NQF 2019 Activities: Report to Congress and the Secretary of the Department of Health and Human Services

Final Report, February 28, 2020

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I. Executive Summary

The National Quality Forum (NQF) works with members of the healthcare community to drive measurable health improvements together. NQF is a not-for-profit, membership-based organization that gives all healthcare stakeholders a voice in advancing quality measures and improvement strategies that lead to better outcomes and greater value. Driven by science, collaboration, and proven outcomes, NQF helps move multiple perspectives into action.

Balancing different groups' perspectives in an open and honest dialogue is core to its work. NQF brings together doctors, health plans, hospitals and patients and caregivers to unite diverse stakeholders on important issues of common need. NQF uniquely and purposefully integrates patients and caregivers to offer a level playing field for all stakeholders to have a voice in defining and improving health care quality.

Quality Performance Measures and Measure Endorsement

NQF has recommended the best-in-class quality measures for use in federal and private improvement programs for two decades. Highly vetted and trusted NQF endorsed measures operate in key, statutorily mandated Medicare programs such as the Quality Payment Program, Hospital Value-Based Purchasing Program and other reporting initiatives in various care settings. Federal improvement programs that use NQF-endorsed quality measures have reduced patient harm in hospitals by 21 percent, saving 125,000 lives and $28 billion in costs. The 3.1 million fewer harms to patients achieved from 2010-2015 include a 91 percent decrease in central line infections and a 16 percent decrease in surgical site infections. Hospital readmission rates for Medicare patients have decreased by 8 percent since 2012.

Aligning the prioritization of such work with the Centers for Medicare & Medicaid Services' (CMS) Meaningful Measures is critical to the overall goals of reducing healthcare costs and improving quality for all. In future years, NQF will continue to align with the Meaningful Measures Initiative to assess core issues that are most vital to high quality care and better patient outcomes and to endorse measures in key areas such as patient safety, population and public health, and patient-centeredness. NQF's endorsement of science based, proven and effective measures allows for continued reduction in healthcare costs and improvement of quality; ensures that Americans have safe, effective and high-value healthcare; and fills important gaps in measurement.

Burden Reduction and Measure Alignment

Measure alignment across the public and private sector reduces burden for providers and clinicians and allows for quality comparisons across providers and programs. Through the Measure Applications Partnership (MAP) and the Core Quality Measures Collaborative, NQF helps private and public payment programs focus on those measures that will have the most impact.

The MAP convenes stakeholders for an intensive annual review of the quality measures being considered by the Department of Health and Human Services for almost 20 federal health programs. It recommends measures that empower patients to be active healthcare consumers and support their decision making, are not overly burdensome on providers, and can support the transition to a system that pays based on value of care. Importantly, it provides a coordinated look across federal programs to identify performance measures being considered, as a way to improve alignment across the healthcare system.

NQF has used its unique convening power to bring together the Core Quality Measures Collaborative (CQMC), a broad-based coalition of health care leaders including CMS, health insurance providers, medical associations, consumer groups, purchasers, and other quality collaboratives. The CQMC is committed to promoting quality measure alignment across the public and private healthcare sectors and has developed several core measure sets for use in multiple clinical areas. The next phase of this project will focus on strategies to increase core set adoption across public and private payers to better promote alignment.

Value Based Care

NQF actively works with CMS to advance the transition to value, ensure that the right quality measures are leveraged to promote high quality care and outcomes through value-based care arrangements while simultaneously looking for ways to streamline measures to reduce quality reporting burden. One of those key areas is rural health. Low case-volume of patients is often at the root of quality measurement challenges for rural health providers and it presents a significant problem for many rural providers, particularly when they want to compare their performance to that of other providers or assess change in quality over time.

NQF convened a multi-stakeholder rural health care committee on promising statistical methods that could address the low case-volume challenge. The report offers key recommendations that public and private stakeholders can act on to promote use of reliable, valid, and relevant measures in rural areas. NQF has also embarked on a new multi-year project that will identify high-priority measures that are important and relevant to rural providers for quality improvement efforts for future testing of the approaches recommended by the multistakeholder committee.

Addressing National Health Priorities

NQF is committed to addressing national health priorities and collaborating with important stakeholders to drive better outcomes. Critical health priorities are often areas where significant gaps in quality measurement exist. NQF provides specific actionable approaches to improve the current state of measurement and health outcomes in high priority areas such as opioid use and maternal mortality.

The U.S. is the only industrialized nation with rising maternal mortality rates and significant racial disparities in pregnancy-related deaths persist, creating an urgency for public health and healthcare delivery systems. Through a multi-year project, NQF is beginning to address morbidity and mortality through the development of actionable approaches that would improve maternal health outcomes. This includes an environmental scan to assess the current state of maternal morbidity and mortality measurement, developing frameworks and the including identification of measurement gaps and innovative quality measurement strategies to enhance care.

Despite a national crisis, only 8 opioid measures have been endorsed by NQF. There are currently several more measures under consideration or under comment however there is much more work to be done in this area. NQF recently released a report with recommendations on the priority measurement gaps that need to be filled in order to reduce opioid use disorders (OUD) and existing and conceptual measures that should be deployed in federal reporting programs.

Taken together, NQF's quality work continues to be foundational to efforts to achieve a cost-efficient, high-quality, 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 2019 are referenced throughout this report, and a full list is included in Appendix A. For more information on the contents of this report as required in statutory language, please reference Appendix I.

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 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.*

As part of Section 50206 of the Bipartisan Budget Act of 2018, Congress reauthorized funds for a CBE through fiscal year (FY) 2019. To that end, HHS awarded a contract to NQF to serve as the CBE under this Act. NQF continues to be an independent, not-for-profit, membership-based organization that brings varied healthcare stakeholders together to put forth quality measurement and improvement strategies that reduce costs and help patients receive better care.

NQF's revenues for FY 2019 were $24,839,854 million, including federal funds authorized under SSA 1890(d), private-sector contributions, membership revenue, and investment revenue. NQF's expenses for FY 2019 were $19,595,632. 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. NQF has made no updates or modifications to 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 consensus-based entity (entity) 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 entity 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 entity 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."[2]

At the request of HHS, the NQF-convened National Priorities Partnership (NPP) provided input that helped shape the initial version of the NQS, released by HHS in 2011. The NQS set out a comprehensive roadmap for the country that focuses on achieving better, more affordable care. It also emphasized the need for healthcare stakeholders across the country, both public and private, to play a role in making the initiative a success.

Annually, NQF continues to endorse measures through our core endorsement process that link to these priorities by convening diverse stakeholder groups to reach consensus on key strategies for performance measurement and quality improvement. Further, NQF began work focused on key issues that address the changing measurement landscape, including, but not limited to, changes in clinical practice guidelines, data sources, or risk adjustment across both the public and private sectors. In late 2018, NQF convened the Core Quality Measures Collaborative (CQMC), a multistakeholder collaborative to ensure that the right quality measures are being used across payers, aligning with the NQS' emphasis on public-private collaboration. In addition, NQF began work in 2019 on an urgent national priority area—to address challenges in opioid and OUD quality measurement. More details about NQF's endorsement work is in Section IV. Quality and Efficiency Measurement Initiatives (Performance Measurement). More information about NQF's priority initiatives on public-private payer alignment and OUDs follows below.

Priority Initiative: Align Private and Public Quality Measurement

A majority of Americans receive care through a value-based care arrangement, one that ties payment to the quality of care. Both public- and private-sector payers use VBP to ensure care is high quality and cost efficient. Ensuring the right quality measures are used across payers is essential to delivering results that will lead to a better healthcare system and reduce clinician burden.

One response was America's Health Insurance Plans (AHIP) convening a collaborative including CMS, NQF, health plans, physician specialty societies, employers, and consumers. The voluntary collaborative sought to add focus to quality improvement efforts; reduce the reporting burden for providers; and offer consumers actionable information to help them make decisions about where to receive their care. More specifically, the collaborative has three main aims:

1. Identify high value, high-impact, evidence-based measures that promote better patient outcomes, and provide useful information for improvement, decision making, and outcomes-based payment.
2. Align measures across public and private health insurance providers to achieve congruence in the measures being used for quality improvement, transparency, and payment purposes.
3. Reduce the burden of measurement by eliminating low-value metrics, redundancies, and inconsistencies in measure specifications and reporting requirements across public and private health insurance providers.

The collaborative developed and released eight core sets of quality measures in 2016 on key areas including:

- Accountable Care Organizations (ACOs), Patient-Centered Medical Homes (PCMH), and Primary Care
- Cardiology
- Gastroenterology
- HIV and Hepatitis C
- Medical Oncology
- Obstetrics and Gynecology
- Orthopedics
- Pediatrics

In 2018, CMS and AHIP—in partnership with NQF—reconvened and formalized the CQMC to continue its alignment efforts and improve healthcare quality for every American. First, the CQMC established a structure for creating, maintaining, and finalizing core measure sets. This process included refining the principles for core set measure selection and developing approaches to future core set prioritization. Next, NQF convened the CQMC to update the existing eight core sets. CQMC workgroups, made up of subsets of CQMC members with expertise in the respective topic areas, reviewed new measures that could be added to the core sets to address high-priority areas. The workgroups also removed measures that no longer showed an opportunity for improvement, did not align with clinical guidelines, or have implementation challenges. The workgroups also discussed measurement gaps and adoption successes and challenges.

In 2019, NQF convened all CQMC workgroups to discuss the maintenance of the core sets. The HIV/Hepatitis C and Gastroenterology workgroups finalized their maintenance discussion and voted on measures to be added or removed from their respective existing core sets. Voting results for the two workgroups were presented to the Steering Committee and are waiting to be presented to the full collaborative for final approval in early 2020. Voting results for the Cardiology, Orthopedics, and Pediatrics core sets were finalized and await presentation to the Steering Committee by early 2020. The Medical Oncology, ACO, and Obstetrics and Gynecology workgroups are yet to finalize their maintenance discussion. The remaining three workgroups will finalize their maintenance discussions in early 2020 and will complete voting by spring 2020.

In the coming year, NQF will continue to provide guidance and technical support to the CQMC on updating core measure sets, expanding into new clinical areas and providing guidance to stakeholders seeking to use the core set measures. Planned work includes finalizing the eight updated core sets and creating new core sets for behavioral health and neurology. NQF will also work collaboratively with CQMC members to develop strategies for facilitating implementation across care settings and promoting measure alignment.

Moving forward, NQF will also convene a workgroup to create an implementation guide. This resource will provide guidance on resolving technical issues related to adoption and increasing stakeholder knowledge of the core sets. The CQMC will also use the updated prioritization criteria to consider additional areas of work. NQF will conduct an analysis of gaps and measure specification variation in the core measure sets. These activities will increase use and widen the adoption of the core sets, thereby reducing the burden of measurement for payers and clinicians.

See the collaborative's website for more information at http://www.qualityforum.org/cqmc/.

Priority Initiative: Opioid and Opioid Use Disorder

Opioid-related overdose deaths and morbidity have increased in epidemic proportions over the last 10 years. In 2019, the Morbidity and Mortality Weekly Report confirmed that in 2017 there were over 47,000 U.S. deaths attributable to opioid use, both prescription and illicit.[3] These numbers eclipse the total mortality related to other crises including peak automobile accidents, the Vietnam war, HIV/AIDS, and gun violence in this country.[4] Moreover, a large proportion of those deaths are tied to heroin that is laced with illegally manufactured fentanyl,[5–7] a substance available in patch form to treat chronic pain.

This salient trend demonstrates an epidemic that is partly tied to unintended effects of regular medical care. More specifically, it has been well-documented that the recent rise in opioid use and dependence largely relates to trends over the past 20 years to expand the therapeutic use of opioids like Oxycontin to treat acute and chronic pain.[8–10] In fact, opioid prescriptions have become so prevalent that currently the U.S. legally distributes more opioids per capita than any other nation, many times over.

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.[11]

The response to the opioid overdose epidemic included congressional action in the form of legislation to permit federal agencies to enhance their efforts to address pain management and OUDs—the 2018 Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities (SUPPORT) Act Section 6093, signed by President Trump in October 2018. That law expanded funding mechanisms for substance use disorder (SUD), and further required examination of the coverage, payment, and treatment issues in Medicare and Medicaid regarding OUDs and pain management. The SUPPORT Act also called for the establishment of a "technical expert panel for the purpose of reviewing quality measures relating to opioids and opioid use disorders including care, prevention, diagnosis, health outcomes and treatment furnished to individuals with opioid use disorders." Under the authority of this law, HHS contracted with NQF to establish a multistakeholder technical expert panel (TEP) to consider OUD-related quality measures within an environmental scan. This included an inventory of existing measures, measure concepts (i.e., measures that have not been fully specified and tested), and apparent gaps.

In 2019, NQF convened a 28-member TEP and began a multiphased approach to address prominent challenges regarding quality measurement science as it relates to OUDs. As called for in the SUPPORT Act, the TEP was directed to do the following:

1. Review quality measures that relate to OUDs, including those that are fully developed or are under development;
2. Identify gaps in areas that relate to OUDs, and identify measure development priorities for such measure gaps; and
3. Make recommendations to HHS on quality measures with respect to OUDs for purposes of improving care, prevention, diagnosis, health outcomes, and treatment, including recommendations for revisions of such measures, need for development of new measures, and recommendations for including such measures in the Merit-Based Incentive Payment System (MIPS), APMs, the Shared Savings Program (SSP), the Hospital Inpatient Quality Reporting (IQR) program and the Hospital VBP program.

