MEASURE PRIORITIZATION ADVISORY COMMITTEE REPORT

Prioritization of High-Impact Medicare Conditions and Measure Gaps

May 2010

PRIORITIZATION OF HIGH-IMPACT MEDICARE CONDITIONS AND MEASURE GAPS

The National Quality Forum (NQF) established a multistakeholder Measure Prioritization Advisory Committee (see Appendix A) to fulfill a requirement under its contract with the Department of Health and Human Services (HHS) to prioritize high-impact Medicare conditions and associated measure gaps. This work will provide strategic guidance for the construction of a measure development and endorsement agenda, which is intended to address critical measure gaps and result in a portfolio of measures useful to consumers, purchasers, providers, policymakers, and other healthcare stakeholder groups.

During the first phase of this work, the Committee was charged with prioritizing the top 20 high-impact Medicare conditions[1] and identifying high-leverage measure gaps areas for Medicare. In subsequent phases of this work, the Committee will examine measurement needs for additional populations (e.g., children, pregnant women, and non-Medicare eligible adults) and for other important cross-cutting areas (e.g., population health, meaningful use of health information technology, and performance-based payment systems) to construct the comprehensive measure development and endorsement agenda.

HHS encouraged the Committee to take its prioritization work beyond a condition-by-condition approach and to consider how measurement might be advanced by focusing on broader measures of quality that apply across conditions. In carrying out this charge, the Committee considered quantitative and qualitative data related to quality measurement and improvement, along with the implications of applying performance measurement in practice. The Committee's recommendations were based on a review of available evidence, as well as on its determination of priority areas as subject matter experts.

Of the Committee's key considerations, probably none is more noteworthy than the awareness that looking solely through a condition-focused lens would limit the utility of the measure development and endorsement agenda. Unlike clinical process measures, which are largely condition-specific, measures that drive toward a fully developed and integrated healthcare system will allow for the assessment of care for patients with multiple chronic conditions, provided by multiple caregivers across multiple settings, over periods of time, and at both patient and population levels.

This report synthesizes this first phase of the Committee's work, and is presented as follows:

I. Key considerations that emerged from the Committee's deliberations in prioritizing the high-impact conditions for Medicare and in identifying Medicare measure gaps;
II. Results of the prioritization of high-impact Medicare conditions;
III. Results of the prioritization of Medicare measure gaps;
IV. Considerations for future measure development and endorsement activities; and
V. Conclusion

I. KEY CONSIDERATIONS FOR HIGH-IMPACT CONDITIONS AND MEASURE PRIORITIZATION

As the Measure Prioritization Advisory Committee worked to prioritize the Medicare high-impact conditions and measure gap areas, many issues and considerations arose that

framed the discussions and impacted the final rankings. Key themes that emerged from the Committee's deliberations were captured to guide the broader measure development and endorsement agenda that will follow. Similar issues and concerns were raised during the NQF Member and public comment period and are also discussed. (Please see Appendix B for a detailed synthesis of the major themes that arose during the NQF Member and public comment period.)

Limitations of a Condition-by-Condition Approach

Any attempt to prioritize clinical conditions will be challenged by many confounding factors. In addition to difficulties associated with varying degrees of evidence that may not be comparable, the artificial dissection of interconnected conditions (e.g., ischemic heart disease, acute myocardial infarction, congestive heart failure, and atrial fibrillation) creates difficulties with weighing the importance of various dimensions or criteria. The Measure Prioritization Advisory Committee considered existing evidence for the dimensions of cost, prevalence, variability, improvability, and disparities, and members expressed differing viewpoints as to which dimensions should be weighted more heavily. Some members favored cost and prevalence, while others favored improvability paired with practice variation to identify high-leverage opportunities for improvement. The Committee acknowledged that most patients do not present with one chronic condition, which further complicates this effort. As a result of these discussions, the Committee considered whether to cluster conditions, for example, based on system such as cardiovascular or musculoskeletal. The Committee concluded that this would be a lengthy and complicated task beyond the scope of this assignment and therefore prioritized the conditions as presented by HHS. The Committee agreed that ongoing work should factor in the complexities of these issues and should ultimately emphasize a holistic, integrated, person-centered approach rather than a condition-by-condition approach to quality measurement. This approach was affirmed by many of the NQF Member and public comments received.

As the Committee considered the prioritization of measure gaps, the members discussed the tension between the need for condition-specific measures and those that can be applied more generally across multiple conditions. For example, when considering health-related quality of life, would a broad instrument such as the SF12 Health Survey[2] be more useful for benchmarking and monitoring performance than one tailored to a specific disease? In many cases, patient care does not and should not change depending on diagnosis—all patients should be engaged in decisionmaking about their care and should receive safe and appropriate care that is coordinated among and between healthcare providers and settings. Still, there are clinical processes that are critically important and strongly linked to outcomes that should be measured and improved (e.g., aspirin on arrival for acute myocardial infarction). Certainly arguments exist for either approach in terms of specificity, utility, and actionability. A balanced approach that incorporates measure sets that are applicable across populations and supplemented with disease-specific modular components as needed may prove most useful.

