MEASURE PRIORITIZATION ADVISORY COMMITTEE REPORT

MEASURE DEVELOPMENT AND ENDORSEMENT AGENDA

JANUARY 11, 2011

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I. INTRODUCTION

Despite many ongoing government and private sector efforts to standardize quality measures, quality of health and health care continues to be highly variable in the United States. There is a strong need for the development of quality and cost measures that will ensure broad transparency on the value of care and support performance-based payment and quality improvement around the most prevalent conditions and health risks that account for the greatest share of health care spending. Thus, an assessment and strategic evolution of the current portfolio of measures is needed to ensure that the "right" measures are included.

Section 183 of the Medicare Improvements for Patients and Providers Act of 2008 provides funding for a consensus-based entity to prioritize, endorse, and maintain valid quality performance measures. This legislation and the National Quality Forum's (NQF's) subsequent contract with the U.S. Department of Health and Human Services (HHS) afforded NQF with the opportunity for the Formulation of a National Strategy and Priorities for Healthcare Performance Measurement. To achieve these goals, NQF approached the evolution of its endorsed measures portfolio strategically by constructing a working Measure Development and Endorsement Agenda. Key objectives of the project include:

- Alignment with the development of HHS' National Quality Strategy;
- Construction of a clear Agenda to encourage direction of resources to high leverage areas;
- Continuous scan of the environment to identify and make mid-course corrections, as necessary; and
- Alignment of this work with expanded public reporting and payment reform in the context of the Affordable Care Act (ACA) and meaningful use in the context of the American Recovery and Reinvestment Act (ARRA), as both of these laws require a robust set of performance measures to serve a variety of needs: meaningful use measures, various new and emerging payment systems, and expanded public reporting.

This report includes: (1) the Measure Development and Endorsement Agenda, a prioritized, consolidated list of measure gap domains and sub-domains based on the prioritization of Medicare, child health, and population health measure gaps; (2) key issues, and themes that arose during the public comment period; (3) additional details about the project; and (4) a Path Forward section. This report also incorporates findings from an environmental scan of pipeline measures (measures that are in development, have specifications, and have not yet been submitted to NQF).

This report is comprised of five main sections:

- Background;
- Prioritization of Consolidated List of Measure Gaps;
- Prioritization of Child Health Conditions, Risks, and Measure Gaps;
- Prioritization of Population Health Measure Gaps; and

- The Path Forward.

In the Appendix, we provide the following:

- The Measure Prioritization Advisory Committee Roster (Appendix A);
- NQF Member and Public Comments (Appendix B); and
- Environmental Scan of Pipeline Performance Measures (Appendix C).

II. BACKGROUND

In March 2010, NQF convened the current Measure Prioritization Advisory Committee (Committee) to tap the Committee's ongoing expertise and build on its prior work in prioritizing Medicare conditions and measure gaps.[1] A list of Committee members is provided in Appendix A. HHS charged the Committee with developing a consolidated list of measure gap domains and sub-domains for the construction of a Measure Development and Endorsement Agenda. The consolidated list of measure gap domains and sub-domains was constructed based on the Committee's prioritization of:

- Medicare conditions as well as Medicare measure gap domains and sub-domains;
- Child health conditions and risks as well as child health measure gap domains and sub-domains; and
- Population health measure gap domains and sub-domains.

Key issues were captured during the course of the Committee's deliberations to provide context for interpreting the lists of priority conditions and measure gaps that emerged from the prioritization process.

Purpose of the Project

The Measure Prioritization Advisory Committee was charged with identifying priority conditions and measure gap domains and sub-domains for a working Measure Development and Endorsement Agenda. This effort is intended to enhance NQF's portfolio of endorsed measures and serve as an input to the development of HHS' National Quality Strategy. These gap areas represent priorities of focus for the field. The domains and sub-domains on each of the gap prioritization lists are considered critical areas for measure development. The voting results reflect the Committee's relative prioritization of these categories for future measure development.

[1] NQF established the Measure Prioritization Advisory Committee in 2009 to provide strategic guidance to HHS regarding priority conditions and gaps in quality measures under the previous HHS work on Medicare prioritization. In May 2010, NQF's Measure Prioritization Advisory Committee submitted to HHS *The Prioritization of High-Impact Medicare Conditions and Measure Gaps* report. This report provided a prioritized list of 20 high-impact Medicare conditions and priority measure gaps for Medicare.

Project Methodology

The identification and prioritization of the child health conditions and risks as well as the child health, population health, and consolidated list of measure gap domains and sub-domains involved three main methodological components:

- Identification and Analysis of Conditions and Measure Gap Domains and Sub-Domains;
- Analysis of Cross-Check Streams; and
- Committee Deliberations and Expert Guidance.

Identification and Analysis of Conditions and Measure Gap Domains and Sub-Domains

Two groups of experts provided the Committee with initial lists of conditions and gaps:

- Experts from Child and Adolescent Health Measurement Initiative (CAHMI) and the National Initiative for Children's Healthcare Quality (NICHQ) provided the Committee with background materials (from a NPP-NICHQ Child Health Convening) and an initial list of child health conditions and risks and measure gap domains and sub-domains for Committee consideration and prioritization.[2]
- Similarly, experts from the NPP's Population Health Workgroup provided the Committee with background materials (from the NPP Population Health Convening) and an initial list of population health measure gap domains and sub-domains for Committee consideration and prioritization.

NQF staff consolidated the list of measure gap domains and sub-domains in child health, population health, and Medicare for Committee consideration and prioritization.[3]

Analysis of Cross-Check Streams

NQF staff presented analysis of several key inputs

Cross-Check Streams

- ✧ Integrated Framework for Performance Measurement (National Priorities Partnership Priorities and the NQF-endorsed Patient Focused Episodes of Care Framework)
- ✧ Measure developer priorities;
- ✧ Health Information Technology (HIT) meaningful use deliberations;
- ✧ Disparities-sensitive measure gap domains and sub-domains; and
- ✧ Gaps identified during the NQF endorsement process.

[2] For the child health background materials, see pages 1, 3 from the link provided, also available at http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=25843. For an initial list of child health conditions and risks, see slide 27 from the link provided, also available at http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=25844. For an initial list of child health measure gap domains and sub-domains, see slides 50-58 from the link provided, also available at http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=27086.

[3] For the population health background materials, see page 2 from the link provided, also available at http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=25843. For an initial list of population health measure gap domains and sub-domains, see slides 72-79 from the link provided, also available at http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=27086.

or "cross-check" streams to the Committee, including National Priorities Partnership[4] (NPP) Priorities which align with HHS' proposed National Health Care Quality Strategy, priorities of specific measure developers,[5] HIT meaningful use deliberations,[6] disparities-sensitive measure gap domains and sub-domains,[7] and gaps identified during the NQF measure endorsement process.[8] NQF staff also presented a review of available measures in the NQF-endorsed portfolio of child health and population health measures. Section III provides additional detail regarding each cross-check stream.

Committee Deliberations and Expert Guidance

The Committee considered background materials and revised each list of conditions and risks and measure gap domains and sub-domains prior to prioritization. After extensive deliberations, the Committee used a modified Delphi approach to reach final agreement on prioritization of the list of child health conditions and risks as well as child health, population health, and a consolidated list of measure gap domains and sub-domains. The Committee reviewed the prioritization results and determined that no additional modifications were necessary.