To inform the TEP's work, NQF first conducted an environmental scan of the current landscape of quality and performance measures and measure concepts that could be used to assess opioid use, OUD, and overdose. The environmental scan resulted in identification of a total of 207 measures and 71 measure concepts categorized into four domains—Pain Management, Treatment of OUD, Harm Reduction, and Social Issues. Measures and measure concepts were then further divided into smaller groupings within each domain to organize the measures and facilitate the identification of measure gaps.

The next phase of this project included developing recommendations that specifically identified the prioritized gaps in measure concepts for OUDs. It also provided guidance on OUD measurement for federal programs. The TEP identified five priority gaps/concepts that have multiple dimensions and multiple level-of-analysis targets, which are summarized here:

- Measures of opioid tapering, and more general measures related to the treatment of acute and chronic pain, are essential to addressing the opioid crisis.
- The inclusion of some measures for special populations such as pregnant women, newborns, racial subgroups, and detained persons is important.
- Long-term follow-up of clients being treated for OUD across time and providers is important to assess even though there are data challenges.
- Pain management, OUD treatment, SUD treatment, and treatment of physical and mental health comorbidities are all important.

The guidance on opioid and OUD measurement for federal programs included recommendations on the measures that should be included in these programs, whether revisions of measures should be considered or if there is a need for development of new measures. The applicable federal programs and payment models for these recommendations are MIPS; APMs; SSP; IQR; and the hospital VBP program. In consideration of each program, the TEP reviewed the measures and measure concepts applying them to each of the five federal programs.

A full report of the review process, TEP discussion, and recommendations is available to the public for comment and was finalized in February 2020.

IV. Quality and Efficiency Measurement Initiatives (Performance Measurement)

Section 1890(b)(2) and (3) of the Social Security 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, and consistent across types of healthcare providers. 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.

NQF works closely with many different stakeholders across the healthcare spectrum, including providers, patients, healthcare systems, hospitals, insurers, employers, and many more. Diverse stakeholder involvement and perspectives facilitate an equitable review and endorsement of healthcare performance measures. NQF-endorsed measures are used in a variety of ways. Providers use them to help understand whether the care they provide to their patients is optimal and appropriate. Federal and state governments use performance measures to identify where to focus quality improvement efforts and evaluate performance. Healthcare performance measures further enhance healthcare value by

ensuring consistent, high quality data are available, which ultimately allows for comparisons across providers, programs, and states. Currently, NQF has a portfolio of 520 endorsed measures used across the healthcare system. Subsets of this portfolio apply to particular settings and levels of analysis.

Cross-Cutting Projects to Improve the Measurement Process

In 2019, NQF undertook two projects to expand the science of performance measurement: the Social Risk Trial and the Rural Health Technical Expert Panel. These projects aimed to provide greater insights into measure methodology and future guidance for NQF's work to endorse performance measures. NQF explored ways to address attribution models; that is, the methodology through which a patient and their healthcare outcomes are assigned to a provider. NQF also examined the ongoing issue of how to account for the influence that a person's socioeconomic status or other social risk factors can have on their healthcare outcomes—and the challenges faced by rural providers to meet the reporting requirements in various CMS quality programs.

Social Risk Trial

Outcome measures—like those related to mortality, readmissions, or complications—have been playing an increasingly important role in VBP programs for public and private payers. More often than not, healthcare outcomes are not solely the results of the quality of care received but can be influenced by factors outside a provider's control, such as a patient's age, gender, comorbid conditions, severity of illness, or socioeconomic factors. Based on the input of a TEP, NQF published a report in 2014 recommending that performance measures should account for these underlying differences in patients' health risk, clinical or socioeconomic, if there is a conceptual basis for doing so to ensure measures make fair conclusions about provider quality.

Risk-adjusting outcome 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 is widely accepted. However, it is also well-documented that a person's social risk factors (i.e., socioeconomic and demographic factors) can also affect health outcomes. In the past, NQF's policy forbid risk adjustment for social risk factors, due to concern about the possibility of masking disparities or creating lower standards of care for people with social risk factors.

Based on the 2014 report mentioned earlier, 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 its 2014 report that performance measures should be risk adjusted for social risk factors if there is a conceptual basis for doing so. 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 a second Social Risk Trial, a three-year effort that began in May 2018 and will be completed by May 2021.

As part of this work, NQF has continued working with the Disparities Standing Committee and builds on the lessons of the initial NQF-funded Social Risk Trial initiative. In 2019, the Disparities Committee met to review the risk-adjusted measures for the spring and fall 2019 cycle submissions, review the risk models in use, and interpret results. The table below provides an overview of the measures submitted and initial analysis.

Total Number of Measures Reviewed	127
Number of outcome measures (including intermediate outcome and patient-reported outcome-based performance measures (PRO-PM))	48 of 127
Number of measures that used some form of risk adjustment	38 of 127
Number of measures that provided a conceptual rationale for potential impact of social risk factors	32 of 127

The measure developers established the conceptual rationale to support the potential impact of social risk factors through literature reviews, internal data analysis, or expert group consensus. Some of the social risk factors 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 276 measures submitted; 108 of those used some form of risk adjustment, and 100 measures had a conceptual model outlining the impact of social risk. Many of the measures submitted were process measures (44 percent), but the overall portfolio of measures included other measure types such as composite, efficiency, intermediate outcome, outcome, PRO-PM, resource use, and structural measures.

In 2020, NQF will continue to 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). The ongoing work of the Social Risk Trial period will 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 May 2021.

Rural Health Technical Expert Panel

Compared to the urban and suburban regions in the U.S., rural communities have higher proportions of elderly residents, higher rates of poverty, greater burden of chronic diseases (e.g., diabetes, hypertension, and chronic obstructive pulmonary disease), and limited access to the healthcare delivery system. While 60 percent of all trauma deaths in the U.S. occur in rural areas, only 24 percent of rural residents have access to a trauma center, compared to 85 percent for all U.S. urban and suburban residents, underscoring the severity of insufficient access to care.

Rural healthcare providers face many challenges in reporting quality measurement data and implementing care improvement efforts to address the needs of their populations. Low case-volume presents a significant measurement challenge for many rural providers to report measures, making it difficult for them to compare their performance to that of other providers (both rural and non-rural), identify topics for improvement, or assess change in quality over time. Rural areas are, by definition, sparsely populated, and this can affect the number of patients eligible for inclusion in healthcare performance measures, particularly condition- or procedure-specific measures. The low -volume challenge for rural providers is further aggravated by geographical remoteness and lack of transportation options for rural residents.

In 2018, as an extension of NQF's work in convening the MAP Rural Health Workgroup, CMS tasked NQF with eliciting expert input on promising statistical approaches that could address the low case-volume challenge as it pertains to healthcare performance measurement of rural providers. NQF began this new work by convening a five-member TEP. As part of the effort, the TEP reviewed previously identified approaches to the low case-volume challenge and offered new recommendations as appropriate. In fulfilling its charge, the TEP considered exemptions for reporting requirements for rural providers in various CMS quality programs, as well as the heterogeneity of the residents and healthcare providers in rural areas.

As part of their work, TEP members considered the following ways of defining low case-volume for the purposes of the report and its recommendations:

- Too few individuals meet the measure denominator
- Too few individuals meet the measure numerator
- As defined by specific program reporting requirements (i.e., reporting thresholds)

The TEP ultimately agreed to consider low-case volume primarily as having too few individuals that meet the measure denominator criteria. Members noted that some measures, by design, will have very low numerator counts (e.g., measures of patient safety "never events"), and that consideration of the magnitude of the numerator, relative to that of the denominator, may be of more interest than focusing on the numerator. Regarding use of specific program reporting requirements to define low case-volume, TEP members noted that thresholds for reporting often are implemented due to concerns about privacy, which are different from concerns regarding low case-volume and its resulting effects on score-level reliability. Thus, the TEP decided to consider the various program-specific thresholds on a case-by-case basis, if necessary, rather than use them to define low case-volume for the report.

The TEP also discussed whether to consider complete lack of service provision (e.g., a hospital does not perform deliveries) as a part of their deliberations. Members agreed that this is a missing-data problem within the context of composite measures and program design, rather than a low-case-volume problem. Therefore, they decided that this situation was out of scope for the report.

The TEP's four key recommendations to address the low-case-volume challenge are to: 1) "borrow strength" for low-case-volume rural providers to the extent possible by systematically incorporating additional data as needed (e.g., from past performance, from other providers, from other measures, etc.); 2) recognize the need for robust statistical expertise and computational power to implement the recommended modeling approach of borrowing strength; 3) report exceedance probabilities (exceedance probabilities, like confidence intervals, reflect the uncertainty of measure results); 4) and anticipate the potential for unintended consequences of measurement. TEP members also suggested several additional ideas for future work that could further address the low-case-volume challenge for rural providers, including both research and policy activities:

- Apply the recommendation of borrowing strength to the extent possible in a simulation study.
- Implement a "challenge grant" by providing either real or simulated data of rural providers with low case-volume—again, where the true quality of the providers is known—and ask volunteer researchers to apply various methods to address the problem.
- Explore which structural characteristics might be appropriate in defining shrinkage targets for performance measurement of rural providers.

- Bring together experts from other disciplines (such as education), who also must contend with the small-denominator problem, in order to share best practices for measurement and reporting.
- Explore nonparametric alternatives when developing measures for rural providers.
- Determine whether, and if so, how, to consider the small-numerator problem, particularly from the rural perspective. The small-numerator problem, which was considered out of scope by the TEP for this project, occurs when few individuals meet the measure numerator.
- Explore the policy rationale for various approaches to measurement in rural areas, particularly considering quality improvement and access rather than competition.
- Explore the implications of lack of service delivery (e.g., obstetrical services, mental health services) in rural areas on performance measurement, particularly in the context of actual or theoretical pay-for-performance program structures.
- Revisit the core set of rural-relevant measures identified in 2018 by the MAP Rural Health Workgroup on an ongoing basis to ensure that rural residents and providers find these measures meaningful.
- Continue to explore ways to ensure that rural providers can meaningfully participate in quality programs, both public and private.

The final report from the Rural Health Technical Expert Panel was published in April 2019.

Current State of the NQF Measure Portfolio

In 2019, NQF's measure portfolio contained 520 measures across a variety of clinical and cross-cutting topic areas. Forty-five percent of the measures in NQF's portfolio are outcome measures. NQF's multistakeholder committees—comprising stakeholders from across the healthcare landscape including consumers, providers, patients, payers, and other experts—review both previously endorsed and new measures submitted using NQF's rigorous 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

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. More information is available in Measure Evaluation Criteria and Guidance for Evaluating Measures for Endorsement.

NQF's portfolio of endorsed measures undergoes 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 multistakeholder committees review previously endorsed measures to ensure that 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.

Measure Endorsement and Maintenance Accomplishments

In 2017, NQF redesigned the endorsement process, creating an opportunity for measure developers to submit measures for endorsement consideration twice each year (spring and fall). As a result, in 2019, NQF convened 14 multistakeholder topic-specific standing committees for 28 quality measure endorsement projects (two projects per committee) to review submitted measures. This report highlights the outcomes of the three measure submission and review cycles that had activity in 2019: the completion of the review of measures submitted in the prior year (November 2018/fall 2018) and measure review cycles started in the calendar year addressed by this report (April 2019/spring 2019 and November 2019/fall 2019).

Also, as a result of the 2017 redesign, NQF convened the 40-member Scientific Methods Panel (SMP) to assist with the methodological review of complex measures prior to committee review of measures. Complex measures may include outcome measures, instrument-based measures (e.g., PRO-PMs), cost/resource use measures, efficiency measures, and composite measures) across all 14 topic areas. The SMP's review focuses on the measure's Scientific Acceptability (specifically, the "must-pass" subcriteria of reliability and validity), using NQF's standard measure evaluation criteria for new and maintenance measures. The Panel's feedback is critical input for standing committee endorsement recommendations. To that end, the Panel evaluated 72 complex measures in 2019.

Next, NQF's 14 multistakeholder standing committees reviewed and evaluated the measures. While some measure endorsement projects received measures for review each cycle, others did not. When standing committees did not receive measures, they instead convened to discuss overarching issues related to measurement in their topic area; these projects included Cancer and Prevention and Population Health. Through projects completed in 2019 with standing committees receiving measures, NQF endorsed 110 measures and removed 41 measures from its portfolio. Appendix B lists the types of measures reviewed in 2019 and the results of the review**.** Below are summaries of endorsement projects completed in 2019, as well as projects that began but were not completed before the end of the year.

All-Cause Admissions and Readmissions

A hospital readmission can be defined as patient admission to a hospital within 30 days after being discharged from an earlier hospital stay.[12] Hospital admissions and readmissions rates are influenced by various factors (e.g., socioeconomic status) and often are unavoidable and necessary.[13] To drive improvement in admissions and readmissions rates, performance measures have continued to be a key element of VBP programs to incentivize collaboration in the healthcare delivery system.

NQF's current portfolio includes 51 endorsed admissions and readmissions measures, including all-cause and condition-specific admissions and readmissions measures addressing numerous settings. Many of these measures are used in private and federal quality reporting and VBP programs, including CMS' Hospital Readmissions Reduction Program (HRRP) as part of ongoing efforts to reduce avoidable admissions and readmissions.

During the fall 2018 review cycle, the All-Cause Admissions and Readmissions Standing Committee evaluated seven measures. Four were endorsed, and the remaining three were not endorsed due to concerns about the measures' validity. The fall 2018 cycle concluded in August 2019, and the final report was published in August 2019. During the spring 2019 review cycle, five measures were evaluated, none of which was endorsed. One new measure was withdrawn from consideration. Another new measure was split and assessed at two levels of analysis, with one not endorsed and one deferred to the fall 2019 review cycle. Two more measures deferred from the fall 2018 cycle were not endorsed.