Many comments received during the NQF Member and public comment period supported a transition of emphasis from measure development for specific conditions to a cross-cutting approach, reinforcing the Committee's support for measures that span episodes of care across time and settings (e.g., timely patient follow-up after a hospital discharge). While development of condition-specific measures may be easier from a methodological

perspective, meaningful cross-cutting measures offer a more patient-centered approach and a sensible use of limited resources, particularly because condition-specific measures will not address the needs of the many patients with multiple chronic conditions. However, this need not be an either/or approach. Rather, this effort presents an opportunity to harmonize measures across conditions to avoid future development of similar, duplicative measures. There are, for example, multiple smoking cessation counseling measures, which could be harmonized to have one standardized measure across patient populations and provider settings.

Inclusion of Upstream Risk Factors

The Measure Prioritization Advisory Committee strongly advocated for the recognition of measures to address risk factors that are correlated with the development of chronic conditions (e.g., hypertension and obesity). Therefore, as condition-specific measurement is addressed, attention also should be directed to important risk factors, realizing that if addressed upstream the development of costly and burdensome conditions may be avoided. Comments received during the NQF Member and public comment period reinforced this consideration and stressed the need to recognize hypertension, hyperlipidemia, obesity, and substance and tobacco use as risk factors.

In response, subsequent phases of the Committee's work will address population health with an emphasis on preventive care and healthy lifestyle behaviors. Two recent efforts underway will help to inform the Committee's future deliberations in this area. The National Priorities Partnership's[3] (NPP) Population Health workgroup has identified measurement needs that map to three goal areas: delivery of effective clinical preventive services; adoption of healthy lifestyle behaviors; and use of an index of community health status that incorporates behavioral, clinical, social, and environmental indicators. Also, a joint effort by NQF and the National Initiative for Children's Healthcare Quality (NICHQ) will provide input on conditions and measure gap areas that are important to children and their families, addressing issues that contribute to the development of risk factors. The recommendations of these two efforts will be considered by the Committee during its next phase of this work.

Burden as a Criterion for Prioritization

To prioritize the 20 high-impact Medicare conditions, the Measure Prioritization Advisory Committee considered the five dimensions of cost, prevalence, variability, improvability, and disparities. Although these dimensions are critical, the Committee actively discussed other issues such as quality of life and opportunity cost of disease and agreed that it would be an oversight to discount the burden of illness on patients, their families and caregivers, and society. This consideration factored heavily into the final prioritization of the conditions, and as a result conditions such as major depression, Alzheimer's disease, and stroke/transient ischemic attack (TIA) rose in the rankings. The dimension of burden also surfaced in discussions concerning measure gaps and led to the inclusion of measurement areas such as health-related quality of life, functional status, and productivity as priorities.

Many NQF Member and public comments underscored the importance of burden as a criterion for the ranking of conditions. As anticipated, some commenters called for the Committee to reconsider the rankings, primarily for atrial fibrillation and chronic renal disease. The primary rationale in favor of a reprioritization focused on the negative impact

of these conditions on patients' quality of life. Given commenters' emphasis on burden and quality of life, the Committee was prudent in reflecting on this issue during its deliberations despite its not having been included initially as a primary dimension for consideration.

Population-Based Measurement

With 60 percent of American deaths attributed to social, physical, and behavioral factors,[4] improvement in the population's well-being cannot be achieved through the healthcare delivery system alone. The Measure Prioritization Advisory Committee agreed that measurement strategies should look to address the extent to which the healthcare delivery and community/public health systems are coordinating to address the healthcare needs of a population, particularly through the delivery of effective preventive services and the promotion of healthy lifestyle behaviors. Although multiple data sources and formats create data collection and aggregation issues that complicate these efforts, significant investments currently are being made in our national health information technology (HIT) infrastructure through the American Recovery and Reinvestment Act (ARRA) of 2009. Taking a population-based approach should emphasize the targeting of resources to address these issues. The Committee acknowledged that population-level approaches also should focus on reducing existing disparities in health and in healthcare, and should allow for the capacity to identify at-risk populations in order to target resources and interventions to effectively address their needs.

NQF Member and public comments echoed the need to evaluate health and healthcare from a population perspective, noting that better healthcare for pre-Medicare populations may alleviate stress on the Medicare system in the future. Populations mentioned as important for consideration included maternal and child health (i.e., Medicaid and Children's Health Insurance Program), uninsured, and commercial patients (i.e., non-Medicare adults). As a measure development and endorsement agenda is constructed, consideration should be given to the collection of data at a population level to facilitate a broader assessment of community, regional, and national health. By evaluating the health and needs of populations or sub-populations, healthcare providers, communities, and others can begin to more actively collaborate to evaluate and improve how care is delivered collectively and to address disparities in care.