Additional detail regarding each of these methodological components can be found using the online archive for each of the Committee meetings.[9]

Project Scope Limitations

It is important to note the limitations of this project given its requisite scope. This project focused on developing a consolidated list of measure gap domains and sub-domains. Deeper dives into gap domains and sub-domains at the measure concept level were not explored due to budget, time and scope limitations. Further, this project focused on *measure* gaps (i.e., gaps in endorsed measures). However, gaps in quality are also due to *implementation* gaps such as methodological issues and data infrastructure gaps. These issues would also need to be addressed in order to fill critical gap areas in the Quality Enterprise.

Measure Gap Domain and Sub-Domain Prioritized Lists: Assumptions and Limitations

Consistent with NQF's mission and policies, the Committee was purposively constituted to reflect a broad range of stakeholder interests and perspectives. This added to the

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[4] The NPP link is available at http://www.nationalprioritiespartnership.org/.

[5] See slides 18-49 from the link provided, also available at http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=29966.

[6] See slides 32-38 from the link provided, also available at http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=38989. See also, *Identification of Potential 2013 e-Quality Measures Report* (2010).

[7] See slides 50-68 from the link provided, also available at http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=29966. See also key disparities reports listed at the following link, http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=29964.

[8] See slides 50-58 for child health gaps and 80-86 for population health gaps identified during the NQF endorsement process, from the link provided, also available at http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=27086. For additional information on the process for identifying these gaps, see Section III of this report.

[9] The online archive is available at the following link: http://www.qualityforum.org/MeasureDevelopmentandEndorsementAgenda.aspx#t=2&s=&p=2%7C.

richness of the discussion and safeguarded against any one viewpoint dominating the final outputs produced. Although the committee looked to the existing evidence-base to inform and guide its work, at points along the decision-making process, expert opinion based on stakeholders' experiences was relied upon.

The voting exercises that drove towards the identification of domains and sub-domains for filling critical measure gaps should be viewed as a mechanism to begin prioritizing a succinct but high leverage starter list designed to inform measure development and subsequent endorsement moving forward. All of the domains and sub-domains on the consolidated, child health and population health prioritization gap lists are critical areas for measure development. The voting results were meant to reflect a broad classification schema clustering by top tier, middle tier or bottom tier. Thus, interpretation of the voting results is more meaningful when comparing the top and bottom tiers rather than within tiers, as the exercise was not intended, nor does it allow, such clear cut discrimination. Furthermore, the Committee cautions viewing these lists in isolation, without the benefit of the context provided by the key issues that arose during the Committee's robust deliberations, which are captured within this report.

It is important to note that it was not within the scope of the Committee to fully define the domains and sub-domains, many of which reflect common terminology adopted in the field. However, further fleshing out of these domain areas will be important work moving forward as part of future calls for measures for endorsement and to provide guidance on development of new measures. Finally, the Committee recognized that the domain areas are not always mutually exclusive, as some concepts are applicable across multiple domains.

Public Comment Period

In September and October, 2010, NQF sought public comment regarding:

- General comments on the Measure Development and Endorsement Agenda project;
- Comments on the prioritized, consolidated list of measure gap areas and key issues;
- Comments on the prioritization of child health conditions, child health measure gap areas, and key issues; and
- Comments on the prioritization of population health measure gap areas and key issues.

As part of the public comment process, NQF posted a public comment report[10] that outlined measure gaps and priorities for quality measurement, along with the Committee's key issues, for the purpose of collecting feedback from NQF members and the public. NQF received 64 online comments. Key themes from the public comments are presented throughout this report in the applicable sections. A detailed chart of the public comments and responses is provided in Appendix B. NQF previously sought public

[10] The public comment report is available at the following link: http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=39268.

comment on the Medicare conditions, measure gap areas, and key issues, which are summarized in the Medicare prioritization public comment report.[11]

Alignment with Public and Private Sector Initiatives

NQF recognizes the importance of aligning this project with other public and private sector quality improvement activities, especially HHS' National Quality Strategy. Public commenters noted that public and private sector alignment would strengthen the quality enterprise by coordinating measure development, endorsement, and implementation around high priority quality improvement activities.

Figure 1: Quality Enterprise Functions

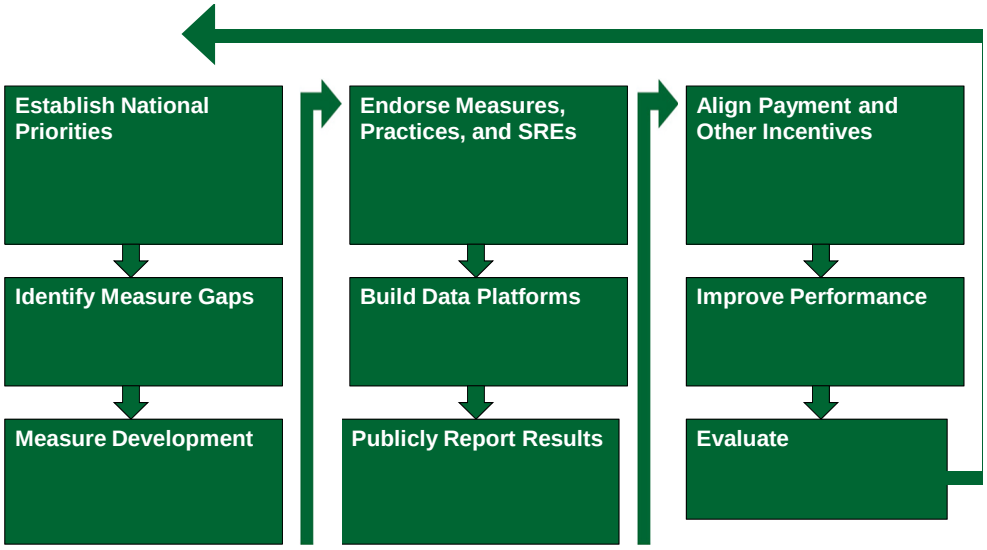

Figure 1 illustrates the connections among the various elements of the Quality Enterprise. The Measure Development and Endorsement Agenda project aligned with several activities within the Quality Enterprise, including but not limited to:

- Proposed HHS National Quality Strategy;[12]
- National Priorities Partnership (NPP) Priorities;[13]
- NQF-Endorsed Patient-Focused Episodes of Care Framework;[14]
- National Committee on Vital and Health Statistics, Subcommittee on Quality: Measure Development Priorities;[15]
- Priorities of Specific Measure Developers; [16]

[11] The report is available at the following link: http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=21348.
[12] The Proposed HHS National Quality Strategy is available at the following link: http://www.hhs.gov/news/reports/quality/nhcqsap.html.
[13] The NPP link is available at http://www.nationalprioritiespartnership.org/.
[14] The report is available at the following link: http://www.qualityforum.org/Projects/Episodes_of_Care_Framework.aspx.
[15] Information on the Subcommittee's work is available at the following link: http://www.ncvhs.hhs.gov/wg-qual.htm.
[16] See slides 18-49 from the link provided, also available at http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=29966.

