any updates or modifications of internal policies and procedures of the entity as they relate to the duties of the entity under this section, including: (I) specifically identifying any modifications to the disclosure of interests and conflicts of interests for committees, work groups, task forces, and advisory panels of the entity; and (II) information on external stakeholder participation in the duties of the entity under this section (including complete rosters for all committees, work groups, task forces, and advisory panels funded through government contracts, descriptions of relevant interests and any conflicts of interest for members of all committees, work groups, task forces, and advisory panels, and the total percentage by health care sector of all convened committees, work groups, task forces, and advisory panels.*