Implementation Gaps

The Measure Prioritization Advisory Committee was charged specifically with identifying priority areas for measure development. However, it acknowledged that in some instances lack of measurement may not reflect a lack of metrics but rather challenges in their implementation. Certainly many measurement gaps exist because of the difficulties inherent in measurement (e.g., risk-adjustment, small sample size, an insufficient or evolving evidence base, and cost), but implementation gaps resulting from environmental barriers, such as difficulties in incorporating measurement into routine work flows, also inhibit uptake and utilization. The cost and burden of data collection and the lack of widespread adoption of electronic health records preclude many from fully engaging in performance measurement and improvement efforts. Issues related to data source, availability, integration, and aggregation may prevent full use of available measures. Moreover, there is a general lack of knowledge regarding the extent to which current measures are (or are not) being used; a better understanding of this situation could provide insight as to what the major barriers to implementation may be.

NQF Member and public comments also reflected on implementation issues acknowledging that in some cases gaps in measurement may not be the primary barrier to performance issues, but rather that onerous implementation issues limit the utility of existing measures. Comments reinforced the need to maximize the use of HIT and to ensure that the HIT infrastructure and measurement enterprise are intentionally designed to work in alignment with each other. This will necessitate greater standardization and integration, but ultimately will lead to a healthcare system from which evidence is continuously produced, communicated, and used to improve care.

Summary

Although variations of the above themes emerged during the Committee's discussions, the key considerations described were the primary issues that Committee members kept in mind as they moved through the prioritization of Medicare conditions and measure gaps. These issues will also inform the Committee's future deliberations concerning the measure development and endorsement agenda. The NQF Member and public comment period reinforced many of these themes, particularly those related to advancing measure development to address cross-cutting areas that ultimately are more meaningful to patients and their families. Support was voiced for the inclusion of risk factors that lead to the development of chronic conditions in order to stem the development of chronic disease upstream. Commenters urged the inclusion of the needs of populations beyond Medicare beneficiaries for measure development purposes and acknowledged the need to address technical and implementation issues. The Committee's ongoing work will ensure that these concerns are addressed and captured in the final agenda.

II. RESULTS: PRIORITIZATION OF HIGH-IMPACT MEDICARE CONDITIONS

As a first step, the Measure Prioritization Advisory Committee considered a synthesis of evidence provided by Booz Allen Hamilton (BAH),[5] which included background information for each high-impact condition related to the five dimensions of cost, prevalence, variability, improvability, and disparities. Building on their collective expertise and reflecting on the key considerations presented above, Committee members used quantitative and qualitative approaches to reach agreement on the prioritized list of conditions.

The Committee members were first asked to individually perform a preliminary ranking of the conditions using an Excel spreadsheet tool that allowed them to modify the weighting of the five dimensions. They were also encouraged to consider additional literature beyond the BAH report and other data sources to which they had access based on their content area of professional expertise. Weighted averages were then calculated from these individual rankings and presented to the Committee during the in-person meeting. At that time, the Committee's weighted rankings varied only slightly from the original BAH rankings, which were based on equal weighting of the five dimensions.

The Committee discussed at length the weighting of the dimensions and the limitations of such an approach given the varying levels of evidence, particularly for the dimensions of improvability, variability, and disparities. Committee members expressed differing points of view as to which dimension(s) should be weighted more heavily, but were able to reach agreement on a final prioritized list that was informed by quantitative data, expert opinion,

and consideration of multiple stakeholder perspectives. Following its discussions the Committee, using a modified-Delphi approach, reached consensus on the final prioritized list presented in Table 1.

TABLE 1: PRIORITIZED LIST OF 20 HIGH-IMPACT MEDICARE CONDITIONS

Condition	Votes
1. Major Depression	30
2. Congestive Heart Failure	25
3. Ischemic Heart Disease	24
4. Diabetes	24
5. Stroke/Transient Ischemic Attack	24
6. Alzheimer's Disease	22
7. Breast Cancer	20
8. Chronic Obstructive Pulmonary Disease	15
9. Acute Myocardial Infarction	14
10. Colorectal Cancer	14
11. Hip/Pelvic Fracture	8
12. Chronic Renal Disease	7
13. Prostate Cancer	6
14. Rheumatoid Arthritis/Osteoarthritis	6
15. Atrial Fibrillation	5
16. Lung Cancer	2
17. Cataract	1
18. Osteoporosis	1
19. Glaucoma	0
20. Endometrial Cancer	0

As the Committee discussed the importance of the dimensions of cost, prevalence, improvability, variability, and disparities, it determined that the important dimension of disease burden and its impact on patients, families, and society was not being duly considered. This discussion influenced many Committee members and, as a result, contributed to the rise in the ranking of conditions that cause significant personal and societal burdens, such as major depression, Alzheimer's disease, and stroke/transient ischemic attack (TIA). Conditions that may be more prevalent but not result in such a significant level of burden to patients and families tended to move down the list. Regardless of the approach to prioritization, there are conditions that consistently presented in the top tier (e.g., congestive heart failure and diabetes) and conditions that presented in the bottom tier (e.g., endometrial cancer and osteoporosis). Therefore, this final prioritized list may lend itself to a tiered approach for the purposes of prioritizing measure development.