- Office of the National Coordinator (ONC) HIT Policy Committee Quality Measures Workgroup Tiger Teams: Identification of Gaps for Measure Development;[17]
- NQF's Patient Outcomes Measures Project: Identification of Outcomes Gaps for Measure Development;[18]
- NQF's Health Information Technology Advisory Committee (HITAC): HIT Initiatives;[19]
- Measure Applications Partnership (MAP): Public Reporting and Payment Reform Measures;[20] and
- NQF's Measure Use Evaluation.[21]

National Priorities Partnership Priorities

Patient and Family Engagement
Safety
Care Coordination
Palliative and End-of-Life Care
Equitable Access
Elimination of Overuse
Population Health
Infrastructure Supports

Alignment among these projects varied depending on whether projects were used as a current input to the Measure Development and Endorsement Agenda (NPP, Patient-Focused-Episodes of Care, priorities of specific measure developers), a future input for a potential, subsequent phase of the Agenda because of timing (National Quality Strategy, National Committee on Vital and Health Statistics, Subcommittee on Quality, Patient Outcomes Measures Project, MAP, and the Measure Use Evaluation), or whether other projects' Committees incorporated the Measure Development and Endorsement Agenda project findings into their project work (Tiger Teams and HITAC). Coordination among all projects was maintained to ensure that synergies were realized.

Alignment of the Project within the Quality Enterprise

The Measure Development and Endorsement Agenda Project focuses on measure gap identification and gap filling within the Quality Enterprise to identify the *right* performance measures to improve health and health care delivery. The project serves as a bridge between priorities and uses of measurement. The need for the right measures is critical for high stakes uses such as public reporting and performance-based payment and ultimately to measure progress in achieving the priorities and goals identified in HHS' National Quality Strategy.

[17] Information on the Tiger Teams is available at the following link: http://healthit.hhs.gov/portal/server.pt?open=512&mode=2&objID=3079.
[18] Information on this project is available at the following link: http://www.qualityforum.org/projects/Patient_Outcome_Measures_Phases1-2.aspx#t=1&s=&p=.
[19] Information on HITAC is available at the following link: http://www.qualityforum.org/projects/hitac.aspx.
[20] Information on MAP is available at the following link: http://www.qualityforum.org/Setting_Priorities/Partnership/Measure_Applications_Partnership.aspx.
[21] Information on the Measure Use Evaluation Project is available at the following link: http://www.qualityforum.org/Setting_Priorities/Measure_Use_Evaluation.aspx.

HHS' Proposed National Quality Strategy

In preparing for the development of the National Quality Strategy, HHS proposed a framework that includes three pillars—better care, affordable care, and healthy people/healthy communities—which a set of national priorities, goals, and measures should address. Furthermore, HHS put forth the following four core principles that would serve as a foundation for the National Quality Strategy:

- Person-centeredness and family engagement;
- Care for patients of all ages, populations, service locations, and sources of coverage;
- The elimination of disparities in care; and
- Opportunities for the alignment of public and private sectors.

National Priorities Partnership Priorities

The Committee considered the NPP Priorities as a key input to its work. The consolidated measure gap domains and sub-domains align to the NPP priorities as discussed in Section III of this report. Further, HHS requested input from the NPP as a step in the development of the National Quality Strategy. In its response, the NPP recognized the inextricable links between the three pillars of better care, affordable care, and healthy people/healthy communities and the corresponding eight NPP priority areas as discussed in a recent NPP report.[22]

NQF-Endorsed Patient-Focused Episodes of Care Framework

To provide guidance to key stakeholder groups in accelerating toward a high-performing, high-value healthcare system, NQF convened a Steering Committee to develop a framework for evaluating the efficiency of care over time, including clear definitions and a shared vision of what can be achieved around quality, cost, and value, serving as a foundation for the work of larger performance improvement efforts.

The framework consists of the following:

- Key terms and definitions;
- An explanation of the patient-focused episode of care approach;
- Domains for performance measurement for evaluating efficiency; and
- Guiding principles.

The Committee considered NQF-Endorsed Patient-Focused Episodes of Care Framework as a key input to its work.

Office of the National Coordinator (ONC) HIT Policy Committee Quality Measures Workgroup's Tiger Teams

The Quality Measures Workgroup is currently developing recommendations on quality measure prioritization and measure gaps.[23] The Measure Development and Endorsement

[22] The link to the report is available at: http://www.qualityforum.org/Setting_Priorities/Addressing_National_Priorities.aspx.

[23] Office of the National Coordinator (ONC) HIT Policy Committee Quality Measures Workgroup available at http://healthit.hhs.gov/portal/server.pt?open=512&mode=2&objID=3079. According to its website, The Quality Measures Workgroup "will produce initial recommendations on quality measure prioritization and the quality measure convergence process pertaining to measure gaps and opportunities for Stage 2 Meaningful Use."

Agenda list of consolidated measure gaps served as an input to the Quality Measures Workgroup's Tiger Teams in the topic areas of Patient & Family Engagement, Population & Public Health, Patient Safety, Care Coordination, and Efficiency.

National Committee on Vital and Health Statistics, Subcommittee on Quality: Measure Development Priorities

The goal of the Quality Subcommittee is to outline a roadmap for quality measures that will measure both individual and population health status using electronically available data and emerging data sources in support of the development of meaningful measures. The Quality Subcommittee recently held a hearing to gain perspective on the activities necessary to support anticipated needs of healthcare stakeholders including:

- Those who use or consume measurement information;
- Those who provide care and are responsible for improving performance;
- Those who accredit and regulate based on measurement information; and
- Those who use measures to make decisions about coverage.[24]

The measure roadmap identified by the Quality Subcommittee will inform a future phase of the Measure Development and Endorsement Agenda project.

Priorities of Specific Measure Developers

The Agency for Healthcare Research and Quality (AHRQ), Centers for Medicare and Medicaid Services (CMS), The Joint Commission, National Committee for Quality Assurance (NCQA), and the Physician Consortium for Performance Improvement (PCPI) as convened by the American Medical Association (AMA) contributed to the measure developer priorities that the Committee considered. These themes are further discussed in Section III of the report.

NQF's Patient Outcomes Measures Project

In 2010, the NQF multi-phase Patient Outcomes project evaluated outcomes measures in a variety of areas. The Steering Committees have recommended 37 outcomes measures for NQF endorsement. During their deliberations, the Steering Committees identified numerous areas where outcomes measures are needed but have not yet been developed. As part of the Patient Outcomes project, HHS requested an analysis of important gap areas in outcomes measures to inform measure development activities within the federal government. Findings from the Patient Outcomes Measures project are expected to be incorporated into a future phase of the Measure Development and Endorsement Agenda project as part of the "Gaps Identified during the NQF Endorsement Process" cross-check stream.

NQF's Health Information Technology Advisory Committee

The Health Information Technology Advisory Committee (HITAC), established by the NQF Board of Directors, advises NQF on the strategic direction for its health IT initiatives. The Measure Development and Endorsement Agenda served as an input to the HITAC's development of a set of priorities and focus areas that will provide an overarching

[24] Booz Allen Hamilton, Environmental Scan Presentation, National Committee on Vital and Health Statistics, Subcommittee on Quality Hearing, October 19, 2010 available at http://www.ncvhs.hhs.gov/101019p4.pdf.

framework to guide NQF's health IT projects. The HITAC framework outlines the categories of information necessary to enable individuals and care providers to manage health and well-being, and to effectively measure health outcomes for individuals and communities. The framework will also define the infrastructure necessary to support decision making at the individual and community level and should facilitate endorsement of measures with new and emerging data sources (e.g., nontraditional data sources, including patient derived data).