One measure will be reviewed during the fall 2019 cycle.

Behavioral Health and Substance Use

Behavioral health—including psychiatric illness (mental illness) and SUDs–is an important construct that reflects the interwoven complexities of human behavior and its neurological underpinnings.[14] As of 2018, approximately 57 million adolescent and adult Americans suffer from substantive behavioral health disorder, and the need for treatment remains very high, with only about 18 percent of those with SUD and 43 percent for those with any MI being able to access treatment.

NQF's current portfolio includes 49 endorsed behavioral health measures pertaining to the treatment of depression, psychosis, attentional disorders, and SUDs.

During the fall 2018 cycle, the Behavioral Health and Substance Use Standing Committee evaluated four measures against NQF's measure evaluation criteria. Two were new measures, and two were undergoing maintenance review. Of the four, three measures were endorsed, and one measure did not pass the NQF Evidence criterion and was not recommended for endorsement due to concern about the sensitivity and specificity of both the numerator and denominator. During the spring 2019 cycle, the committee reviewed two new measures, and four measures undergoing maintenance review were evaluated. All six measures were endorsed.

Four measures will be reviewed as part of the fall 2019 cycle.

Cancer

Cancer care is complex and provided in multiple settings—hospitals, outpatient clinics, ambulatory infusion centers, radiation oncology treatment centers, radiology departments, palliative and hospice care facilities—by multiple providers including surgeons, oncologists, nurses, pain management specialists, and social workers. Due to the need for multiple care transitions that may at times require numerous care settings and providers, care coordination is vital, and quality measures that address the value and efficiency of care for patients and their families are needed.

NQF's current portfolio includes 27 endorsed measures that address prevalent forms of cancer; specifically, breast cancer, colon cancer, hematology, lung and thoracic cancer, and prostate cancer.

During the fall 2018 cycle, the Cancer Standing Committee evaluated two new measures and one measure undergoing maintenance review against NQF's standard evaluation criteria. The Standing Committee recommended two measures for endorsement. One did not pass the NQF evaluation criterion due to the small sample size and complexity of the measure, and therefore was not recommended. The Consensus Standards Approval Committee (CSAC) deferred the endorsement decision of one measure back to the Standing Committee for reassessment in a future cycle. However,

during spring 2019, there were no measures submitted for review. Instead, the Committee had a strategic web meeting to preview the two new measures and eight undergoing maintenance review.

Nine measures are being reviewed as part of the fall 2019 cycle.

Cardiovascular

Cardiovascular disease (CVD) is a significant burden in the U.S., leading to approximately one in four deaths per year.[15] CVD is the leading cause of death for men and women in the U.S..[16] Considering the effect of cardiovascular disease, measures that assess clinical care performance and patient outcomes are critical to reducing the negative impacts of CVD.

NQF's current portfolio includes 54 endorsed measures addressing primary prevention and screening or the treatment and care of disease such as coronary artery disease (CAD), heart failure (HF), ischemic vascular disease (IVD), acute myocardial infarction (AMI), and hypertension. Other endorsed measures assess specific treatments, diagnostic studies, or interventions such as cardiac catheterization, percutaneous catheterization intervention (PCI), implantable cardioverter-defibrillators (ICDs), cardiac imaging, and cardiac rehabilitation.

During the fall 2018 cycle, the Cardiovascular Standing Committee evaluated four measures: one new measure, and three measures undergoing maintenance review. All four measures were endorsed. In the spring 2019 cycle, the Standing Committee evaluated six measures undergoing maintenance review against NQF's standard evaluation criteria. All six measures were endorsed.

Seven measures are being reviewed as part of the fall 2019 cycle.

Cost and Efficiency

In 2017, the U.S.' national health expenditures grew to 17.9 percent of GDP, reaching $3.5 trillion.[17] The prevalence of chronic disease and life expectancy continue to worsen in the U.S. compared with other developed countries, despite extensive investment.[18] Identifying opportunities to improve an upward trend, and understanding cost relative to quality of care and outcomes are vital for determining whether spending is proportionate to the healthcare goals we seek to achieve.[19,20]

NQF's current portfolio includes 14 endorsed measures that address the value of healthcare services through total cost of care and spending for treatment of specific conditions for hospitals and providers. NQF's Cost and Efficiency Project primarily focuses on evaluating costs and resource use measures and supports NQF's efforts to provide guidance to the performance measurement enterprise on using cost measures to understand efficiency and value.

In the fall 2018 cycle, the Cost and Efficiency Standing Committee evaluated and endorsed one new measure. During the spring 2019 cycle, the Committee evaluated and endorsed 15 measures.

No measures are being reviewed as part of the fall 2019 cycle.

Geriatrics and Palliative Care

As of 2018, there were an estimated 50.9 million individuals (15.6 percent of the U.S. population) categorized within the 65-and-older population, a figure that is expected to increase to 94.7 million by 2060.[21] This population is affected by a variety of disabilities, limited function and, for those noninstitutionalized, have two or more chronic conditions.[21,22] Improving both access to and quality of

palliative and end-of-life care becomes more important with the increasing number of aging Americans with chronic illnesses, disabilities, and functional limitations.[23]

NQF's current portfolio includes 35 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 2018 review cycle, the Geriatric and Palliative Care Standing Committee evaluated five measures undergoing maintenance review against NQF's measure evaluation criteria. All five were endorsed. During the spring 2019 cycle, the committee reviewed and endorsed two new measures.

Two measures are being reviewed as part of the fall 2019 cycle.

Neurology

Neurological conditions and injuries affect millions of Americans each year, including patients, families, and caregivers, with costs increasing each year. According to a study published in the April 2017 issue of Annals of Neurology, the most common neurological diseases cost the United States $789 billion in 2014, and this figure is projected to grow as the elderly population doubles between 2011 and 2050.[24] Evaluation of performance measures will help guide quality improvements in care and treatment of neurological conditions.

NQF's current portfolio includes 18 measures addressing stroke, dementia, and epilepsy. The portfolio contains 16 measures for stroke, which include six measures that are NQF-endorsed with reserve status, and two for dementia.

In the fall 2018 cycle, there were no measures submitted for evaluation; however, the Neurology Committee did have a strategic discussion about the portfolio of measures. During the spring 2019 cycle, one maintenance eMeasure was evaluated, but the committee could not reach consensus due to lack of graded evidence, so the eMeasure was not endorsed.

Three measures are being reviewed as part of the fall 2019 cycle.

Patient Experience and Function

As the healthcare paradigm evolves from one that identifies persons as passive recipients of care to one that empowers individuals to participate actively in their care, effective engaged care must adapt readily to individual and family circumstances, as well as differing cultures, languages, disabilities, health literacy levels, and socioeconomic backgrounds.[25] The implementation of patient-centered measures is one of the most important approaches to ensuring that the healthcare Americans receive reflects the goals, preferences, and values of care recipients.

NQF's current portfolio includes 53 measures addressing concepts such as functional status, communication, shared decision making, care coordination, patient experience, and long-term services and supports.

During the fall 2018 review cycle, the Patient Experience and Function Committee evaluated five new measures. All five measures were endorsed. During the spring 2019 cycle, 15 measures were reviewed, and all were endorsed.

Two measures are being reviewed as part of the fall 2019 cycle.

Patient Safety

Medical errors are estimated to cause hundreds of thousands of preventable deaths each year in the U.S..[26] Patient safety measurement and quality improvement efforts represent one of the most successful applications of quality measurement. These efforts have helped drive substantial reductions in patient safety-related events, particularly in hospitals. Despite improvements, opportunities exist to reduce harm and promote more effective and equitable care across settings.

NQF's current portfolio includes 62 measures on topics such as medication safety, healthcare-associated infections, mortality, falls, pressure ulcers, and workforce and radiation safety.

The fall 2018 review cycle included six new and maintenance measures focused on medication monitoring and review, surgical site and hospital-acquired infections, and nurses' practice environment. All six measures were endorsed. During the spring 2019 cycle, the Patient Safety Committee evaluated 11 measures, of which, nine measures were endorsed, one was withdrawn by the measure developer following the committee's evaluation, and one was not recommended for endorsement because it did not pass the performance gap subcriterion. During these cycles, the Patient Safety Committee also explored harmonization of medication review and reconciliation measures, an area with considerable variation of specifications. NQF summarized and analyzed key similarities and differences of these measures. Conversations among the Committee members and developers resulted in recommendations highlighting key opportunities for alignment and the need for standardized definitions.

Four measures are being reviewed as part of the fall 2019 cycle.

Perinatal and Women's Health

Perinatal healthcare accounts for the largest expenditure in U.S. healthcare, yet the U.S. continues to rank last in maternal outcomes.[27] Healthcare disparities play a large role, as there are vast differences in care among different racial and ethnic groups regarding reproductive and perinatal healthcare and outcomes.[28] This is a major concern for women, mothers, babies, and the providers who care for them, and accordingly, it is important for quality measurement.[29,30]

NQF's current portfolio includes 18 endorsed measures on reproductive health, pregnancy, labor and delivery, postpartum care for newborns, and childbirth-related issues for women.

NQF did not receive measures for the fall 2018 cycle. Instead, the Perinatal and Women's Health Committee held strategic web meetings to discuss various high-level concepts of perinatal health including predictors of hospital satisfaction in childbirth, person-centered maternity care, challenges in perinatal and women's health measure development, and measure gaps in women's health within the NQF portfolio. During the spring 2019 cycle, the Committee reviewed one new measure, which was ultimately not endorsed as it did not pass the Scientific Methods Panel review. Therefore, the Committee had a strategic web meeting to discuss measurement for maternal morbidity and mortality and gaps in women's health measures (nonperinatal and reproductive health measures).

Two measures are being reviewed as part of the fall 2019 cycle.

Prevention and Population Health

Efforts to improve the health and well-being of individuals and populations have expanded from traditional medical care to intervention-based health prevention, such as smoking cessation programs and social determinants of health (SDOH).[31] Both medical care and SDOH influence health outcomes;

therefore, performance measurement is necessary to assess whether healthcare stakeholders are using strategies to increase prevention and improve population health.

NQF's current portfolio includes 36 endorsed measures that address immunization, pediatric dentistry, weight and body mass index, community-level indicators of health and disease, and primary prevention and/or screening.

During the fall 2018 review cycle, the Prevention and Population Health Committee evaluated three measures undergoing maintenance review. All three were endorsed. During the spring cycle 2019, NQF did not receive any measures. Instead, the committee had a strategic discussion on defining value-based care for population health measurement.

Three measures are being reviewed as part of the fall 2019 cycle.

Primary Care and Chronic Illness

Chronic disease affects one in 10 Americans and continues to be the leading cause of morbidity and mortality among.[32] Annual costs for chronic diseases such as glaucoma, rheumatoid arthritis, and hepatitis C are at $5.8 billion, $19.3 billion, and $6.5 billion, respectively.[33–35] Primary care and chronic illness management are crucial to prevent other health concerns, and therefore must be considered in healthcare services to reduce disease burden and healthcare costs.

NQF's current portfolio includes 47 measures addressing areas on nonsurgical eye or ear, nose, and throat conditions, diabetes care, osteoporosis, HIV, hepatitis, rheumatoid arthritis, gout, asthma, chronic obstructive pulmonary disease (COPD), and acute bronchitis.

During the fall 2018 review cycle, the Primary Care and Chronic Illness Committee evaluated two measures against NQF's evaluation criteria. One is a new measure, and one is undergoing maintenance review. Both measures were endorsed. During the spring 2019 review cycle, the Committee evaluated 10 measures (five new measures and five undergoing maintenance review). Following Committee evaluation, six measures were endorsed, consensus was not reached on two measures, and two measures were not recommended for endorsement, as they both did not pass the validity criterion.

Six measures are being reviewed as part of the fall 2019 cycle.

Renal

Renal disease is a leading cause of death and morbidity in the U.S. An estimated 30 million American adults (15 percent of the population) have chronic kidney disease (CKD), which is associated with premature mortality, decreased quality of life, and increased healthcare costs. Left untreated, CKD can result in end-stage renal disease (ESRD), which afflicts over 700,000 people in the U.S. and is the only chronic disease covered by Medicare for people under the age of 65.[36,37]

NQF's current portfolio includes 20 endorsed measures addressing dialysis monitoring, hemodialysis, peritoneal dialysis, as well as patient safety.

No measures were submitted for review during the fall 2018 review cycle. During the spring 2019 review cycle, the Renal Committee evaluated five measures undergoing maintenance review that focused on adult peritoneal dialysis quality or pediatric dialysis quality. All five measures were endorsed.

One measure is being reviewed as part of the fall 2019 cycle; the maintenance reviews of several other measures were deferred to a subsequent cycle at the developer's request.

Surgery

In 2014, there were 17.2 million hospital visits that included at least one surgery, with over half occurring in a hospital-owned ambulatory surgical center.[38] Ambulatory surgeries have increased over time as a result of less invasive surgical techniques, patient conveniences (e.g., less time spent undergoing a procedure), and lower costs.[39,40] There are risks associated with ambulatory surgeries, and with the continued growth in the outpatient surgery market, assessing the quality of the services provided holds great importance.

NQF's current portfolio includes 65 endorsed surgery measures, one of its largest portfolios. These measures address cardiac, vascular, orthopedic, urologic, and gynecologic surgeries, and include measures for adult and child surgeries as well as surgeries for congenital anomalies. The portfolio also includes measures of perioperative safety, care coordination, and a range of other clinical or procedural subtopics.