NQF Member and Public Comments

In response to the prioritization of high-impact conditions, many NQF Member and public comments advocated for a higher ranking of some conditions, particularly for atrial

fibrillation and chronic renal disease. Commenters applauded the Committee for ranking major depression first, citing its prevalence, underdiagnosis, and common occurrence as a comorbidity. Additional conditions were suggested for inclusion in the prioritization effort, especially those important to patients beyond the Medicare population, including asthma, chronic pain, low back pain, mental illness, pneumonia, and uterine disorders. As previously mentioned, subsequent phases of this work will consider additional populations and measurement needs that are relevant and important to non-Medicare patients. (Please refer to Appendix B for more detailed descriptions of the comments received.)

III. RESULTS: MEDICARE MEASURE GAPS

Building on conceptual models from the Institute of Medicine,[6] the NQF-endorsed® patient-focused episode of care,[7] and the National Priorities Partnership, the Measure Prioritization Advisory Committee discussed measure gap areas within a framework that built on the broader domains of patient-focused outcomes, cost and resource use, and process measures. The Committee considered the results of an environmental scan by BAH of performance measures that are related to the 20 high-impact Medicare conditions and their respective measure domains and subdomains,[8] including NQF-endorsed and nonendorsed measures and measures currently in development but not yet ready for use. The scan included measures that apply not only to the 20 conditions but also to those that are cross-cutting in nature insofar as they can be applied to patients with more than one condition. Also captured in this initial scan were measures related to non-Medicare beneficiaries, including maternal and child health populations.

The primary limitation of the environmental scan was the lack of a qualitative assessment of the measures, and the Committee recognized that more information will be needed to evaluate the appropriateness of available measures in addressing measure gaps in any domain or gap area. The scope of this project was not to evaluate the full extent to which the current NQF-endorsed portfolio of measures is being used in the field (e.g., for public reporting, payment, systems improvement, accreditation/certification), but rather to hone in on priority gaps in performance measurement on which to focus measure development efforts moving forward. Many have recognized the need for an assessment of the use and impact of performance measurement; therefore, as part of its ongoing work under contract with HHS, NQF will be engaging a subcontractor to evaluate the uses of NQF-endorsed measures.

Given the aforementioned challenges, the Committee considered prior conceptual models and the collective expertise of the group and worked in subgroups to brainstorm further areas for measure development that would offer the highest leverage for Medicare beneficiaries. Through its deliberations, including a preliminary balloting exercise that was later shared and discussed via a web meeting, the Committee reached agreement on six priority areas for measure development and endorsement, and their respective measure gap areas, which are presented in Table 2. Following the identification of these priority measure gap areas, Committee members ranked each gap area individually and confirmed their consensus ranking during a final conference call. The results of this vote are presented in Table 3, in rank order from highest to lowest based on raw score.

TABLE 2:
MEASURE GAP AREAS BY MEASURE DOMAIN

Health Status
Functional Status
Burden on Patients and Families
Productivity
Care Coordination
Communication
Patient Follow-up
Medication Management
Accountability for Care Coordination
Use of Care Plans
Cost/Efficiency
Appropriateness/Efficiency
Direct Costs
Indirect Costs
Patient & Family Engagement
Patient Engagement
Patient Experience and Satisfaction
Shared Decisionmaking
Patient Self-Management
Patient Activation
Population Health
Effective Preventive Services
Healthy Lifestyle Behaviors
Safety
Ambulatory Safety
Medication Adherence/Use
Prevention of Serious Events
Standardized HAI Rates

TABLE 3:
PRIORITIZED MEASURE GAP AREAS

Gap Area	Votes
Appropriateness/Efficiency	23
Communication	13
Patient Follow-up	11
Direct Costs	11
Effective Preventive Services	11
Functional Status	9
Medication Management	8
Accountability for Care Coordination	8
Use of Care Plans	7
Patient Engagement	7
Healthy Lifestyle Behaviors	7
Burden on Patients and Families	6
Patient Experience and Satisfaction	6
Ambulatory Safety	6
Medication Adherence/Use	6
Shared Decisionmaking	5
Patient Self-Management	5
Prevention of Serious Events	5
Indirect Costs	4
Standardized HAI Rates	3
Productivity	2
Patient Activation	2

These six domains and their respective measure gap areas reflect the Committee's discussion that the most critical measure gaps are those that can be implemented across multiple conditions, those that reflect patient-centered outcomes, and those that reflect care delivered over time as opposed to at a single point in time. Of particular note is the convergence between these priority measure domains and the NPP's National Priorities. Measure gaps for the NPP's National Priorities and Goals have been identified previously and will be integrated into the measure development and endorsement agenda in a subsequent phase.

NQF Member and Public Comments

Comments received regarding the priority measure domains highlighted the obvious absence of palliative and end-of-life care as a domain area, particularly because this is one of the NPP National Priorities. Although several of the measure domains and gap areas speak to palliative or end-of-life care needs, commenters strongly suggested that this is not sufficient and that this area should be more explicitly reflected in this work, either as a condition or a measurement domain. Others recommended that measures of access that address more than insurance coverage (e.g., access to a family physician or to off-hours care) be incorporated into domains such as care coordination and population health to assess systems issues in need of attention. Many commenters expressed agreement with the ranking of efficiency and appropriateness measures as a top priority but strongly emphasized that these measures must incorporate elements of cost *and* quality. This

underscores the important tenet that reductions in cost not occur at the expense of high-quality care. Finally, measure development strategies should acknowledge the continued disparities that exist in healthcare and should strive to address this issue at every opportunity by providing for measures that allow for stratification and comparisons between different populations. (Please refer to Appendix B for more detailed descriptions of the comments received.)