Measure Applications Partnership

NQF currently serves as the "consensus-based entity" under contract with HHS, and as such may be tasked with carrying out a new consultative process in its role as neutral convener. ACA assigns new duties to the consensus-based entity, including convening multi-stakeholder groups to provide input to HHS on the selection of measures for public reporting and payment programs. In anticipation of this potential need, the NQF Board has adopted a contingency plan for the Partnership. Measure gaps identified by the Partnership are expected to be incorporated into a future phase of the Measure Development and Endorsement Agenda project.

NQF's Measure Use Evaluation

To help the Quality Enterprise understand measure uses, successes, missed opportunities, and to develop recommendations for better uses of measures and measurement information, NQF has subcontracted with an independent third-party evaluator to assess measure use, particularly use of NQF-endorsed measures. Findings from this project are expected to be incorporated into a future phase of the Measure Development and Endorsement Agenda project as a cross-check stream.

Environmental Scan of Pipeline Performance Measures

In 2010, NQF subcontracted with Booz Allen Hamilton (BAH) to conduct an environmental scan of pipeline measures. For the purposes of the scan, "pipeline measures" were defined as measures in development that have specifications, but have not yet been submitted to NQF for endorsement. The environmental scan focused on identifying and classifying pipeline measures related to the NPP original six Priorities and Child Health. The priority areas included:

- Patient and Family Engagement;
- Population Health;
- Safety;
- Care Coordination;
- Palliative and End-of-Life Care;
- Overuse; and
- Child Health.

Through interviews with measure developers and targeted website searches, BAH identified more than 800 pipeline measures and classified these measures in the targeted priority areas listed above. Identified measures were also classified using the

consolidated list of measure gap domains and measure gap sub-domains. Findings and methodological limitations from the BAH environmental scan of pipeline measures are detailed in Appendix C.

III. Prioritization of Consolidated List of Measure Gaps

The Committee was tasked with developing and prioritizing a consolidated list of measure gap domains and sub-domains. All the domains and sub-domains on the consolidated measure gap prioritization list are considered critical areas for measure development, and the voting results reflect the Committee's relative prioritization of these categories.

Development of Consolidated List of Measure Gap Domains and Sub-Domains

As shown in *Figure 2* below, the consolidated list of measure gap domains and sub-domains was constructed based on the Committee's prioritization of:

- Medicare conditions and Medicare measure gap domains and sub-domains;
- Child health conditions and risks and child health measure gap domains and sub-domains; and
- Population health measure gap domains and sub-domains.

Cross-Check Streams

Key inputs or cross-check streams to the consolidated list included:

- Integrated Framework for Performance Measurement (National Priorities Partnership[25] Priorities and the NQF-endorsed Patient-Focused Episodes of Care Framework); [26]
- Priorities of specific measure developers; [27]
- Health Information Technology (HIT) meaningful use deliberations;[28]
- Disparities-sensitive domains and sub-domains; [29] and
- Measure gaps identified during the NQF endorsement process.[30]

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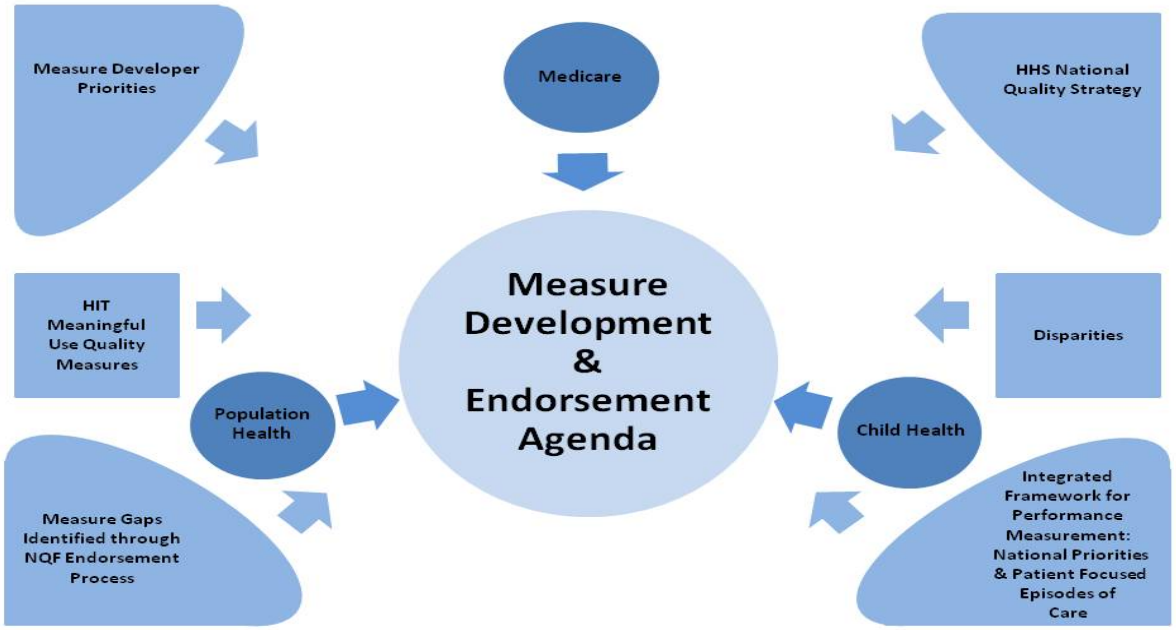
[25] The NPP link is available at http://www.nationalprioritiespartnership.org/.
[26] The report is available at the following link: http://www.qualityforum.org/Projects/Episodes_of_Care_Framework.aspx.
[27] See slides 18-49 from the link provided, also available at http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=29966.
[28] See slides 32-38 from the link provided, also available at http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=38989. See also, *Identification of Potential 2013 e-Quality Measures Report* (2010).
[29] See slides 50-68 from the link provided, also available at http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=29966. See also key disparities reports listed at the following link, http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=29964.
[30] See slides 50-58 for child health gaps and 80-86 for population health gaps identified during the NQF endorsement process, from the link provided, also available at http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=27086.

The Committee considered, as a key input to its work, the NQF Integrated Framework for Performance Measurement, comprised of the National Priorities Partnership (NPP) Priorities and the NQF-endorsed Patient-Focused Episodes of Care Framework. The Integrated Framework highlights the full spectrum of patient-focused performance measurement, including longitudinal and cross-cutting aspects. Further, the Committee considered themes that emerged from the priorities of specific measure developers.[31] These themes included: care coordination, efficiency/overuse, child health, safety, functional status, and palliative care. Key measure developer issues included: comprehensive measure dashboards, composite measures addressing quality and cost, e-measure specifications for electronic health records (EHRs), and the need for measures addressing multiple chronic conditions. The Committee also considered the prioritization of measure gaps when looking through the lens of HIT meaningful use deliberations, as well as disparities-sensitive domains and sub-domains. Further, the Committee considered, as an input, measure gaps identified during the NQF endorsement process. The source for these identified measure gaps was a review of more than 20 NQF Consensus Development Process (CDP) reports.