During the fall 2018 review cycle, the Surgery Committee evaluated 15 measures undergoing maintenance. All 15 were endorsed. During the spring 2019 review cycle, the committee evaluated 11 measures. Of those, six measures were endorsed.

Two measures are being reviewed as part of the fall 2019 cycle.

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

Section 1890(b)(5)(A)(vi) of the Social Security Act requires the CBE to include in this report a description of annual activities related to multistakeholder group input on the selection of quality and efficiency measures from among: (i) such measures that have been endorsed by the entity; and (ii)… [that] are used or proposed to be used by the Secretary for the collection or reporting of quality and efficiency measures. Additionally, it requires that this report describe matters related to multistakeholder input on national priorities for improvement in population health and in delivery of health care services for consideration under the National Quality Strategy.

Measure Applications Partnership

Under section 1890A of the Act, HHS is required to establish a pre-rulemaking process under which a consensus-based entity (currently NQF) 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 consensus-based entity is to report the input of the multistakeholder groups, which will be considered by HHS in the selection of quality and efficiency measures.

NQF convenes the Measure Applications Partnership (MAP) to provide guidance on the use of performance measures in federal healthcare quality programs. MAP makes these recommendations through its pre-rulemaking process that 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 implementing and provides guidance on their acceptability and value to stakeholders. MAP was first convened in 2011 and completed its ninth year of review in 2019.

MAP comprises 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 members represent users of performance measures and over 135 healthcare leaders from 90 organizations. MAP conducts its pre-rulemaking work in an open and transparent process. More specifically, the list of Measures Under Consideration (MUC) is posted publicly, MAP's deliberations are open to the public, and the process allows for the submission of both oral and written public comments to inform the deliberations.

MAP aims to provide input to CMS that ensures the measures used in federal programs are meaningful to all stakeholders. MAP focuses on recommending measures that: 1) empower patients to be active healthcare consumers and support their decision making; 2) are not overly burdensome on providers; and 3) can support the transition to a system that pays on value of care. MAP strives to recommend measures that will improve quality for all Americans and ensure that the transition to VBP and APMs improves care and access while reducing costs for all.

MAP 2019 Pre-Rulemaking Recommendations

MAP published the findings of its 2018-2019 pre-rulemaking deliberations in a series of reports delivered in February and March 2019. MAP made recommendations on 39 measures under consideration for 10 CMS quality reporting and value-based payment programs covering ambulatory, acute, and post-acute/long-term care settings. A summary of this work is provided below. Additionally, MAP began its 2019-2020 pre-rulemaking deliberations in November 2019 to provide input on 17 measures under consideration for nine CMS programs. Reports on this work are expected in February and March 2020.

MAP's pre-rulemaking recommendations reflect its Measure Selection Criteria and how well MAP believes a measure under consideration 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 emphasizes the need for evidence-based, scientifically sound measures while minimizing the burden of measurement by promoting alignment and ensuring measures are feasible. MAP also promotes person-centered measurement, alignment across the public and private sectors, and the reduction of healthcare disparities.

MAP Rural Health Workgroup

In the fall of 2019, NQF reconvened the MAP Rural Health Workgroup to provide input into the CMS annual pre-rulemaking process, as recommended in the 2015 NQF report on rural health. The Workgroup comprises 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, including 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 workgroup reviewed and discussed the 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. A liaison from the Rural Workgroup attended each of the setting-specific workgroup meetings to provide additional input and represent the rural perspective.

MAP Clinician Workgroup

The MAP Clinician Workgroup reviewed 26 MUCs from the 2018 list for two programs addressing clinician or accountable care organization (ACO) measurement, making the following recommendations organized by program.

Merit-Based Incentive Payment System - MIPS was established by section 101(c) of MACRA. MIPS is a pay-for-performance program for eligible clinicians. MIPS applies positive, neutral, and negative payment adjustments 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 21 measures for MIPS and made the following recommendations:

- Conditional Support. MAP conditionally supported 17 measures pending receipt of NQF endorsement, including 11 measures that promote affordability of care by assessing healthcare costs or appropriate use.
- No Support with Potential Mitigation. MAP did not support with potential for mitigation three measures under consideration.
- No Support. There was one measure considered that MAP did not support for rulemaking.

In addition to the measure recommendations, MAP noted the need to reduce healthcare costs but cautioned that measures must be accurate and actionable. MAP noted that CMS and the NQF Cost and Efficiency Standing Committee should continue to evaluate the risk-adjustment model and attribution models for appropriateness and ensure that cost measures truly address factors within a clinician's control. MAP also emphasized the importance of completing measure testing at the clinician level of analysis prior to implementation in the MIPS program.

Measures for MIPS on the 2018 MUC list were under consideration for potential implementation in the 2020 measure set affecting the 2022 payment year and future years.

Medicare Shared Savings Program (SSP) - Section 3022 of the Affordable Care Act (ACA) created the Medicare Shared Savings Program. The Shared Savings Program creates an opportunity for providers and suppliers to create an ACO. An ACO is responsible for the cost and quality of the care for an assigned population of Medicare fee-for-service beneficiaries. For ACOs entering the program in 2018 or 2019, there were multiple participation options: (Track 1) one-sided risk model (ACOs do not assume risk for shared losses); (Track 1+ Model) two-sided risk model (ACOs assume limited losses [less than other tracks]); (Track 2) two-sided risk model (sharing of savings and losses, with the possibility of receiving a greater portion of any savings than track 1 ACOs); and (Track 3/ENHANCED track) two-sided risk model (sharing of savings and losses with greater risk than Track 2, but opportunity to share in the greatest portion of savings if successful). SSP aims to promote accountability for a patient population, care coordination, and the use of high quality and efficient services.

In its 2018-2019 pre-rulemaking work, MAP considered five measures for SSP and made the following recommendations:

- Conditional Support. MAP conditionally supported three measures, two of which address opioid overuse. MAP noted the importance of these measures given the current public health opioid crisis. MAP also conditionally supported *Adult Immunization Status* (also considered for MIPS)

pending NQF endorsement. This measure has been proposed by CMS for addition to the SSP measure set.

- No Support. MAP did not support adding two measures for use in SSP: *Initial Opioid Prescription Compliant with CDC Recommendations* and *Use of Opioids from Multiple Providers and at High Dosage in Persons without Cancer.* MAP did not consider the first measure to be adequately specified for the ACO level, and MAP considered the second to be duplicative of the opioid measures already recommended.

Key Themes from the Pre-Rulemaking Review Process - One overarching theme of MAP's pre-rulemaking recommendations for measures in the MIPS and the SSP emphasized appropriate attribution and level of analysis for the measures considered. MAP recognized the need to appropriately assign patients and their outcomes to the appropriate accountable unit (e.g., a clinician, a group of clinicians, an ACO) for performance measures that are incorporated into payment programs. MAP members noted that measures that give actionable information are more likely to be acceptable to clinicians.

MACRA requires that cost measures implemented in MIPS include consideration of clinically coherent groups; specifically, patient condition groups or care episode groups. Through its pre-rulemaking work, MAP emphasized the importance of aligning cost and quality measures to truly understand efficiency while protecting against potential negative unintended consequences of cost measures, such as the stinting of care or the provision of lower quality care. MAP provided several recommendations to safeguard quality of care while measuring the cost of the care provided. These follow below:

- First, MAP recommended that measures that serve as a balance to cost-of-care measures be incorporated into the program when feasible. These balancing measures could include clinical quality measures, efficiency measures, access measures, and appropriate use measures.
- In addition to focusing on the quality of the care provided, MAP stated that CMS should continually monitor for signs of inequities of care. MAP specifically noted a concern for stinting on care, which would disproportionately impact higher-risk patients.
- Relatedly, MAP recommended clinical and social risk-adjustment models to incentivize providers who demonstrate expertise when dealing with increased risk.
- Lastly, MAP commented on the need to link clinician behaviors to cost.

MAP members appreciated that CMS used TEPs to determine which components of cost an assessed clinician or group can control. MAP reinforced the need for this process to be transparent and understandable to clinicians who are being evaluated.

MAP Hospital Workgroup

The MAP Hospital Workgroup reviewed four MUCs from the 2018 list for two hospital and other setting-specific programs, making the following recommendations.

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, including process, structure, outcome, and patient perspective on care, efficiency, and costs-of-care measures. The applicable percentage increase for hospitals that do not participate or meet program requirements are reduced by one-quarter. The program has two goals: 1) to provide an incentive for hospitals to report quality information about their services; and 2) to provide consumers information about hospital quality so they can make informed choices about their care.

MAP reviewed three measures under consideration for the IQR Program and offered conditional support for all three 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 Assess Hospitals for endorsement.

PPS-Exempt Cancer Hospital Quality Reporting Program - The Prospective Payment System (PPS)-Exempt Cancer Hospital Quality Reporting (PCHQR) Program is a voluntary quality reporting program for PPS-exempt cancer hospitals.

In its 2018-2019 pre-rulemaking deliberations, MAP reviewed one measure under consideration for the PCHQR program, *Surgical Treatment Complications for Localized Prostate Cancer*. MAP did not support the measure for rulemaking with potential for mitigation if problems with the measure specifications are unresolved.

Key Themes from the Pre-Rulemaking Review Process - The MAP Hospital Workgroup noted an increasing need to align the measures included in the various hospital and setting-specific programs. Providers are performing a growing number of surgeries and/or procedures across the various settings that traditionally occurred in the inpatient setting (i.e., hospital operating room). MAP recognized that patients and their families might face challenges in distinguishing between inpatient and outpatient services while making informed choices about their care. MAP also noted CMS' focus on minimizing the duplication of measures across programs while focusing on measures in high-priority areas. MAP noted the importance of providing patient-focused care that aligns with patient and family preferences, and recommended that future high-priority measures include patient- and family-focused care that aligns with the patient's overall condition, goals of care, and preferences.

MAP PAC/LTC Workgroup

MAP reviewed nine measures under consideration from the 2018 list for five setting-specific federal programs addressing post-acute care (PAC) and long-term care (LTC), making the following recommendations.

Skilled Nursing Facility Quality Reporting Program - The Skilled Nursing Facility Quality Reporting Program (SNF QRP) is a pay-for-reporting program that applies to free-standing SNFs, SNFs affiliated with acute care facilities, and all noncritical access hospital swing-bed rural hospitals. SNFs that do not submit the required data with respect to a fiscal year are subject to a 2 percent reduction in their annual payment rates for the fiscal year.

MAP reviewed and conditionally supported two measures under consideration for the SNF QRP, pending NQF endorsement: *Transfer of Health Information to Patient—Post-Acute Care* and *Transfer of Health Information to Provider—Post-Acute Care.* The workgroup noted that both measures could help improve the transfer of information about a patient's medication, an important aspect of care transitions. Better care transitions could improve patient outcomes, reduce complications, and lessen the risk of hospital admissions or readmissions. Additionally, the measures would meet the Improving Medicare Post-Acute Care Transformation (IMPACT) Act requirement that protects clients' choice and streamline service provision,[41] address PAC/LTC core concepts not currently included in the program measure set, and promote alignment across programs.

Inpatient Rehabilitation Facility Quality Reporting Program (IRF QRP) - The Inpatient Rehabilitation Facility Quality Reporting Program (IRF QRP) was established under section 3004 of the ACA. This program applies to all IRF settings that receive payment under the IRF PPS including IRF hospitals, IRF units that are co-located with affiliated acute care facilities, and IRF units affiliated with CAHs. Under this

program, IRF providers must submit quality reporting data from sources such as Medicare fee-for-service FFS Claims that pay providers separately for each service,[42] Centers for Disease Control and Prevention (CDC) National Healthcare Safety Network (NHSN) data submissions, and the IRF-Patient Assessment Instrument (PAI), or be subject to a 2 percent reduction in the applicable annual payment update.

MAP reviewed and conditionally supported the same two measures under consideration for the IRF QRP. Again, MAP noted that these measures address an IMPACT Act requirement for the IRF QRP and address an important patient safety issue. MAP recognized that IRFs may see more acute patients than other PAC/LTC settings, and suggested congruence with the definition of medication lists for acute care.

Long-Term Care Hospital Quality Reporting Program (LTCH QRP) - The Long-Term Care Hospital Quality Reporting Program (LTCH QRP) was established under section 3004 of the ACA. Under this program, LTCH providers must submit quality reporting data from sources such as Medicare FFS Claims, the CDC NHSN data submissions, and the LTCH Continuity Assessment Record and Evaluation Data Sets (LCDS), or be subject to a 2 percent reduction in the applicable annual payment update.

MAP reviewed and conditionally supported the same two measures discussed in the previous sections for the LTCH QRP.

Home Health Quality Reporting Program (HH QRP) - The Home Health Quality Reporting Program (HH QRP) was established in accordance with Section 1895 of the Social Security Act. Under this program, home health agencies (HHAs) must submit quality reporting data from sources such as Medicare FFS Claims, the Outcome and Assessment Information Set (OASIS), and the Home Health Care Consumer Assessment of Healthcare Providers and Systems survey (HH CAHPS®), or be subject to a 2 percent reduction in the annual PPS increase factor.

MAP reviewed and conditionally supported the same two measures discussed in the previous sections for this program as well.

Hospice Quality Reporting Program (HQRP) - The Hospice Quality Reporting Program (HQRP) was established under section 3004 of the ACA. The HQRP applies to all hospices, regardless of setting. Under this program, hospice providers must submit quality reporting data from sources such as the Hospice Item Set (HIS) data collection tool and the Hospice Consumer Assessment of Healthcare Providers and Systems survey (CAHPS Hospice survey), or be subject to a 2 percent reduction in the applicable annual payment update.