IV. THE PATH FORWARD

Through this project, HHS has provided for the convening of the Measure Prioritization Advisory Committee, a multistakeholder group of national experts, to think critically, strategically, and proactively about the future of performance measurement and how as part of the broader quality enterprise, measurement should contribute to improvement in the health of Americans. The impetus is on the field to ensure that measure development and endorsement result in the availability of high-leverage metrics that will allow stakeholder groups to assess those areas that are critical—not necessarily those that are easiest—to measure.

Population of the Integrated Framework for Performance Measurement

As stakeholders continue to demand higher quality healthcare, and as the Patient Protection and Affordable Care Act (PPACA) is implemented, new ways of assessing whether the healthcare delivery system is achieving its purpose of improving health, reducing burden of illness, and maximizing the use of scarce resources will be needed. To evaluate overall performance, the measurement system will need to reflect the quality of care patients receive as they move along their trajectory of an illness—an episode of care—and how patients experience the care delivered by the healthcare system as a whole. In addition, to evaluate the value of services provided, measures of cost and resource use will need to be paired with other quality measures. To further develop the complete picture, measures of population health will be needed to help communities understand and address their needs, particularly to reduce disparities in care. These enhancements in performance measurement contrast significantly with the ways in which performance has traditionally been measured to reflect care delivered by individual providers or practitioners at single points in time.

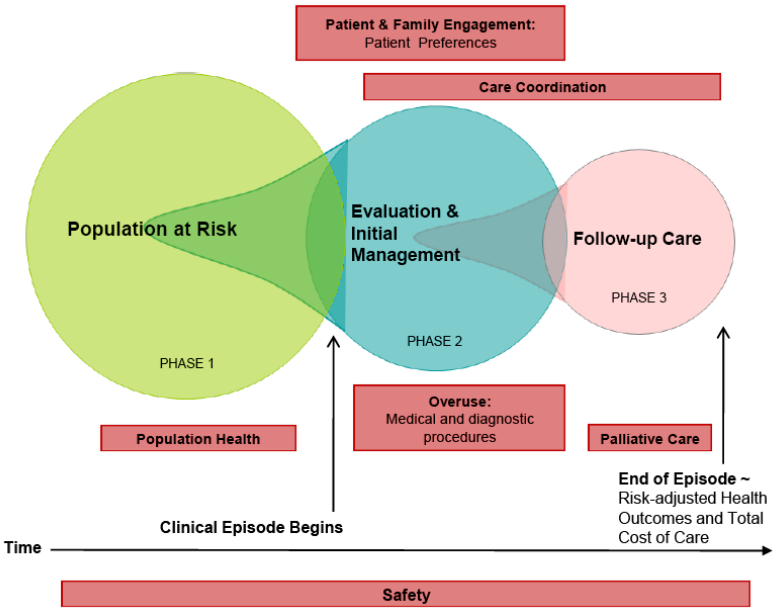
Exhibit 1 presents an integrated framework for performance measurement reflecting an episode of care that takes into account preventive, acute, and post-acute phases. The six National Priorities identified by the NPP further emphasize particular aspects of care that should be addressed as patients move through an episode: population health, patient and family engagement, safety, care coordination, palliative and end-of-life care, and overuse.

Application of Prioritization Efforts

The integrated framework for performance measurement, which focuses on longitudinal and cross-cutting performance, offers guidance for the development and endorsement of measures that will be needed for multiple purposes. The immediate application of this report is anticipated to be for determining priority measure development needs for the Medicare population. However, as health reform legislation is implemented, additional applications may arise in the context of setting national priorities, allocating quality measure development funding, or selecting measures for public reporting and performance-based payment programs. For example, as bundled payment strategies are

implemented to provide financial incentives for delivery system improvement, such a framework can inform the bundle of performance measures needed to ensure that patients receive high-value care.

EXHIBIT 1: INTEGRATED FRAMEWORK FOR PERFORMANCE MEASUREMENT[9]



Additional Measurement Streams

Throughout this phased approach to the construction of a measure development and endorsement agenda, the Measure Prioritization Advisory Committee will identify important measure gaps by considering other measurement streams that are important for supporting existing programs, implementing new programs, or addressing the needs of special populations. Several additional measurement streams that will be considered in subsequent phases of agenda-setting were suggested in the NQF Member and public comments received during this initial phase.

The next phase of this work, which is underway and will be completed in early 2011, will focus on measurement needs for child health, population health, and for determining HIT meaningful use. In addition, cross-checks will be completed to assure that measure gaps related to the NPP National Priorities and gaps identified by NQF consensus development project steering committees are addressed.