Figure 2: Streams Feeding the Measure Development and Endorsement Agenda Project



[31] The Agency for Healthcare Research and Quality (AHRQ), Centers for Medicare and Medicaid Services (CMS), The Joint Commission, National Committee for Quality Assurance (NCQA), and the Physician Consortium for Performance Improvement (PCPI) as convened by the American Medical Association (AMA) contributed to the measure developer priorities that the Committee considered.

Prioritization of Consolidated List of Measure Gap Domains and Sub-Domains

The Committee was tasked with prioritizing a consolidated list of measure gap domains and sub-domains based on its prior Medicare prioritization work, and its child health and population health prioritization work during this phase of the project. The Committee used a modified Delphi approach to reach final agreement on the prioritization of a consolidated list of measure gap domains, as shown in Table 1, and sub-domains, as shown in Tables 2 and 3. Table 2 presents the results for the measure gap sub-domain prioritization clustered under the eight overarching measure domains, and Table 3 presents the results for the measure gap sub-domain prioritization listed in order from highest to lowest votes. The Committee members considered the following dimensions in determining their priority measure gaps:

- Impact / burden (including prevalence and cost);
- Improvability / variability (including actionability and effectiveness); and
- Feasibility (including data source and burden of measurement).

Table 1: Prioritized List of Measure Gap Domains	
Domains	Votes
Resource Use / Overuse	16
Care Coordination & Management	15
Health Status	8
Safety Processes & Outcomes	8
Patient & Family Engagement	7
System Infrastructure Supports	5
Population Health	4
Palliative Care	0

Table 2: Prioritized List of Measure Gap Sub-Domains by Domain	
Sub-Domains	Votes
Domain 1: Care Coordination & Management	
Communication	11
Medication Management (Appropriateness, Adherence)	9
Transitions[32]	9
Having a Medical or Health Home	4
Appropriate and Timely Follow-up	3
Effective Care Plans	2
Help Coordinating Care	1
Domain 2: Systems Infrastructure Supports	
System Capacity & HIT	8
Patient/Family Centered Systems of Care	7
Research, Quality Improvement, and Knowledge Dissemination	7
Workforce Development	4
Performance Measurement	3

[Table 2, Continued]	
Domain 3: Health Status	
Function, Symptoms, and Quality of Life	16
Productivity	2
Well Being	2
Burden of Illness	0
Mortality/Length of Life	0
Domain 4: Palliative Care	
Advance Preparations Defined and Honored	2
Pain Management and Symptom Relief	2
Access to Supportive Services	1
Access to Spiritual, Cultural, and Psychological Needs	0
Caregiver/Family Burden	0
Domain 5: Patient & Family Engagement	
Shared Decision Making [33]	19
Self-Management[34]	6
Experience [35]	0
Domain 6: Population Health	
Effective Preventive Services[36]	10
Healthy Lifestyle Behaviors[37]	7
Population Health Outcomes	4
Community Index	2
Environmental Factors	1
Social Determinants	1
Domain 7: Resource Use/Overuse	
Appropriateness/Efficiency	23
Direct Cost[38]	2
Indirect Cost	0
Domain 8: Safety Processes & Outcomes	
Prevention of Adverse Events	13
Medication Safety	9
Standardized Hospital Acquired Infection (HAI)	2
Ambulatory Setting	2

[32] Includes "Accountability, Success/Failure Rates."
[33] Includes "Bridge Gap Between Expert and Public Knowledge, Patient Communication and Knowledge Regarding Consent & Safety."
[34] Includes "Activation, Consumer Empowerment."
[35] Includes "Satisfaction, Health Literacy, Communication, Respect and Cultural Sensitivity."
[36] Includes "Cardiovascular Disease Prevention, Early and Continuous Screening, Child and Adolescent Health, Cancer Prevention, Injury Prevention, Vaccine-Preventable Illness."
[37] Includes "Physical Activity, Diet, Smoking, Risky Alcohol Use, Health Promotion."
[38] Includes "Overuse of Procedures and Surgery, Medication Overuse, Avoidable Emergency Department and Hospital Readmission, Duplicate Testing."

Table 3: Prioritized List of Measure Gap Sub-Domains	
Sub-Domains	Votes
Appropriateness/Efficiency	23
Shared Decision Making	19
Function, Symptoms, and Quality of Life	16
Prevention of Adverse Events	13
Communication	11
Effective Preventive Services	10
Medication Management (Appropriateness, Adherence)	9
Medication Safety	9
Transitions	9
System Capacity & HIT	8
Healthy Lifestyle Behaviors	7
Patient/Family Centered Systems of Care	7
Research, Quality Improvement, and Knowledge Dissemination	7
Self-Management	6
Having a Medical or Health Home	4
Population Health Outcomes	4
Workforce Development	4
Appropriate and Timely Follow-up	3
Performance Measurement	3
Advance Preparations Defined and Honored	2
Ambulatory Setting	2
Community Index	2
Direct Cost	2
Effective Care Plans	2
Pain Management and Symptom Relief	2
Productivity	2
Standardized HAI	2
Well Being	2
Access to Supportive Services	1
Environmental Factors	1
Help Coordinating Care	1
Social Determinants	1
Access to Spiritual, Cultural, and Psychological Needs	0
Burden of Illness	0
Caregiver/Family Burden	0
Experience	0
Indirect Cost	0
Mortality/Length of Life	0

Key Considerations

As the Committee worked to prioritize the consolidated list of measure gap domains and sub-domains, issues and considerations arose that framed the discussions and impacted the final rankings. Key themes that emerged from the Committee's deliberations were captured, as were similar issues that were raised during the public comment period. A detailed chart of the public comments and responses is provided in Appendix B. Key considerations for the prioritized, consolidated list include:

- The relatively low prioritization of *Palliative Care*;
- Various ways to conceptualize *Resource Use/Overuse*; and
- The need to move toward "complex measures."

Palliative Care

Almost a third of the public commenters raised concerns regarding the relatively low prioritization of Palliative Care in the Measure Development and Endorsement Agenda. The Committee agreed that the voting results reflect the prioritization of this area for measure development rather than the overall importance of palliative care. The Committee further agreed that there is a need to fill measure gaps within all of the domains and sub-domains, including palliative care.

Several commenters noted that palliative care may have received fewer votes because it was a narrow category that overlapped with other domains and sub-domains. The Committee also recognized the inherent overlap between *Palliative Care*, as a cross-cutting domain, with other domains and sub-domains. The Committee noted that some measure gaps in *Palliative Care* will be addressed as critical measure gaps as these areas are filled. Finally, commenters noted that progress has been made in developing measures in palliative care, but much work remains to develop palliative care measures with reliability and usability suitable for public reporting and performance-based payment.

NPP's commitment to palliative care as a priority is reflected in the inclusion of palliative care in the NPP's recommendations to HHS on priorities for the National Quality Strategy and in the recent NPP convening on palliative care (November 2, 2010). In addition, NQF anticipates a call for palliative care measures for endorsement during the first half of 2011.