MAP reviewed one measure under consideration for the HQRP: *Transitions from Hospice Care, Followed by Death or Acute Care*. MAP did not support this measure for rulemaking as currently specified with a potential for mitigation. MAP recommended that the measure developer reconsider the exclusion criteria for the measure. Specifically, the developer should review the exclusion for Medicare Advantage patients, as this may be excluding too many patients. Additionally, the developer should consider adding an exclusion to allow for patient choice. MAP recognized the need to address a potentially serious quality problem for patients if they are inappropriately discharged from hospice. MAP noted that transitions of care at the end of a person's life can be associated with adverse health outcomes, lower patient and family satisfaction, and higher costs.

Key Themes from the Pre-Rulemaking Review Process - MAP noted that patients requiring post-acute and long-term care are clinically complex and may frequently transition across sites of care. As such, quality of care is an essential issue for PAC and LTC patients. Performance measures are vital to understanding healthcare quality, but measures must be meaningful and actionable if they are to drive true improvement.

MAP highlighted that patients who receive care from PAC and LTC providers frequently transition between sites of care. Patients may move among their home, the hospital, and PAC or LTC settings as their health and functional status change. Improving care coordination and the quality of care transitions is essential to improving post-acute and long-term care. MAP members appreciated that the measures allow for the current technology limitations in PAC/LTC settings by allowing for multiple modes of transmission of the required medication list.

MAP members recommended that CMS ensure that the measures appropriately address situations such as a patient leaving against medical advice or a transfer to an emergency department. MAP also noted that the measures should ensure a timely transfer of information so that patients and receiving providers can ensure that they have the medications and equipment needed for a safe and effective transition of care. MAP stressed the importance of ensuring that measures produce meaningful information for all stakeholders. Measures should focus on areas that are meaningful to patients as well as clinicians and providers. MAP emphasized a need for measures that are person-centered and address aspects of care that are most meaningful to patients and families. MAP members noted the need to engage patients and families into quality improvement efforts.

2019 Measurement Guidance for Medicaid Scorecard

Medicaid and CHIP cover 73 million lives, or roughly 23 percent of the U.S. population. Nearly 51 percent of individuals enrolled in Medicaid are children, and approximately two-thirds of women enrolled in Medicaid are in their child-bearing years. Both programs are responsible for delivering healthcare to a significant proportion of Americans, and especially to those who are among the most economically and medically vulnerable, like children from low-income households, low-income elderly, and persons with marked disability. Many federal efforts and programs promote quality of care and health for the Medicaid population. In June 2018, CMS released its first version of the Medicaid and CHIP (MAC) Scorecard. The Scorecard is designed to increase the public's access to performance data for the MAC programs including health outcomes of enrollees. The Scorecard has three pillars, each consisting of a set of measures selected to reflect the performance of the units that support the MAC programs: state health system performance, state administrative accountability, and federal administrative accountability.

NQF convened the multistakeholder MAC Scorecard Committee, charged with providing input on the prepopulated Scorecard version 1.0 for the state health system performance pillar. Specifically, the Committee was tasked with determining which measures should be recommended for addition to—and removal from—the current version of the Scorecard. In an effort to facilitate adoption and implementation of the Scorecard, the state health system pillar draws on measures from the Medicaid Adult and Child Core Sets. This pillar is designed to examine how states serve MAC beneficiaries throughout different measurement domains including, but not limited to, Communicating and Coordinating Care, Reducing Harm Caused in Care Delivery, and Making Care Affordable.

The Committee first evaluated the current measures in the state health system performance pillar of the Scorecard to identify high need and gap areas such as behavioral health. Subsequently, the Committee assessed measures in the 2018 Adult and Child Core Sets to identify potential measures to recommend for addition to or potential removal from the Scorecard in future iterations. During measure discussions, Committee members considered many factors, including whether measures address the diverse health needs of the Medicaid population and the most vulnerable among them, drive improvements in healthcare quality, and reduce or minimize reporting burden. Committee members considered measures for addition that directly address the usefulness of measure implementation and reporting. Given the recency of the Scorecard's creation, the Committee also considered the application of measures in the Scorecard and the consequences or implications of accountability. Ultimately, the Committee recommended one measure for removal, *Use of Multiple Concurrent Antipsychotics: Ages 1-17,* and the addition of four measures listed in order of priority.

Rank	NQF Number and Measure Title
1	1448 Developmental Screening in the First Three Years of Life
2	1768 Plan All-Cause Readmissions
3	0038 Childhood Immunization Status
	1879 Adherence to Antipsychotic Medications for Individuals with Schizophrenia (SAA-AD)

These measures would strengthen the measure set by promoting measurement of high-priority quality issues and addressing childhood immunization, preventive care for children, and behavioral health. At the request of CMS, additions were limited to the Core Sets only.

The MAC Scorecard Committee also discussed the future direction of the Scorecard and provided guidance on future measure set curation, as well as best practices to promote reporting. The Committee emphasized the importance of harnessing performance measurement results to drive health system change and improvements in care delivery. In order to promote measure reporting, the Committee suggested that states implement payment incentives or leverage value-based payment models in the Scorecard's early stages of development. Given the new and iterative nature of the Scorecard, the Committee encouraged the Center for Medicaid and CHIP Services (CMCS) to structure the Scorecard's evolution in two phases focused on refinement and feedback. In the short term, the Committee emphasized the importance of refinement to optimize the Scorecard measure set. For the long term, the Committee recommended that CMCS solicit and leverage continuous feedback and performance data from states to prioritize use of measures that have the greatest utility.

The final report, *Strengthening the Medicaid and CHIP (MAC) Scorecard*, was published in August 2019.

VI. Gaps in Endorsed Quality and Efficiency Measures

Under section 1890(b)(5)(A)(iv) of the Act, the entity is required to describe in the annual 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 2019 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 2019 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 2018-2019 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)(v) of the Act, the entity 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 2019 to create needed 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, cost-effective care that reflects current science and evidence.

NQF began projects to create strategic measurement frameworks for assessing population-based trauma outcomes, healthcare system readiness, chief complaint-based quality for emergency care, common formats for patient safety, person-centered planning and practice, measure feedback loop, patient-reported outcomes, EHR data quality, diagnostic error, and maternal morbidity and mortality.

Population-Based Trauma Outcomes

Intentional and nonintentional injuries resulting in trauma are the third-leading cause of death in the U.S..[43] Traumatic injuries—that is, the set of all physical injuries of sudden onset and severity that require immediate medical attention—result in 39 million emergency visits and 12.3 million hospital admissions every year. Such injuries were associated with $670 billion in medical expenses in 2013.[44,45] Fortunately, major progress has been made in trauma care. Yet, even with the improvements, trauma injury has a significant impact on public health, and performance of trauma systems requires increased attention. However, there are few measures in existence or implemented to improve trauma care quality.[43] Performance measures allow for assessment of trauma care and increased focus on improvement efforts with respect to quality of care. Performance measures may also help in addressing

key outcomes within trauma care, such as quality of life, mental health status, rehabilitation, and loss of life.

In 2018, NQF began work on population-based trauma outcomes by convening a committee to identify domains within emergency physical trauma as experienced at the individual patient level. Psychological trauma was not extensively addressed by the committee but was acknowledged as an important long-term corollary to physically traumatic events. A conceptual framework was then developed for population-based trauma outcomes and the subsequent systematic identification and prioritization of measure gaps. In 2019, the conceptual measurement framework for this project was finalized. It identified four domains (access to trauma services, cost and resource use, trauma clinical care, and prevention of trauma) and 15 subdomains for population-based trauma outcomes. Below is a table of the domains and subdomains for this project.

Domain	Subdomain
Access to trauma services	System capacity, availability of services, timeliness of services, and resource matching
Cost and resource use	Individual, trauma center, system, and societal
Trauma clinical care	Acute care, post-acute care, longitudinal care
Prevention of trauma	Intentional, unintentional, general, undetermined

The framework was presented to the Consensus Standards Approval Committee as an information update in February 2019, and a final report was completed in May 2019.

Healthcare Systems Readiness

Improving healthcare and public health systems and capacities for health security threats—such as bioterrorism, disease outbreaks, and inclement weather—has been a focus in recent years. Yet, despite substantial progress, complex challenges persist, and preparedness efforts may not suffice. For example, many parts of the U.S. remain unprepared for emergencies despite the development of cross-sector programs to improve the nation's preparedness during national and regional emergencies.[46,47] Furthermore, not only is there a need for healthcare systems to be ready for all types of events ("preparedness"), there is also a need for them to prepare for, mitigate against, rapidly identify, evaluate, react to, and recover from a wide spectrum of emergency conditions related to a disaster or emergency ("readiness").

The current landscape of healthcare system readiness measurement includes critical and relevant metrics for public health and disease surveillance programs. There is, however, a lack of quality and accountability metrics specific to health system readiness to incentivize private-public partnerships within the healthcare sector to ensure the delivery of high quality care during times of system stress with the goal of improving person-centered care, value, and cost efficiency. The focus of this project was on measurement of the more comprehensive concept of readiness and including not only how a

healthcare system may prepare prior to an event, but also how it actually performs both during an event and after it ends.

To address these challenges, in 2018, NQF convened a multistakeholder committee to provide input and guide the creation of a framework. The development of the framework originated from the concept that readiness exists at the intersection of the four phases of emergency management: mitigation, preparedness, response, and recovery. The concept of readiness is a holistic concept that applies to all entities that deliver care (i.e., the healthcare system) within a particular community that is, or may be, affected by a disaster or emergency. With this view of readiness in mind, the committee developed a set of guiding principles to define the key criteria when considering the measure concepts to guide their development into performance measures. Guiding principles were then further divided into the subcategories of "the what," "the where," and "the how" to provide a primer of factors that users should consider when applying this framework. An overarching subcategory of "why" was also created.

Principle	Description
What	Person-centered Capacity and capability-focused Available and accessible Maintenance of health
Where	Care beyond hospitals Scalability & geographical considerations Healthcare system size considerations
How	Communication among entities Preparing for the known and unknown Maintenance of readiness Ongoing measurement
Why	Need for measure concepts and performance measures

Below is a table of the domains and subdomains for this project:

Domains	Subdomains
Staff (also applies to volunteers [both paid and unpaid], where appropriate)	Staff safety, staff capability, staff sufficiency, staff training, staff support
Stuff	Pharmaceutical products, durable medical equipment, consumable medical equipment and supplies, nonmedical supplies
Structure	Existing facility infrastructure, temporary facility infrastructure, hazard-specific structures
Systems	Emergency management program, incident management, communications, healthcare system coordination, surge capacity, business continuity, population health management

Using these domains and subdomains, NQF worked with the Readiness Committee to examine and develop measure concepts based on information gathered from the literature and knowledge of each of the Committee members. They noted some challenges with moving from measure concepts to quality measures as requiring a concerted collaboration between healthcare entities, measure developers, and the federal government. The Committee emphasized the adoption of metrics related to readiness that could be deployed across various types of healthcare entities and measure whether entities are actually ready to meet the needs of patients during a disaster or emergency. To that end, the Committee offered

several next steps focused on investment in the development of high-priority measures: developing a feasibility scale for healthcare entities to identify and determine capacities and capabilities for readiness efforts; better defined responsibilities across healthcare entities; and alignment between public and private stakeholders. The final report for this project was published in June 2019.

Chief Complaint-Based Quality for Emergency Care

Emergency departments (EDs) have always played an important role in the delivery of acute, unscheduled care in the U.S., with nearly 145 million visits and more than one-quarter of all acute care visits.[48] The majority of ED care focuses on diagnosing and treating a patient's chief complaint rather than addressing a definitive diagnosis. A patient's chief complaint—patient-reported symptoms collected at the start of the visit—describes the most significant symptoms or signs of illness (e.g., chest pain, headache, fever, abdominal pain, etc.) that caused the person to seek healthcare.

Chief complaint data have various uses that facilitate and inform patient-centered care, decision support, disease surveillance, and quality measurement. However, the lack of standardization of information about chief complaints creates challenges for use cases that require aggregation of similar patients for quality measures or detecting disease outbreaks. Efforts to resolve the challenges with standardization of chief complaint data have been discussed for more than two decades. However, recent advancements in information technology (IT) and informatics may present solutions to several of the barriers—areas that have limited standardization. Researchers and informaticists have developed several approaches and tools that can standardize chief complaints including classification systems, nomenclatures, ontologies, and IT-based tools. However, there is still no current guidance or consensus on how to navigate these approaches, understand their strengths and weaknesses, and select the best approaches and tools for a specific use case.

In addition, there is a lack of standard nomenclature to define how chief complaints are organized, categorized, and assigned. Further, a reliance on diagnosis-based administrative claims for quality measurement creates barriers to establishing valid and reliable patient feedback on the reason the patient came to the ED for care. Currently, there is no national guidance to overcome these barriers to using chief complaints in quality measurement for patients presenting to the ED.

In fall 2018, NQF convened a multistakeholder Expert Panel to identify performance measures; measure concepts; and gaps in available performance measures, nomenclatures, and data sources related to chief complaints. Additionally, the Expert Panel provided suggestions for standardizing: 1) chief complaint-based nomenclature; and 2) existing assessments of the strengths and weaknesses of current data sources (e.g., existing clinical content standards, processed free text, EHRs) for developing either new eMeasures in this space, or new measures that incorporate patient perspectives.

Ultimately, the Committee identified a total of 50 measures and 11 measure concepts based on symptom-based discharge diagnoses across 16 chief complaints or conditions, which included back pain, chest pain, head injury, abdominal pain, altered mental status, chest pain/shortness of breath, syncope, vaginal bleeding, substance use, neck pain, low back pain, sore throat, head trauma, seizure, suicidal ideation, and dizziness. This environmental scan provided a foundation for the development of the measurement framework.