During a subsequent round of agenda-setting in 2011, the Committee will consider additional streams feeding the measure development and endorsement agenda, including maternal, neonatal, and adult non-Medicare populations, and other end uses, such as for public reporting and performance-based payment systems. In addition, the Committee will strive for further granularity in each of the measure domains to compel more targeted measure development. The ultimate result is intended to be a comprehensive, aligned agenda that will provide healthcare stakeholders with a roadmap for high-leverage, coordinated measure development and endorsement efforts. As it deliberates, the

Committee will continue to identify implementation issues—particularly around usability and feasibility—that require resolution to advance the field of quality measurement.

V. CONCLUSION

Through the NQF Member and public comment period, many stakeholder groups voiced their support for these prioritization efforts and stressed the imperative of strategically aligning performance measurement with identified priorities in healthcare. While the Measure Prioritization Advisory Committee welcomed its charge to make recommendations for measure development priorities by prioritizing high-impact Medicare conditions and measure gaps, it recognized and deliberated the significant limitations to such lists without attention to the context provided by the key issues raised in this report. The Committee repeatedly emphasized patient-focused as opposed to disease-focused measurement to address the needs of all patient populations, and acknowledged that to best measure the value of services and understand the overall health of the population, there should be an appropriate balance between cross-cutting and condition-specific priorities for performance measurement.

Notes

[1] The list of the top 20 high-impact Medicare conditions was provided to NQF by HHS, as those conditions that account for 95 percent of Medicare costs based on an analysis of claims in CMS' Chronic Conditions Warehouse.

[2] The SF-12®: An Even Shorter Health Survey; http://www.sf-36.org/tools/sf12.shtml.

[3] National Priorities Partnership, *National Priorities and Goals: Aligning Our Efforts to Transform America's Healthcare,* Washington, DC: National Quality Forum; 2008.

[4] Kindig DA, Asada Y, Booske B, A population health framework for setting national and state health goals, *JAMA*, 2008;299(17):2081-2083.

[5] See Booz Allen Hamilton, *Synthesis of Evidence Related to 20 High Priority Conditions and Environmental Scan of Performance Measures*, report prepared for NQF; January 2010.

[6] Institute of Medicine, *Priority Areas for National Action: Transforming Health Care Quality*, Washington, DC: The National Academies Press; 2003.

[7] National Quality Forum (NQF), *Measurement Framework: Evaluating Efficiency Across Patient-Focused Episodes of Care*, Washington, DC: NQF; January 2010.

[8] The results of the environmental scan were organized into a framework including the following domains and subdomains: patient-focused outcomes (mortality, morbidity, health-related quality of life, functional status, safety outcomes, patient experience); cost and resource use; and process measures (prevention services/healthy lifestyle behaviors, clinical care processes, care coordination, patient and family engagement, safety processes).

[9] NQF, *Measurement Framework: Evaluating Efficiency Across Patient-Focused Episodes of Care.*

NATIONAL QUALITY FORUM

Appendix A:
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Appendix B:
Measure Prioritization Advisory Committee: Prioritization of High-Impact Conditions and Measure Gaps
Synthesis of and Response to NQF Member and Public Comments

NQF Member & Public Comments	Response
General Comments	
Overall comments were favorable regarding the Committee's approach to the prioritization of high-impact conditions and measure gaps. Specific comments noted that this project serves a "critical purpose of providing a road-map for approaching the future of measure development and endorsement." Commenters were appreciative of the thoughtful consideration given to this work by the Committee, especially because the question of how to prioritize can become mired in individual values and perspectives. Comments indicated support for moving beyond a condition-specific approach. Although development of condition-specific measures may be easier from a methodological perspective, the development of more meaningful cross-cutting areas seems to be an appropriate place to focus limited resources. Comments emphasized "the need for measures that cut across the disease conditions," noting that "disease-specific measures will continue to be of limited value" and will not address the needs of the many patients with multiple chronic conditions. The Committee's ranking of measure gaps was described as a "good assessment of the current environment." Comments supported the Committee's consideration of multiple dimensions, including cost, prevalence, and improvability, and expressed general agreement with the assessment of high-impact conditions and measure gaps.	Comments received during the comment period will be reflected in the final report that is delivered to HHS.
Prioritizing Conditions: General Comments Regarding Prioritization Results	
In general, comments regarding the prioritization of conditions were favorable. Many agreed with major depression being the top priority given its prevalence, underdiagnosis, and impact as a common comorbidity. Others expressed agreement with the inclusion of diabetes, chronic obstructive pulmonary disease, and heart conditions in the top 10. One comment questioned whether HHS should address the needs of all 20 conditions given the low number of votes for some conditions in the bottom tier. The following conditions received more specific comments: **Atrial fibrillation:** Many comments reflected concerns that important factors were not taken into consideration for the prioritization, including ineffective drugs with multiple side effects; an understatement of the impact on cost estimates and quality of life; and a lack of measures for diagnosis and treatment of atrial fibrillation. **Alzheimer's Disease:** Some comments reflected concerns over the dearth of measures for this disease and the amount of measure development work needed, and therefore recommended moving it higher on the prioritized list. **Cataracts:** A review of the literature and outcomes of cataract surgery was submitted to further detail prevalence, variation, appropriateness, and clinical outcomes, and concluded that cataract surgery "may be the most successful surgical procedure...with low geographic variation, high appropriateness ratings, consistency of clinical outcomes, and well-documented benefits to patient function and quality of life." Submitted comments indicated that the ranking of this condition was appropriate.	The Committee's recommended list of prioritized conditions and measure gaps will be submitted in a full report to HHS. This synthesis of key themes from NQF Member and public comments will be incorporated for consideration.