Resource Use/Overuse

A critical measure gap in performance measurement exists in the area of resource use/overuse. The Committee acknowledged the importance of this issue through its voting results. *Resource Use/Overuse* was ranked as the highest measure gap domain. *Appropriateness and Efficiency* (within the *Resource Use/Overuse* domain) was ranked as the highest sub-domain. While the Committee stressed the need for a consistent way to measure cost and value, it recognized the lack of an evidence base for, and standardization of, cost measures. In the field, there is little agreement about how to define, measure, and improve cost and value.

One Committee member proposed measuring total cost of care, conceptualized as the cost of care in a given system (including the costs to payors, families, and society) or within an

institution (including administrative costs), as opposed to per episode cost of care. Committee members also discussed varying ways to conceptualize the sub-domain, *Appropriateness and Efficiency*. While the Committee readily agreed that *Appropriateness* is getting the "right care at the right time" the Committee engaged in extensive deliberations regarding how best to conceptualize *Efficiency* for purposes of the measure gap sub-domain. The Committee discussed various approaches to understanding efficiency, including highest quality per unit cost for an episode of care, but as one member noted, a physician could be "efficient" but performing the wrong procedure so total cost would ultimately increase. Thus, measure developers should also consider *Efficiency* within the context of total cost of care with a population focus.

In preparing for the development of the National Quality Strategy, HHS has proposed a framework that includes three pillars—better care, affordable care, and healthy people/healthy communities—which a set of national priorities, goals, and measures should address. The HHS National Quality Strategy proposed framework identifies affordable care as "care that reins in unsustainable costs for families, government, and the private sector to make it more affordable." This pillar highlights the importance of measuring total cost of care.

NQF has an HHS-funded project underway, Understanding & Evaluating Resource Use Measures,[39] to endorse resource use measures. This project will serve as a building block for efficiency measures.

Complex Measures

The Committee recommended a move toward "complex measures," including composite and longitudinal measures. For example, Committee members stressed the importance of developing composite measures for evidence-based clinical preventive services. The composites could be measured at an individual and/or system level. The Committee also discussed using HHS' proposed National Quality Strategy framework of population health, better care, and affordability as a basis for developing composite measures.

The Committee also stressed the need for longitudinal measures. The Committee discussed taking a long-term view of health and health care, even moving beyond an episodic model. Existing measures could be improved by adding the ability to follow trends over time (e.g. "delta measures"). The HIT presentation[40] to the Committee on meaningful use measure gaps included "enabling longitudinal measurement" among the criteria for 2013 meaningful use measures. The Committee also considered how to build a quality infrastructure that supports longitudinal data collection for longitudinal measures.

[39] The project's public comment report is available at the following link: http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=37427.

[40] See slides 32-38 from the link provided, also available at http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=38989. See also, *Identification of Potential 2013 e-Quality Measures Report* (2010).

IV. Prioritization of Child Health Conditions, Risks, and Measure Gaps

As part of the Measure Development & Endorsement Agenda Project, the Committee prioritized child health conditions and risks as well as child health measure gaps. Before engaging in these prioritization exercises, the Committee reviewed key considerations in child health quality measurement. These considerations included a broad framework for child health quality and performance measurement with a focus on:

- Healthy development and risks for children, in addition to conditions and diagnoses;
- Children's dependence on familial and community factors;
- The high level of diversity among children, impacted by issues of socio-economic status, race, and ethnicity; and
- Alignment with the Children's Health Insurance Program Reauthorization Act (CHIPRA) core measures.

Prioritization of Child Health Conditions and Risks

Child health experts from the Child and Adolescent Health Measurement Initiative (CAHMI) and the National Initiative for Children's Healthcare Quality (NICHQ) provided the Committee with an initial list of child health conditions and risks for prioritization. The Committee considered key child health background materials[41] and used a modified Delphi approach to reach final agreement on the prioritization of the list of child health conditions and risks presented in Table 5. The Committee members considered the following dimensions in determining their priority conditions:

- Prevalence;
- Quality of life (current and future)/burden of illness;
- System improvability—methods and models exist or are feasible to develop;
- Infrastructure for measurement success; and
- Motivation for and support for change (legislation, regulation, certification).

Table 5: Child Health Conditions and Risks

Conditions and Risks	Votes
Tobacco Use	29
Overweight/Obese (≥85th percentile BMI for age)	27
Risk of Developmental Delays or Behavioral Problems	20
Oral Health	19
Diabetes	17
Asthma	14
Depression	13
Behavior or Conduct Problems	13
Chronic Ear Infections (3 or more in the past year)	9
Autism, Asperger's, PDD, ASD	8
Developmental Delay (diag.)	6
Environmental Allergies (Hay Fever, Respiratory or Skin Allergies)	4
Learning Disability	4
Anxiety Problems	3
ADD/ADHD	1
Vision Problems Not Corrected by Gasses	1
Bone, Joint or Muscle Problems	1
Migraine Headaches	0
Food or Digestive Allergy	0
Hearing Problems	0
Stuttering, Stammering, or Other Speech Problems	0
Brain Injury or Concussion	0
Epilepsy or Seizure Disorder	0
Tourette Syndrome	0

[41] For the child health background materials, see pages 1, 3 from the link provided, also available at http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=25843.

Prioritization of Child Health Measure Gaps

Informed by an initial list of measure gap areas identified by the NPP-NICHQ child health convening, "Promoting Alignment: National Priorities and Child Health Measures Conference" and accompanying report[42], the Committee prioritized measure gap domains and sub-domains in the area of child health. The Committee used a modified Delphi approach to reach final agreement on the prioritization of child health measure gap domains and sub-domains presented in Tables 6 and 7, respectively. The Committee members considered the following dimensions in determining their priority measure gaps:

- Value / impact / potential impact on quality of life across the lifespan;
- Usability / feasibility (including burden of measurement);
- Ability to influence and prevent disease;
- Evidence base; and
- Measurable outcomes which can motivate care innovation.

Table 6: Child Health Measure Gap Domains	
Domains	Votes
Care Coordination, including Transitions	15
Clinical Effectiveness in Acute and Chronic Care Management	14
Patient, Family, & Caregiver Engagement	12
Population Health including Primary and Secondary Prevention & Communities	12
Overuse (includes waste, efficiency, and appropriateness)	10
Safety	3
Palliative Care	0

[42] National Quality Forum (NQF) and National Initiative for Children's Healthcare Quality (NICHQ). *Promoting Alignment: National Priorities and Child Health Measures Conference Summary Draft Report.* (May 2010). Washington, DC.