The Chief Complaint Measurement Framework provided a conceptual model for how chief complaint data can be used to measure quality in acute care settings like the ED. While it is not the focus of the

framework, the use of these data for public health surveillance is also represented. This framework relies on the implementation of a systematic approach for standardizing and aggregating chief complaint data and a key set of terms, which include defining: 1) chief complaint; 2) reason for visit; presenting problem; and 4) clinical syndrome. Establishing these terms and definitions helped shape the ability to understand the relationship between the chief complaint, a standardized representation of the chief complaint (i.e., presenting problem), and a clinical syndrome.

The measurement framework comprises 11 domains:

- Patient-Reported Outcomes[a]
- Effective Care/Appropriateness of Diagnostic Process
- Cost of Care
- Diagnostic (Accuracy) Quality and Safety
- Care Coordination
- Shared Decision Making
- Safety
- Timeliness
- Patient Experience
- Utilization
- Patient Outcomes

The Committee also suggested strategies for promoting the implementation of the recommendations to enable widespread, standardized, and systematic collection of chief complaint data in the current emergency department and EHR landscape. Recommendations centered on four key areas: 1) establishing a standard chief complaint vocabulary; 2) aggregating chief complaint data in the absence of a standard vocabulary; 3) engaging important stakeholders to advance chief complaint-based measurement; and 4) data quality and implementing chief complaint-based measures.

The final report for this project was published in June 2019.

Common Formats for Patient Safety

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)[b] authorizes AHRQ to designate Patient Safety Organizations (PSOs) that work with providers. The term "Common Formats" refers to improving patient safety and healthcare quality. In order to support PSOs in reporting data in a standard way, AHRQ created "Common Formats"—or 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 projects 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

[a] Patient-Reported Outcomes are defined as the status of a patient's health condition that comes directly from the patient without interpretation. Patient Outcomes are defined as an outcome of the patient as a result of care in the ED (or similar setting).

[b] Patient Safety and Quality Improvement Act of 2005 Statue and Rule. https://www.hhs.gov/hipaa/for-professionals/patient-safety/statute-and-rule/index.html. Published June 10, 2017. Last accessed January 2020.

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 specific care settings include hospitals, nursing homes, community pharmacies and hospital surveillance. The Common Formats for event reporting apply to all patient safety concerns, including incidents, near misses or close calls, and unsafe conditions programs.

NQF, on behalf of AHRQ, coordinates a process annually to obtain comments from stakeholders about the Common Formats. In 2019, 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.

An NQF Expert Panel reviewed the public comments and provided AHRQ feedback with the goal of improving the Common Formats modules and the standardization of information.

Person-Centered Planning and Practice

Recent transformations in the healthcare and human services delivery systems have focused on performance measures across payers and providers to improve outcomes, experience of care, and population health, with the explicit goal of increasing a person's "ownership" of their health and healthcare services within their chosen community. However, there is neither a national quality measure set for person-centered planning (PCP) nor a set of evidence-based strategies upon which to develop measures of PCP. About 21 million Americans are expected to be living with multiple chronic conditions by 2040, and many will require long-term services and supports (LTSS) in community and institutional settings.[49]

In an effort to address LTSS needs that are predicated on individuals' needs, preferences, goals, and desires, NQF convened a committee of experts in 2019 with lived and professional experience in LTSS and with acute/primary/chronic care systems. The goal is to create a sustainable LTSS system where older adults and people with disabilities have choice, control, and access to a full array of quality services that assure optimal outcomes including independence, good health, and quality of life.

The aim of the committee was to provide a consensus-based view of multiple areas of PCP by addressing three concerns related to designing practice standards and competencies for PCP. Through a consensus-building process, stakeholders representing a variety of diverse perspectives met throughout the project to refine the current definition of PCP; develop a set of core competencies for performing PCP facilitation; make recommendations to HHS on systems 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.

The first interim report representing the committee's efforts to date was made available for comment in November 2019. In this report, the committee addressed three key concerns related to designing practice standards and competencies for PCP. First, the committee proffered a functional, person-first definition of PCP. Second, the committee outlined a core set of competencies for persons facilitating the planning process, including details of foundational skills, relational and communication skills, philosophy, resource knowledge, and the policy and regulatory context of PCP. Lastly, the committee

considered the systems characteristics that support PCP such as system-level processes, infrastructure, data, and resources, along with guidance on how to maintain system-level person-centeredness.

A future final report with committee feedback will be completed in July 2020. It will address the history of PCP, a framework for quality measurement within PCP, and a research agenda to advance and promote PCP in long-term services and supports, which includes home and community-based services and institutional settings, such as nursing homes, and the interface with the acute/primary/chronic care systems.

Measure Feedback Loop

Collecting data on how quality measures are implemented and used in the field is critical for continuing to improve the quality measurement landscape. A measure feedback loop refers to the process by which information about measure performance from those who implement measures is relayed back to measure developers and multistakeholder standing committees who can then act on it. This information is vital to identifying opportunities for improvements to measure specifications, implementation guidance, and other aspects of the measure that may improve usability.

While NQF receives some information from measure developers and measure stewards about the implementation and use of measures, this process could be strengthened and standardized. The Measure Feedback Loop project aims to determine a workable process to elicit feedback from healthcare stakeholders on the experience of reporting measures used in Medicare quality reporting and value-based payment programs, including unintended consequences on providers, payers, consumers, caregivers, and other measure users. The project aims to enhance understanding of how measures actually perform in the real world, and about the risks and issues related to implementing measures in the field.

In fall 2018, NQF began a new project to explore how to gather more information on the use of measures and how they affect patient care and organizations or providers that implement them. To accomplish this task, NQF convened a multistakeholder committee, conducted an environmental scan on measure performance data, collected existing consensus development process (CDP) use and usability information, and outlined options for piloting a measure feedback loop at NQF.

The environmental scan published in April 2019 identified four key aspects of a measure feedback loop: 1) feedback categories including examples; 2) key stakeholders from which measure feedback can be collected; 3) channels for exchanging feedback within NQF and CMS quality measurement processes and 4) tools for collecting and soliciting feedback.

The use and usability report, completed in June 2019, explored how CDP standing committees currently apply the usability and use criteria, current practices for collecting feedback, challenges associated with each of these practices, recommendations for improving them, and new potential approaches for collecting feedback. Ultimately, the recommendations centered on six key areas: 1) modifying the Usability and Use criteria and NQF measure submission form; 2) improving accessibility of commenting tools and opportunities to submit comments; 3) facilitating communication of feedback throughout the loop; 4) targeting outreach to key stakeholders; 5) classifying feedback into key domains; and 6) developing guidance for measure developers.

The pilot options report, published in November 2019, recommended a number of strategies that have the potential to improve the ways in which NQF solicits, collects, facilitates, and shares feedback among healthcare stakeholders. In this report, NQF grouped the strategies and rated them against potential costs and benefits to facilitate prioritization of the strategies. With Committee guidance, NQF identified strategies that are low benefit, but high cost and so should not be prioritized, and other strategies that have high potential benefit whose implementation should be explored in future work. In 2020, NQF will develop an implementation plan report that details the recommended strategies and tactics, along with a proposed timeline for pilot-testing these approaches at NQF.

Patient-Reported Outcomes

Patient-reported outcomes (PROs) are increasingly used for various healthcare-related activities including care provision, performance measurement, and clinical, health services, and comparative effectiveness research.[50,51] They can be particularly valuable in improving the quality of care that is provided to patients and families, because PROs allow those actually receiving care to provide information on issues of import to them (e.g., symptoms, functional status, side effects, engagement in decision making, goals of care, etc.).[52–57] Despite the desire to use PROs in healthcare, there is also recognition that there are many challenges inherent in their use—particularly related to selecting and collecting PRO data.

In 2012, HHS provided funding to NQF[c] to convene a multistakeholder Expert Panel to conduct work that has since laid the groundwork for future PRO-PM development, testing, endorsement, and implementation. Specifically, the Panel provided guidance for selecting PROMs for use in performance measurement and articulated a pathway to move from PROs to NQF-endorsed PRO-PMs. As part of this work, the Panel also provided clarity to the field by defining "patient"—to include all persons, including patients, families, caregivers, and consumers more broadly—and defining and differentiating between PROs, defined and differentiated patient-reported outcomes (PROs), patient-reported outcome measures (PROMs), and patient-reported outcome-based performance measures (PRO-PMs). The Panel also provided guidance for selecting PROMs for use in performance measurement and articulated a pathway to move from PROs to NQF-endorsed PRO-PMs. As noted in the final report that was published in December 2012 for that project, the word "patient" includes all persons, including patients, families, caregivers, and consumers more broadly.

The desire to use PROs in healthcare accompanies recognition of many challenges inherent in their use. For example, clinicians may be interested in using PRO data to guide the provision of care but need guidance in selecting which PROs and PROMs to use to drive meaningful clinical interactions as well as for other downstream uses such as performance measurement. Challenges pertaining to the implementation of PROs center on achieving buy-in from various stakeholders given the realities of the data collection burden (e.g., workflow concerns by clinicians and their staff, time and privacy issues for patients, if/how to incorporate data into EHRs, etc.), and ensuring that PRO data are of high quality. However, the collection of high quality PRO data depends, in part, on data sources (e.g., self-report vs. proxy), modes of administration (e.g., self- vs. interviewer-administered), and the method of administration (e.g., paper and pencil, telephone-assisted, electronic capture via tablets, etc.).[51] Other considerations influence the quality of PRO data as well, such as selection bias due to medical or social

[c] National Quality Forum. Patient-Reported Outcomes in Performance Measurement. https://www.qualityforum.org/Publications/2012/12/Patient-Reported_Outcomes_in_Performance_Measurement.aspx. Last accessed February 2020.

factors of the person providing the data, the extent of missing data, nonresponse bias, and overall response rates.

In 2019, NQF convened a multistakeholder TEP to make recommendations for best practices to: 1) address challenges in PRO selection and data collection; 2) ensure PRO data quality; and 3) apply the recommended best practices on PRO selection and implementation to use cases related to burns/trauma, heart failure, and joint replacement. Application of these recommendations to the selected use cases allowed the TEP to pilot-test them for both acute and chronic conditions that often necessitate provision of care across settings and providers.

NQF began by conducting an environmental scan to identify the challenges and promising approaches for: 1) selecting both PROs and PROMs; and 2) collecting high quality PRO data. The scan also identified both PRO-PMs and PROMs, the TEP making the distinction of PROs reflecting concepts (e.g., fatigue) that are reported by patients, whereas PROMs are the instruments used to elicit information from patients about those concepts. NQF identified a total of 81 PROMs relevant to burns, trauma, joint replacement, and heart failure, and generic PROMs that can be used for patients with these conditions. Overall, more of the identified PROMs addressed health-related quality of life, functional status, and symptoms/symptom burden. The 2019 TEP used the guiding principles for selecting PROMs identified by the 2012 Panel to select PROMs for the scan: psychometric soundness, person-centeredness, meaningfulness, amenable to change, and implementable. The final report of the environmental scan was published in December 2019.

The TEP will use the results of the environmental scan to spur discussion and identification of consensus recommendations for addressing challenges in the PRO selection and data collection and ensuring PRO data quality. The TEP also will use the results of the scan when applying these recommendations to use cases related to burns/ trauma, heart failure, and joint replacement.

Electronic Health Record Data Quality

EHRs have become important data sources for measure development, because these data are captured in structured fields during patient care and are in wide use: 86 percent of office-based physicians use EHRs, as do 96 percent of acute care hospitals.[58] The use of EHR data is expected to reduce provider burden associated with collecting and reporting data for public reporting and value-based purchasing.[59,60] Furthermore, federal programs such as the Promoting Interoperability Programs (also known as “meaningful use”) promoted EHR use with the goal of improving care coordination and population health outcomes, as well as healthcare quality. While the increased use of EHRs holds promise for enhancing quality measurement, data quality varies considerably.

Electronic clinical quality measures (eCQMs), which are specified to use EHRs as a source of data, were designed to enable automated reporting of measures using structured data. Combining eCQMs with structured EHR data has the potential to provide timely and accurate information pertinent to clinical decision support and facilitate monitoring of service utilization and health outcomes.[61] Currently, NQF has endorsed nearly 520 healthcare performance measures, with only 34 of these being eCQMs.

Previous work by NQF has identified the ability of EHR systems to connect and exchange data as an important aspect of quality healthcare that is not currently fully realized. However, eCQMs and EHR data are not enough to enable automated quality measurement. eCQMs require that every single data element used within an eCQM measure specification be collected as a discrete structured data element.

EHR data are primarily designed to support patient care and billing, not necessarily to capture data for secondary uses such as quality measurement.[62] Furthermore, while EHR use has led to an increase in the volume of structured data, EHR data are often not at the right level of completeness or granularity needed for effective use with eCQMs.[63]

In 2019, NQF began a project to identify best practices addressing EHR data quality issues impacting the use of EHR data in eCQMs and explore the challenges of assessing the quality of EHR data so that it can better support quality measurement, including automated measurement using eCQM specifications. Specifically, this project will identify the causes, nature, and extent of EHR data quality issues, discuss and assess the impact that poor EHR data quality has on scientific acceptability, use and usability, and feasibility, and make recommendations to HHS for best practices in assessing and improving EHR data quality to improve the reliability and validity, use and usability, and feasibility of quality measure (including eCQMs) and increase the scientific acceptability and likelihood of NQF endorsement.