Appendix B:
Measure Prioritization Advisory Committee: Prioritization of High-Impact Conditions and Measure Gaps
Synthesis of and Response to NQF Member and Public Comments

NQF Member & Public Comments	Response
Chronic Renal Disease (CRD): Several comments suggested that CRD should have a higher ranking given its association with congestive heart failure and other cardiovascular conditions. Another noted that the prioritization reflects an "accurate and appropriate reflection of the staggering personal, fiscal, and societal burden associated with this very prevalent disease." **Chronic Obstructive Pulmonary Disease (COPD):** A few comments supported the inclusion of COPD as a priority condition and noted the paucity of performance measures in this area. Additionally, COPD is a "paradigmatic disease for assessing chronic multimorbidity as about 85 percent of patients with COPD have at least one other chronic condition (diabetes, systemic hypertension, ischemic heart disease, and/or mental health disorders)." **Glaucoma:** A few comments advocated for a higher ranking of glaucoma as the prevention of vision loss reduces falls, medication errors, etc. Additionally, because many patients do not seek treatment, more consumer awareness is needed. There is also a high degree of variation in access to treatment and in utilization. **Lung Cancer:** A few comments expressed concern over the paucity of measures. **Oncology:** A few comments suggested a need for measures in the area of care planning, communication, and shared decisionmaking. **Osteoporosis:** A few comments advocated for a higher ranking given that this is a highly preventable disease that has a substantial impact on functional status. **Rheumatoid Arthritis/Osteoarthritis (RA/OA):** A recommendation was made to consider changing the RA/OA condition category to Arthritis and Other Rheumatic Conditions (AORC), which reflects more than 100 diseases.	
The following conditions and risk factors were recommended for inclusion in measure development efforts, given their role in the development of chronic conditions, and/or high cost, volume, and burden: Asthma Chronic pain Hyperlipidemia Hypertension Low back pain Mental health/illness Obesity Pneumonia (including aspiration pneumonia) Respiratory tract infections (given the recent onslaught of potential viral infections, including seasonal influenza, H1N1, SARS, avian flu) Sleep-disordered breathing Substance use Tobacco use Uterine disorders	Prioritizing high-impact conditions relevant to the Medicare population is the first phase of the Committee's work. The areas proposed will be considered in future streams as additional populations and measurement needs are assessed.

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NQF Member & Public Comments	Response
Prioritizing Conditions: Methodological Issues	
Cost: Concern was expressed that cost estimates reflected in the Booz Allen Hamilton (BAH) report may not be accurate given the date and source of the data collected and that Medicare beneficiary expenditures have changed significantly. Based on a health plan's Medicare Advantage population, congestive heart failure, CRD, RA/OA, diabetes, and acute myocardial infarction (AMI) are among the conditions with the greatest resource use. Additionally, the estimates of cost (and prevalence) are confounded by the inter-connectedness of diseases and the settings in which they are treated.	The Committee discussed these and other similar issues and did not base the prioritization of conditions on cost alone.
Improvability: A few comments requested clarification on the use of "improvability" as a criterion for prioritization and expressed concerns that holding some conditions to a standard of improvability may not be appropriate. Also, there was a request for clarification of the weighting of the dimensions for prioritization purposes.	Improvability was considered by the Committee as one of the dimensions in the prioritization exercise. The definition of improvability used by BAH for the synthesis of evidence was that there exists "evidence for evidence based practices that, if implemented, could result in improvements in clinical care or patient outcomes." The Committee used quantitative and qualitative approaches to prioritize the conditions and did not base the final prioritization on a specific weighting of the dimensions.
Interconnectivity of Conditions: Some comments included concerns that the prioritization of conditions did not take into account the interconnectedness of diseases. Atrial fibrillation, for example, is a root cause of congestive heart failure (CHF) and of stroke/transient ischemic attack, and is also related to Alzheimer's disease and depression. CRD also is highly interrelated with cardiovascular disease and is significantly complicated when diabetes is also present; risk factors include cardiovascular disease, diabetes, hypertension, and obesity. Within conditions, diseases are artificially dissected out, e.g., AMI prevalence and cost data do not reflect downstream effects of AMI, such as CHF.	The Committee discussed this issue and whether to prioritize conditions based on body system (e.g., cardiovascular, musculoskeletal) but prioritized the list of conditions as requested by HHS.
Measure Gaps: Some comments requested clarification as to how measure gaps played into the final rankings and suggested that the extent to which there are measure gaps should be a primary consideration for the prioritization of conditions.	Measure gaps were a consideration and will continue to be discussed as the Committee's work progresses, particularly as it develops recommendations for more specific measurement strategies in subsequent phases.