Table 7: Child Health Measure Gap Sub-Domains	
Sub-Domains	Votes
Domain 1: Patient and Family Engagement	
Shared Decision-making	11
Bridge Gap Between Expert and Public Knowledge	10
Patient/Family Centered Systems of Care	8
Communication, Respect Cultural Sensitivity	7
Health Literacy	6
Consumer Empowerment, including Transparency	3
Patient Experience with Care	3
Patient/Family Activation	2
Domain 2: Care Coordination including Transitions	
Having a Medical or "Health Home"	14
Access to Referrals and Appropriate Follow-up	11
Success/Failure Rates in Handoffs	11
Help Coordinating Care	4
Effective Transition to Adult Services	2
Domain 3: Population Health including Primary and Secondary Prevention & Communities	
Population Health Outcomes	15
Early and Continuous Screening and Appropriate, Timely Follow-up	12
Community and Neighborhood Resources, Support and Safety	8
Population Health Oriented Systems of Care (Needs Assessment, Shared Accountability, etc)	4
Health Promotion	2
Domain 4: Clinical Effectiveness in Acute and Chronic Care Management	
Appropriate Tests and Follow-up	15
Medications (Appropriateness, Management, Adherence)	12
Self Care Management and Support	12
Effective Care Plans	10
Burden of Illness, Symptoms & Functional Status	6
Domain 5: Safety	
Adverse Events	13
Patient Communication and Knowledge regarding Consent & Safety	2
Medication and Sedation Safety	1
Domain 6: Overuse	
Overuse of Procedures and Surgery	11
Medication Overuse	10
Avoidable ED and Hospital Readmission	7
Duplicate Testing	2
Domain 7: Palliative Care	
Caregiver/Family Burden	2
Advance Preparations Defined and Honored	1
Pain Management and Symptom Relief	0
Access to Supportive Services	0
Access to Spiritual, Cultural and Psychological needs	0

Key Considerations

As the Committee worked to prioritize the child health list of conditions and risks as well as the child health prioritized list of measure gaps, issues and considerations arose that framed the discussions and impacted the final rankings. Key themes that emerged from the Committee's deliberations were captured, as were similar issues that were raised during the public comment period. A detailed chart of the public comments and response is provided in Appendix B. Key considerations for the child health prioritized list of conditions and risks as well as the child health prioritized list of measure gaps include:

- Lifelong Impact of Child Health Development and
- Illness Model vs. Wellness Model.

Lifelong Impact of Child Health Development

While child health tends to focus on high cost conditions among children, such as congenital problems and serious injuries, it is important to also recognize the importance of development and its impact on life trajectories, preventable negative events, and hidden long-term costs to society. For example, the Committee considered the significant implications of childhood risk factors like obesity for downstream adult conditions such as diabetes and heart disease. The Committee noted that performance measures should address lifelong impact through different stages of development from birth to late adolescence and into adulthood.

Illness Model vs. Wellness Model

The Committee considered whether it should approach child health prioritization from an illness model or a healthy child model. Some Committee members commented that the disease-focused nature of the child health conditions and risks list made it difficult to underscore the role of prevention. The Committee considered adding a prevention block to the list of conditions and risks and wellness, social determinants, and community safety, support, and resources to the measure gaps list. However, the Committee chose not to do so because of the separate considerations of related topics under the population measure gaps prioritization work.

A few public commenters also noted the limitations inherent in considering child health through a medical lens as opposed to a wellness lens. These commenters advocated a greater focus on preventive care, healthy development, and further consideration of social factors (e.g. healthy social integration and child-friendly communities). Further, several public commenters proposed adding a social determinants sub-domain to the list of child health measure gaps. These commenters recognized the importance of social determinants in child health and noted its inclusion in the population health measure gap list.

V. PRIORITIZATION OF POPULATION HEALTH MEASURE GAPS

As part of the Measure Development & Endorsement Agenda Project, the Committee prioritized population health measure gaps. The Committee considered various population health models that focused beyond the health care delivery system, including

the Kindig model[43] and the State of the USA (SUSA) model[44]. The Committee discussed the three-part focus of population health, better care, and affordability, (which was subsequently adopted in HHS' proposed framework for the National Quality Strategy) as a basis for developing composite measures. The HHS National Quality Strategy proposed framework identifies healthy people/healthy communities as a pillar "important for improving health and wellness at all levels through strong partnerships between health care providers, individuals, and community resources," highlighting the importance of addressing measure gaps in this area.

Prioritization of Population Health Measure Gaps

Informed by an initial list of measure gap areas identified by NPP's population health workgroup report,[45] the Committee prioritized measure gap domains and sub-domains in the area of population health. The Committee considered population health background materials[46] and used a modified Delphi approach to reach final agreement on the prioritization of population health measure gap domains and sub-domains presented in Tables 9 and 10, respectively. The Committee members considered the following dimensions in determining their priority measure gaps:

- Impact / burden (including prevalence and cost);
- Improvability / variability (including actionability and effectiveness); and
- Feasibility (including data source and burden of measurement).

Table 9: Population Health Measure Gap Domains	
Domains	Votes
Clinical Preventive Services	9
Lifestyle Behaviors	9
Health Status (Mortality and Healthy Years)	9
Measures of Health Care and Public Health System Performance	6
Other Factors for a Community Health Index (e.g., Social Determinants and Environmental Factors)	4

[43] Kindig DA, Asada Y, Booske B, A population health framework for setting national and state health goals, *JAMA*. 2008;299(17):2081-2083.
[44] Statue of the USA Health Indicators: Letter Report, 2008, available at http://www.iom.edu/~/media/Files/Report%20Files/2008/State-of-the-USA-Health-Indicators-Letter-Report/SUSA%20report%20brief%20for%20web.pdf.
[45] For the population health workgroup report, see the link provided, also available at http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=26445.
[46] For the population health background materials, see page 2 from the link provided, also available at http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=25843.

Table 10: Population Health Measure Gap Sub-Domains	
Sub-Domains	Votes
Domain 1: Clinical Preventive Services	
Cardiovascular Disease Prevention	4
Child and Adolescent Health	3
Cancer Prevention	1
Injury Prevention	0
Vaccine-Preventable Illness	0
Domain 2: Lifestyle Behaviors	
Physical Activity	8
Diet	5
Smoking	3
Risky Alcohol Use	3
Domain 3: Health Status (Mortality and Healthy Years)	
Health Status (Symptoms, Function, and Quality of Life)	13
Wellness/well-being	9
Length and Quality of Life (Healthy Life Years)	5
Mortality	2
Domain 4: Measures of Health Care and Public Health System Performance	
Coordination of Care Processes across Sectors and Care Coordination across the Patient-Focused Episode to include Community Context	10
System Infrastructure and Policies	8
Domain 5: Other Factors for a Community Health Index	
Environmental Factors	2
Social Determinants	1

Key Considerations

As the Committee worked to prioritize the population health list of measure gap domains and sub-domains, issues and considerations arose that framed the discussions and impacted the final rankings. Key themes that emerged from the Committee's deliberations were captured, along with issues that were raised during the public comment period. A detailed chart of the public comments and responses is provided in Appendix B.

One key consideration from the population health prioritization work focused on the interface between health care delivery and public health. Prompted by members who highlighted the role of public health, the Committee acknowledged the importance of measuring the coordination between public health and health care delivery. The Committee designated *Measures of Health Care and Public Health System Performance* as a measure gap domain under the Population Health stream. The Committee also considered the boundaries between health care delivery, public health, and other

community systems and how these systems might better interact to improve quality and health outcomes. The Committee identified the following gaps in measures focused on linkages between the health care and public health systems:

- Community-level health care resources (e.g., employers and schools);
- Community-level health resource consumption; and
- Measures of community health and community engagement (e.g., how well social institutions are engaging in promoting healthy behavior).