To achieve this, NQF recruited a 21-member multistakeholder TEP to guide and provide input on the work. Additionally, NQF started an environmental scan to review the current landscape for assessing and maximizing structured EHR data quality, explore approaches currently used to mitigate data quality challenges, and identify data needed to support continued development and testing of eCQMs.

This scan will serve as a foundation for a final report that will be delivered to CMS in December 2020, and will encompass the TEP's discussions and recommendations for best practices in assessing and improving EHR data quality to improve the reliability and validity, use and usability, and feasibility of quality measures, including eCQMs, and likelihood for NQF endorsement.

Reducing Diagnostic Error

A 2015 report of the National Academies of Sciences, Engineering, and Medicine (NASEM), *Improving Diagnosis in Health Care*, defines diagnostic errors as the failure to establish or communicate an accurate and timely assessment of the patient's health problem. The report suggests these types of diagnostic errors contribute to nearly 10 percent of deaths each year and up to 17 percent of adverse hospital events.[64] The NASEM Committee on Diagnostic Error in Health Care suggested that most people will experience at least one diagnostic error in their lifetime.

The delivery of high quality healthcare is predicated upon an accurate and timely diagnosis. Diagnostic errors persist through all care settings and can result in physical, psychological, or financial repercussions for the patient. The NASEM Committee noted that there is a lack of effective measurement in this area, observing that "for a variety of reasons, diagnostic errors have been more challenging to measure than other quality or safety concepts."[65]

In follow-up to the NASEM report, NQF, with funding from HHS,[d] convened a multistakeholder expert committee in 2016 to develop a conceptual framework for measuring diagnostic quality and safety, to identify gaps in measurement of diagnostic quality and safety, and to identify priorities for future measure development. As part of this project, which resulted in the 2017 report Improving Diagnostic Quality and Safety, NQF engaged stakeholders from across the healthcare spectrum to explore the complex intersection of issues related to diagnosis and reducing diagnostic harm.[66]

[d] CDC. Reproductive Health. https://www.cdc.gov/reproductivehealth/index.html. Published December 6, 2019. Last accessed January 2020.

In 2019, NQF convened a new multistakeholder expert committee to revisit and build on the work of the former Diagnostic Quality and Safety Committee. The new expert committee reviewed the 2017 measurement framework and environmental scan in light of the new literature published to support the activities of improving diagnostic quality and safety. Specifically, this Committee reviewed one domain (Diagnostic Process and Outcomes) of the 2017 measurement framework and updated or modified the subdomains. In addition, the Committee identified any high-priority measures, measure concepts, current performance measures, and areas for future measure development that have emerged since the initial development of the measurement framework. In October 2019, the environmental scan was published and yielded no updates to the Diagnostic Process and Outcomes domain, but the scan did identify several articles supporting the composition of the subdomains, and their continued relevance to reducing error. There were also no updates made to the domain of High-Priority Areas for Future Measure Development. The scan did identify 19 new fully developed measures to add to the measure inventory, as well as 17 new measure concepts applicable to the process and outcomes domain of the framework. The measures were primarily concerned with the Diagnostic Efficiency and Diagnostic Accuracy subdomains of the Diagnostic Process and Outcomes domain; other measures were identified in the Information Gathering and Documentation subdomain.

Building on the environmental scan, the work of the Committee will continue in 2020 with development of practical guidance in the application of the *Diagnostic Process and Outcomes* component of the original framework, including identifying four specific use cases to demonstrate how the framework can be operationalized in practice. The final report will include recommendations for the application of the conceptual framework to reduce diagnostic errors and improve safety in a variety of systems and settings, with applications to multiple populations.

Maternal Morbidity and Mortality

Maternal morbidity and mortality have been identified as primary indicators for women's health and quality of health globally. Maternal morbidity refers to unexpected short- or long-term outcomes that result from pregnancy or childbirth. These outcomes can include blood transfusions, hysterectomy, respiratory problems, mental health conditions, or other health conditions that require additional medical care, such as hospitalization and long-term rehabilitation, and that can affect a woman's quality of life.[67] Maternal mortality, which includes deaths that occur up to one year after the pregnancy ends, may be caused by a pregnancy complication; a chain of medical events started by the pregnancy; the worsening of an unrelated condition because of the pregnancy, delivery type or obstetrical complications; or other factors.[67]

The Healthy People 2020[e] target goal for U.S. maternal mortality is 11.4 maternal deaths (per 100,000 live births) with a current U.S. rate of 17.2 maternal deaths (per 100,000 live births).[68] The U.S. is the only industrialized nation with a rising maternal mortality rate, with more than 700 women dying annually from pregnancy-related causes. These rates vary by region, state, and across racial and ethnic lines, where significant disparities highlight exacerbating differences among non-Hispanic black women (42.8 percent) and American Indian/Alaska Native (32.5 percent) women. Leading causes of maternal mortality are attributed to increased rates of cardiovascular disease, hemorrhage, and infection.[69]

[e] CDC. Pregnancy-Related Deaths. https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pregnancy-relatedmortality.htm. Published February 26, 2019. Last accessed January 2020

Recent studies indicate that severe maternal morbidity affects more than 60,000 women annually in the U.S., with rising trends over the last two decades.[67,70,71] Severe morbidity poses a tremendous risk to the health and well-being of women, and although the causes of the rising rates are unclear, it is evident that racial disparities are pervasive. Therefore, it is vital to understand the causes of both maternal morbidity and mortality to improve maternal health outcomes for all populations.

In fall 2019, NQF began a two-year project to assess the current state of maternal morbidity and mortality measurement and to provide recommendations for short- and long-term approaches to improve this measurement and apply it to improve maternal health outcomes. This assessment will result in two separate measurement frameworks—one for maternal morbidity and one for maternal mortality. To achieve this, NQF recruited a 30-person multistakeholder committee to guide and provide input on the environmental scan, frameworks, and measure concepts of maternal morbidity and mortality. NQF began work on an environmental scan to review, analyze, and synthesize information related to maternal morbidity and mortality. The project work will continue in 2020 with the finalization of the environmental scan, and development of two frameworks and measure concepts.

VIII. Conclusion

Over the past 20 years, NQF's continuous efforts to improve health and healthcare through measurement have been closely linked with the national priorities of making care safer, strengthening person and family engagement, promoting effective communication, promoting effective prevention and treatment of chronic disease, working with communities to promote best practices of healthy living, and making care affordable in partnership with public and private healthcare stakeholders across the country.

This year, NQF sought to promote coordination across public and private payers. The increased reliance on 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. The Core Quality Measures Collaborative (CQMC), a broad-based coalition of healthcare leaders, was constituted to promote the use of a core set of measures while minimizing the burden on clinicians and providers. This collaborative aims to support the collection of better information about what happens after a measure is implemented. This will ensure that NQF-endorsed measures are driving meaningful improvements and not causing negative unintended consequences.

Public and private payers continue to look to VBP and APMs as methods to reduce the growth of healthcare costs and to incentivize high quality care. However, such payment models require evidence-based and scientifically sound performance measures to assess the value of care provided rather than the volume of services rendered. Moreover, these measures must be implemented in a way that minimizes provider burden while advancing national healthcare improvement priorities.

NQF's work in evolving the science of performance measurement has also expanded over the years, and recent projects, such as CQMC, which focuses on identifying the right quality measures for use across payers, align with the NQS' emphasis on public-private collaboration. The Opioid Expert Panel addressed the challenges in OUD quality measurement.

NQF continued to bring together experts through multistakeholder committees to identify high value, meaningful, and 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 clinicians, hospitals, and other providers to understand if they are providing high quality care and determine where improvement efforts may need to be focused. NQF maintains a portfolio of evidence-based measures that address a wide range of clinical and cross-cutting topic areas. In 2019, NQF endorsed 110 measures and removed endorsement for 41 measures across 28 endorsement projects addressing 14 topic areas. NQF remains committed to ensuring the endorsement process is innovative and efficient with a seven-month review cycle twice every year and extended public commenting periods for greater transparency.

MAP convenes organizations across the private and public sectors to recommend measures for use in federal programs and provide strategic guidance on future directions for these programs. MAP comprises stakeholders from across the healthcare system including patients, clinicians, providers, purchasers, and payers. Through its nine years of pre-rulemaking reviews, MAP has aimed to lower costs while improving quality, promoting the use of meaningful measures, reducing the burden of measurement by promoting alignment and avoiding unnecessary data collection, and empowering patients to become active consumers by ensuring they have the information necessary to support their healthcare decisions. MAP's work that concluded in 2019 included a review of unique performance measures under consideration for use in 18 HHS quality reporting and value-based payment programs covering clinician, hospital, and post-acute/long-term care settings. Additionally, MAP began new work in November 2019 to provide input on 19 measures under consideration for 10 HHS programs.

During their 2019 deliberations, many NQF standing committees discussed measure portfolios and identified measure gaps, where cross-cutting or high value measures are too few or may not yet exist to drive improvement. NQF's standing committees surfaced important measurement gaps in areas such as behavioral health, substance use, and perinatal and women's health. MAP also identified measure gaps to assess care and improvement in federal healthcare programs.

In 2020, NQF looks forward to addressing additional issues and collective efforts to address measurement science challenges and furthering the portfolio of high value measures that public and private payers, providers, and patients rely on to improve health and healthcare.

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Appendix A: 2019 Activities Performed Under Contract with HHS

1. Federally Funded Contracts Awarded in FY 2019

IDIQ Contract	Contract Number	Task Order Name	Period of Performance	Contract Amount for FY 2019
HHSM-500-2017-00060I	75FCMC18F0001	Social Risk Trial – This three-year project explores 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.	May 15, 2019 – May 14, 2020 (Option Year 1)	$401,660
HHSM-500-2017-00060I	75FCMC18F0009	Core Quality Measures Collaborative (CQMC) – The CQMC is a multistakeholder collaborative with representation from various specialty organizations across the healthcare landscape working together to recommend core sets of measures by clinical area to assess the quality of American health care. The voluntary collaborative aims to add focus to quality improvement efforts, reduce the reporting burden for providers, and offer consumers actionable information to help them make decisions about where to receive their care.	September 14, 2019 – September 13, 2020 (Option Year 1)	$275, 884
HHSM-500-2017-00060I	75FCMC18F0010	Common Formats – A project supported by AHRQ to obtain comments from stakeholders about the Common Formats authorized by the Patient Safety and Quality Improvement Act of 2005. "Common Formats" refers to the common definitions and reporting formats that allow collection and submission of standardized information regarding patient safety concerns.	September 14, 2019 – September 13, 2020	$128,340
HHSM-500-2017-00060I	HHSM-500-T0001	Endorsement and Maintenance – NQF recommends the best-in-class quality measures for use in federal and private improvement programs. Measures can be submitted for endorsement twice a year in 14 topic areas including behavioral health and substance use, patient experience and function, and all-cause admissions and readmissions.	September 27, 2019 – September 26, 2020 (Option Year 2)	$9,679,359
HHSM-500-2017-00060I	HHSM-500-T0002	Annual Report to Congress – An annual report that summarizes projects funded under the contract with the Department of Health and Human and Services.	September 27, 2019 – September 26, 2020 (Option Year 2)	$123, 821

IDIQ Contract	Contract Number	Task Order Name	Period of Performance	Contract Amount for FY 2019
HHSM-500-2017-00060I	HHSM-500-T0003	Measure Applications Partnership (MAP). MAP reviews measures that CMS is considering implementing and provides guidance on their acceptability and value to stakeholders. MAP makes these recommendations through its pre-rulemaking process that enables a multistakeholder dialogue to assess measurement priorities for these programs.	March 27, 2019 – March 26, 2020 (Option Year 1)	$ 1,357,149
HHSM-500-2017-00060I	75FCMC19F0001	Person-Centered Planning and Practice (PCP) – PCP plays a key role in the provision of long-term services and supports. This project is establishing a foundation for performance measurement in person-centered planning, identifying measure gaps, and developing a framework to analyze and prioritize gaps for future measure development.	February 6, 2019 – August 2, 2020	$774, 998
HHSM-500-2017-00060I	75FCMC19F0002	Opioid Technical Expert Panel (TEP) – NQF convened a multistakeholder TEP pursuant to the 2018 Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment for Patients and Communities (SUPPORT) Act. The TEP's charge was to review quality measures that relate to opioids and opioid use disorders, identify gaps in areas that relate to opioids and opioid use disorders and priorities for measure development for such gaps, and make recommendations to HHS on quality measures with respect to opioids and opioid use disorders for purposes of improving care, prevention, diagnosis, health outcomes, and treatment.	February 7, 2019 – February 6, 2020	$542, 555
HHSM-500-2017-00060I	75FCMC19F0003	Patient Reported Outcomes (PRO)– NQF convened a multistakeholder TEP to identify best practices to address challenges in selecting and collecting PRO data, make recommendations for use of best practices to address challenges in PRO selection and data collection, and ensure data quality, and apply the recommended best practices on selection and implementation to use cases related to burns/trauma, heart failure, and joint replacement.	June 10, 2019 – June 9, 2020	$502, 288

IDIQ Contract	Contract Number	Task Order Name	Period of Performance	Contract Amount for FY 2019
HHSM-500-2017-00060I	75FCMC19F0004	Electronic Health Record (EHR) Data Quality Best Practices for Increased Scientific Acceptability – Electronic clinical quality measures (eCQMs) are designed to enable automated reporting of measures using EHR data. This 18-month project identifies the causes, nature, and extent of EHR data quality issues related to eCQMs, the impact that poor EHR data quality has on scientific acceptability, use and usability, and feasibility, and make recommendations for best practices in assessing and improving EHR data quality to improve the reliability and validity, use and usability, and feasibility of eCQMs.	July 1, 2019 – December 31, 2020	$554, 421
HHSM-500-2017-00060I	75FCMC19F0005	Reducing Diagnostic Error — – This project builds on the Diagnostic Quality and Safety Measurement Framework published in 2017. A multistakeholder expert committee identified any high-priority measures, measure concepts, current performance measures, and areas for future measure development that have emerged since the initial development of the measurement framework. The next phase will include recommendations on how the framework can be operationalized in practice.	July 15, 2019 – October 14, 2020	$524,854
HHSM-500-2017-00060I	75FCMC19F0007	Rural Health Technical Expert Panel (TEP) – The TEP reviewed previously identified approaches to the low-case-volume challenge and provided feedback and recommendations to address the low-case-volume challenge that many rural providers face.	September 6, 2019 – September 5, 2020	$398, 016
HHSM-500-2017-00060I	75FCMC19F0008	Maternal Morbidity and Mortality – This two-year project will assess the current state of maternal morbidity and mortality quality measurement and provide recommendations for short- and long-term approaches to improve this measurement and apply it to improve maternal health outcomes.	September 18, 2019 – September 14, 2021	$781, 321

TOTAL AWARD		$12,091,362

2. NQF Financial Information for FY 2019 *(unaudited)*

Contributions and Grants	$23,594,966
Program Service Revenue	$656,873
Investment Income	$374,604
Other Revenue	$213,411
TOTAL REVENUE	**$24,839,854**
Grants and Similar Amounts Paid	---
Benefits Paid to or for Members	---
Salaries, Other Compensation, Employee Benefits	11,981,017
Other Expenses[f]	$7,614,615
TOTAL EXPENSES	**$19,595,632**

[f] "Other Expenses" may include operating and overhead costs.