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NQF Member & Public Comments	Response
Prioritizing Measure Gaps: General Comments	
In general, comments regarding the identified priority measure gap areas were favorable. Many agreed with the high priority for appropriateness and efficiency measures but stressed the importance of ensuring that these measures capture both cost AND quality. Many others also agreed with the importance of the measurement domains of health status and care coordination, as well as the gap area of communication. Measures should include patient- and family-centered elements, and they should be developed to collect information from patients and family caregivers, particularly with regard to how they experience the healthcare system. The following measure gap areas received more specific comments: **Access to Care:** A few comments recommended adding "access to care" as a measurement domain to reflect whether patients are able to access necessary care, not necessarily as an indication of insurance status. **Care Coordination:** Several comments noted that measures should include not only coordination over episodes of care and across multiple care sites, but also care delivered between providers. **Indirect Costs:** One comment recommend that "indirect costs" be prioritized higher. **Medication Management:** Some comments reflected concurrence with the identification of medication management as a gap area, particularly given the absense of outcome measures in this area. Others noted that measure gaps also should include decisionmaking, appropriate use, monitoring, adherence, safety, and outcomes of medication therapy. **Palliative and End-of-Life Care:** Many comments raised concerns over the absence of palliative and end-of-life care measures and urged for either a specific domain or condition to capture these measurement needs, citing the NPP's Palliative and End-of-Life Care priority area. **Standardized Hospital-Acquired Infection (HAI):** One comment encouraged raising the prioritization of standardized HAI to second given the significant opportunity for improvement.	These issues were discussed by the Committee and will be captured in the report that will be delivered to HHS.

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NQF Member & Public Comments	Response
Prioritizing Measure Gaps: Methodological Issues	
Most comments reinforced questions that were raised by the Committee in regard to the identification of measure gaps, including the difficulty of determining the availability and appropriateness of measures without an in-depth review of the measures, which was beyond the scope of this project. Additionally, not knowing how available measures are being used limits the determination of whether the challenge is a lack of measures versus barriers to implementation. Some comments suggested that given the interconnectivity of the identified measure domains, development of measures that are reflective of them should lead to meaningful measure sets that capture the full quality picture. **Generalizable Versus Condition-Specific Measures:** Some comments regarding the need for measures that are generalizable versus those that are condition-specific suggested that this is not an "either/or" situation. This is an opportunity for the Centers for Medicare & Medicaid Services and other measure developers to seek harmonization across conditions and to not develop identical process-linked-to-outcome measures that are specific to discrete conditions. **Settings of Care:** One comment recommended ensuring that the full spectrum of settings is included in measure development efforts (e.g., home health). **Lack of Evidence Base:** One comment raised concerns that it will be increasingly difficult to maintain a strong evidence base for the development of new measures due to a lack of studies. Consideration should be given to identifying priority areas and partnering to ensure the necessary development of an evidence base. Also, there should be a consideration for mechanisms that stimulate innovation in implementation. **Composite Measures:** One concern was expressed over the potential use of composite measures that include aggregated technical measures that may be useful to physicians but not to consumers.	These issues were discussed by the Committee and will be captured in the report that will be delivered to HHS.
Project Scope: Inclusion of Additional Populations	
Many comments urged that the prioritization "should be completed not just for the Medicare population, but for other populations as well, "including pre-Medicare, Medicaid, State Children's Health Insurance Program (SCHIP), commercial plan/private pay, end-stage renal disease, uninsured, maternal, and child health populations.	Initially, the Committee targeted the prioritization of the 20 conditions most relevant to Medicare beneficiaries. Additional populations and measurement streams will be considered in subsequent phases of this work.

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Project Scope: Application of Prioritization Exercise	
Some comments requested clarification of the application of the prioritization as well as the timing and process of future measure development. One comment proposed that if one of the uses will be for public reporting, then discussions regarding application should be conducted in consultation with physicians and other healthcare professionals. Support was offered for the development of comprehensive measure sets that follow a trajectory of treatment for a given conditions, because they will be critical to new payment models.	The Committee's specific charge is to provide guidance on developing a national performance measurement and endorsement agenda. The application of the Committee's recommendations could potentially be used to meet the needs of HHS as specified in recent health reform legislation.
Implementation Issues	
Many comments raised issues related to measure development as well as to the implementation of measurement. Commenters encouraged the Committee to consider the fact that the field is currently experiencing both a gap in available measures as well as gaps in implementation. Additional implementation issues call for support of a "learning healthcare system, from which evidence is constantly produced, communicated, and used for benchmarking to improve care." This in turn should support informed and shared decisionmaking. Finally, comments suggest that maximization of health information technology (HIT) will be key and that HIT infrastructure and the measurement enterprise must be intentionally designed to work together. This will require greater standardization, integration, and involvement of patients and their family caregivers as key contributors to measurement.	These issues were discussed by the Committee and will be captured in the report that will be delivered to HHS.