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

As a consensus-based entity, NQF ensures there is comprehensive representation from the healthcare sector across all its convened committees, workgroups, task forces, and advisory panels.

Consensus Development Process Standing Committees

All-Cause Admissions and Readmissions Standing Committee

CO-CHAIRS

John Bulger, DO, MBA
Geisinger Health

Cristie Travis, MSHHA
Memphis Business Group on Health

MEMBERS

Katherine Auger, MD, MSc
Cincinnati Children's Hospital Medical Center

Frank Briggs, PharmD, MPH
West Virginia University Healthcare

Jo Ann Brooks, PhD, RN
Indiana University Health System

Mae Centeno, DNP, RN, CCRN, CCNS, ACNS-BC
Baylor Health Care System

Helen Chen, MD
Hebrew SeniorLife

Susan Craft, RN
Henry Ford Health System

William Wesley Fields, MD, FACEP
UC Irvine Medical Center; CEP America

Steven Fishbane, MD
North Shore-LIJ Health System for Network Dialysis Services

Paula Minton Foltz, RN, MSN
Patient Care Services

Laurent Glance, MD
University of Rochester School of Medicine; RAND

Anthony Grigonis, PhD
Select Medical

Bruce Hall, MD, PhD, MBA
Washington University in Saint Louis; BJC Healthcare

Leslie Kelly Hall
Healthwise

Paul Heidenreich, MD, MS, FACC, FAHA
Stanford University School of Medicine; VA Palo Alto Health Care System

Sherrie Kaplan, PhD
UC Irvine School **of** Medicine

Keith Lind, JD, MS, BSN
AARP Public Policy Institute

Karen Joynt Maddox, MD, MPH
Washington University School of Medicine; Washington University Brown School of Social Work

Paulette Niewczyk, PhD, MPH
Uniform Data System for Medical Rehabilitation

Carol Raphael, MPA
Manatt Health Solutions

Mathew Reidhead, MA
Missouri Hospital Association; Hospital Industry Data Institute

Pamela Roberts, PhD, MSHA, ORT/L, SCFES, FAOTA, CPHQ, FNAP, FACRM
Cedars-Sinai Medical Center

Derek Robinson, MD, MBA, FACEP, CHCQM
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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

- ***Subcriterion 1.1*** *Measures that are not NQF-endorsed should be submitted for endorsement if selected to meet a specific program need*
- ***Subcriterion 1.2*** *Measures that have had endorsement removed or have been submitted for endorsement and were not endorsed should be removed from programs*
- ***Subcriterion 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

- ***Subcriterion 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)*
- ***Subcriterion 3.2*** *Measure sets for public reporting programs should be meaningful for*

consumers and purchasers

Subcriterion 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)*

Subcriterion 3.4 *Avoid selection of measures that are likely to create significant adverse consequences when used in a specific program*

Subcriterion 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

Subcriterion 4.1 *In general, preference should be given to measure types that address specific program needs*

Subcriterion 4.2 *Public reporting of program measure sets should emphasize outcomes that matter to patients, including patient- and caregiver-reported outcomes*

Subcriterion 4.3 *Payment program measure sets should include outcome measures linked to 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

Subcriterion 5.1 *Measure set addresses patient/family/caregiver experience, including aspects of communication and care coordination*

Subcriterion 5.2 *Measure set addresses shared decision making, such as for care and service planning and establishing advance directives*

Subcriterion 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 also can address populations at risk for healthcare disparities (e.g., people with behavioral/mental illness).

Subcriterion 6.1 *Program measure set includes measures that directly assess healthcare disparities (e.g., interpreter services)*

Subcriterion 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.

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

Subcriterion 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 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 nonvoting 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

Centers for Disease Control and Prevention

Centers for Medicare and Medicaid Services

Office of the National Coordinator for Health Information Technology

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

American Academy Of Physician Assistants

American College Of Emergency Physicians

American Hospital Association

American Society Of Health-System Pharmacists

Cardinal Innovations

Geisinger Health

Intermountain Healthcare

Michigan Center For Rural Health

Minnesota Community Measurement

National Association Of Rural Health Clinics

National Rural Health Association

National Rural Letter Carriers' Association

Rupri Center For Rural Health Policy Analysis

Rural Wisconsin Health Cooperative

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 and Medicaid Services

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

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 and 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 Hospital Association

American Society of Anesthesiologists

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

Centers for Disease Control and Prevention

Centers for Medicare and Medicaid Services

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

American Geriatrics Society

American Occupational Therapy Association

American Physical Therapy Association

Centene Corporation

Kindred Healthcare

National Hospice and Palliative Care Organization

National Partnership for Hospice Innovation

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

Centers for Medicare and Medicaid Services

Office of the National Coordinator for Health Information Technology

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 Readmission 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. Medicare Part C & D Star Ratings
15. Merit-Based Incentive Payment System
16. Prospective Payment System Exempt Cancer Hospital Quality Reporting
17. Skilled Nursing Facility Quality Reporting Program
18. Skilled Nursing Facility Value-Based Purchasing Program

Appendix G: Identified Gaps by NQF Measure Portfolio

In 2019, NQF's standing committees identified the following measure gaps—where high value measures are too few or nonexistent to drive improvement—across topic areas for which measures were reviewed for endorsement.

All-Cause Admissions and Readmissions

Due to change in cycles, no measure gaps were identified.

Behavioral Health and Substance Use

- Measures that focus on social determinants of health (e.g. housing, employment, criminal justice issues)
- Care coordination across the life span
- Full course of the wellness/illness continuum (i.e., from prevention to prodromal to illness and recovery)
- Measures that focus on recovery, overall well-being, and total cost of care, including composite measures
- Patient goal measures that are precisely paired with functional outcomes
- 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).
- Over-prescription of opiates

Cancer

Due to change in cycle, no measure gaps were identified

Cardiovascular

Due to change in cycle, no measure gaps were identified

Cost and Efficiency

Due to change in cycle, no measure gaps were identified

Geriatric and Palliative Care

Due to change in cycle, no measure gaps were identified

Patient Experience and Function

Due to change in cycle, no measure gaps were identified

Patient Safety

Due to change in cycle, no measure gaps were identified

Perinatal and Women's Health

- Postpartum depression
- "Churn" (coming on and off) of healthcare coverage
- HPV vaccinations for males and for people up to age 45
- Percentage of minimally invasive hysterectomies
- Intimate partner violence
- Disordered eating
- Burden of caregiving
- Fibroids
- Endometriosis

- Pain
- Social determinants of health
- Social support, particularly during pregnancy and the postpartum period
- Prenatal depression/anxiety
- Appropriate weight gain during pregnancy

Neurology

Due to change in cycle, no measure gaps were identified

Prevention and Population Health

Due to change in cycle, no measure gaps were identified

Primary Care and Chronic Illness

Due to change in cycle, no measure gaps were identified

Renal

Due to change in cycle, no measure gaps were identified

Surgery

Due to change in cycle, no measure gaps were identified

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

During its 2018-2019 deliberations, MAP identified the following measure gaps—where high value measures are too few or nonexistent to drive improvement—for Medicare programs for hospitals and hospital settings, post-acute care/long-term care settings, and clinicians.

Program	Measure Gaps
End-Stage Renal Disease Quality Incentive Program (ESRD QIP)	• Assessment of quality of pediatric dialysis • Management of comorbid conditions (e.g., congestive heart failure, diabetes, and hypertension)
PPS-Exempt Cancer Hospital Quality Reporting (PCHQR) Program	• Measures that assess safety events broadly (i.e., a measure of global harm) • Patient-reported outcomes
Ambulatory Surgery Center Quality Reporting (ASCQR) Program	• Comparisons of surgical quality across sites of care • Infections and complications • Patient and family engagement • Efficiency measures, including appropriate pre-operative testing
Inpatient Psychiatric Facility Quality Reporting Program (IPFQR) Program	• Medical comorbidities • Quality of psychiatric care provided in the Emergency Department for patients not admitted to the hospital • Discharge planning • Condition-specific readmission measures
Hospital Outpatient Quality Reporting (OQR) Program	• Communication and care coordination • Falls • Accurate diagnosis
Hospital Inpatient Quality Reporting (IQR) Program and Medicare and Medicaid Promoting Interoperability Program	• Patient-reported outcomes • Dementia
Hospital Readmissions Reduction Program (HRRP)	• None discussed
Hospital Value-Based Purchasing Program (VBP)	• None discussed
Hospital-Acquired Condition Reduction Program (HACRP)	• Adverse drug events • Surgical site infections in additional locations
Merit-Based Incentive Payment System (MIPS)	• Composite measures to address multiple aspects of care quality • Outcome measures • Measures that allow a broad range of clinicians to report data
Medicare Shared Savings Program	• Composite measures to address multiple aspects of care quality
Inpatient Rehabilitation Facility Quality Reporting Program (IRF QRP)	• Transfer of patient information • Appropriate clinical use of opioids • Refinements to current infection measures
Long-Term Care Hospital Quality Reporting Program (LTCH QRP)	• Mental and behavioral health

Program	Measure Gaps
Skilled Nursing Facility Quality Reporting Program (SNF QRP)	• Bidirectional measures • Efficacy of transfers from acute care hospitals to SNFs • Appropriateness of transfers • Patient and caregiver transfer experience • Detailed advance directives
Skilled Nursing Facility Value-Based Purchasing Program (SNF VBP)	• None discussed
Home Health Quality Reporting Program (HH QRP)	• Measures that address social determinants of health • New measures to address stabilization of activities of daily living
Hospice Quality Reporting Program (HQRP)	• Medication management at the end of life • Provision of bereavement services • Effective service delivery to caregivers • Safety • Functional status • Symptom management, including pain • Psychological, social, and spiritual needs

Appendix I: Statutory Requirement of Annual Report Components

This annual report, *NQF 2019 Activities: Report to Congress and the Secretary of the Department of Health and Human Services*, highlights and summarizes the work that NQF performed between January 1 and December 31, 2019 under contract with the U.S. Department of Health and Human Services (HHS) in the following six areas:

- Recommendations on the National Quality Strategy and Priorities;
- Quality and Efficiency Measurement Initiatives (Performance Measures);
- Stakeholder Recommendations on Quality and Efficiency Measures;
- Gaps on Endorsed Quality and Efficiency Measures across HHS Programs;
- Gaps in Evidence and Targeted Research Needs; and
- Coordination with Measurement Initiatives by Other Payers.

Congress has recognized the role of a "consensus based entity" (CBE), currently NQF, in helping to forge agreement across the public and private sectors about what to measure and improve in healthcare. The 2008 Medicare Improvements for Patients and Providers Act (MIPPA) (PL 110-275) established the responsibilities of the consensus-based entity by creating section 1890 of the Social Security Act. The 2010 Patient Protection and Affordable Care Act (ACA) (PL 111-148) modified and added to the consensus-based entity's responsibilities. The American Taxpayer Relief Act of 2012 (PL 112-240) extended funding under the MIPPA statute to the consensus-based entity through fiscal year 2013. The Protecting Access to Medicare Act of 2014 (PL 113-93) extended funding under the MIPPA and ACA statutes to the consensus-based entity through March 31, 2015. Section 207 of the Medicare Access and Children's Health Insurance Program (CHIP) Reauthorization Act of 2015 (MACRA) (PL 114-10) extended funding under section 1890(d)(2) of the Social Security Act for quality measure endorsement, input, and selection for fiscal years 2015 through 2017. Section 50206 of the Bipartisan Budget Act of 2018 extended funding for federal quality efforts for two years (October 2017 – September 2019) among other requirements. Bipartisan action by numerous Congresses over several years has reinforced the importance of the role of the CBE. In accordance with section 1890 of the Social Security Act, NQF, in its designation as the CBE, is charged to report annually on its work to Congress and the HHS Secretary.

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;.*[1]
- *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.*