VI. THE PATH FORWARD

Through this project, HHS has provided for the convening of the Measure Prioritization Advisory Committee, a multi-stakeholder group of national experts, to think critically, strategically, and proactively about the future of performance measurement. As discussed in the Background section of this report, the Measure Development and Endorsement Agenda project aligned with several activities within the Quality Enterprise, including but not limited to the proposed HHS National Quality Strategy and NPP priorities; National Committee on Vital and Health Statistics, Subcommittee on Quality; priorities of specific measure developers; ONC HIT Policy Committee Quality Measures Workgroup Tiger Teams; and other NQF HIT and measure endorsement projects. NQF recognizes the importance of alignment with other public and private sector quality improvement activities to strengthen the quality enterprise by coordinating measure development, endorsement, and implementation around high priority quality improvement activities. To meet the high stakes measurement needs of health reform, measure development and endorsement must produce high-leverage metrics that will allow assessment of those areas that are essential – not necessarily those that are the easiest – to measure.

Considerations for Future Measure Development and Endorsement

The Committee stressed that the future success of performance measurement is predicated on fundamentally changing prevailing mindsets and approaches. To this end, the Committee, through its deliberations and a future-oriented exercise, envisioned future measurement scenarios and needs in the context of a patient and family oriented health system and a fully HIT enabled environment, impacted by delivery system reform. The Committee emphasized the need for a paradigm shift in several key areas:

- Focus on the *right* measures as opposed to *more* measures, that are meaningful to patients and their families including **care coordination measures,** and **patient reported outcomes measures** such as functional status, health-related quality of life and health risk;[47]
- Move toward **complex measures** (e.g., composites, longitudinal measures of outcomes and cost, and measures that account for multiple chronic conditions);

[47] In considering high-leverage outcome measures, the Committee acknowledged the need for short and long term outcome measures within the following areas: patient experience and satisfaction, cost of care, length and quality of life, patient-centeredness, population health, and healthy years. For example, screening measures need to be related to outcome measures to demonstrate their effects and to begin to attribute success or failure to specific interventions.

- Shift from a provider-centric model to a **patient-centric model** and acceleration of patient self-management and engagement facilitated through technology;
- Focus on **electronic technology** to address *Resource Use/Overuse* gaps and *Systems Infrastructure Supports* gaps;
- Change from an episodic, reactive, static system (disease-specific paradigm) to a **dynamic, proactive wellness system**, which will require infrastructure improvements;
- Shift from segmenting populations to measuring **overall health care system performance**, transcending individual payors and programs with an emphasis on **population health management** particularly as the population ages and move from a private payor system to a public payor system under Medicare;
- **Align** measure development at the national level while also building upon and coordinating with state and regional community efforts (e.g., Beacon Communities)**;**
- Enable **new financing and delivery models** through new measures, such as **episode-based and population-based measures** of system performance to address *Care Coordination* measure gaps;
- Focus on **data and infrastructure gaps** to address various barriers to widespread uptake of standardized performance measures including access to data sources, burden on providers, research to develop the evidence base linking measures to desired outcomes, workforce training, and field testing of measures); and
- Address **measurement methodological issues**, such as small sample size and risk adjustment.

Conclusion

This project provided the Measure Prioritization Advisory Committee with the opportunity to construct a coordinated Measure Development and Endorsement Agenda for addressing key measure gaps. Through participation in meetings and the public comment period, many stakeholders voiced their support for the prioritization effort and stressed the importance of aligning performance measurement with identified priorities in health care.

The domains and sub-domains on each of the measure gap prioritization lists represent opportunities for measure development and provide building blocks for measuring better care, affordable care, and healthier people and communities. The Committee emphasized the need for fundamental change in performance measurement to ensure the right measures are available for high stakes uses and ultimately to measure progress in achieving the priorities and goals of the National Quality Strategy.

APPENDIX A: MEASURE PRIORITIZATION ADVISORY COMMITTEE ROSTER

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APPENDIX B: PUBLIC COMMENTS AND RESPONSES

NQF Member and Public Comments	Response
Overall Project Comments	
Vision/Purpose of Project Two commenters requested a clearer statement of the purpose of the work conducted by the Measure Prioritization Advisory Committee. One commenter asked how the results will be utilized.	The Measure Prioritization Advisory Committee was charged with identifying priority conditions and measure gap domains and sub-domains for a working Measure Development and Endorsement Agenda. This effort is intended to enhance NQF's portfolio of measures and serve as an input to the development of a national quality measurement strategy. The domains and sub-domains on each of the gap prioritization lists are considered critical areas for measure development. The voting results reflect the Committee's relative prioritization of these categories for future measure development.
Public and Private Sector Alignment Several commenters suggested that the project's recommendations be folded in with other public and private sector priorities, especially the HHS National Quality Strategy. Public and private sector alignment will strengthen the quality enterprise by coordinating measure development, endorsement, and implementation around high priority quality improvement activities. A few commenters recommended that the project adopt a stronger communication strategy to actively promote alignment.	The project's gap prioritization is aligned with the National Priorities Partnership (NPP) priorities, as well as other public and private sector priorities as discussed in this report. HHS requested input from the NPP as a step in the development of the National Quality Strategy. We recognize the importance of coordinating measure development, endorsement, and implementation around high priority public and private sector quality improvement activities. We recommend that the next phase of this project incorporate a public-private alignment and communication strategy.
Committee Composition Several commenters expressed that in their view the Committee did not have sufficient representation in the fields of child health or palliative care. These commenters urged stronger representation in those fields for future projects.	The 30-member Committee included a child health expert from academia and a former state Medicaid official. Additional child health experts from AHRQ, CMS, and NICHQ presented child health key issues at various Committee meetings and provided guidance during Committee deliberations. Regarding palliative care, the Committee included four members from the related fields of geriatrics, long-term care, and cancer care. HHS Committee members (CMS, AHRQ, ASPE, CDC, and ONC) also represented important child health and palliative care perspectives during Committee deliberations.

NQF Member and Public Comments	Response
Committee Decision-Making Process A few commenters asked for more clarification regarding the methodology for identifying and prioritizing measure gaps. Commenters asked whether only expert opinion was used or whether analysis of measure gaps was also considered. One organization asked for confirmation that a review of NQF-endorsed measures was used in the identification of gaps in measures. One commenter suggested that the results of the modified Delphi approach used by the Committee be corroborated by another methodology to account for any bias introduced by the size and composition of the Committee.	The Committee's decision making process is described in this report. Additional detail can be found using the online archive and background materials for each of the Committee meetings.[48] NQF's process for establishing multi-stakeholder committees balances diverse interests with manageable size. Individual committee members are encouraged to think beyond their inherent biases as representatives of the broader healthcare community.
Definitions A few commenters suggested that the domains and sub-domains be clearly defined to reduce potential misinterpretation.	Many of the identified domains and sub-domains reflect accepted categories, but experts may not agree on precise definitions. The Committee deliberated about the meaning of several of the domains and sub-domains but did not identify definitions for the categories. Further refinement of the domains and sub-domains may occur as part of NQF's call for measures endorsement process and for de novo measure development. The next phase of this project may provide additional guidance to the field with regard to these areas.
Disparities A few commenters encouraged the steering committee to further discuss how to address disparities, where appropriate.	The Committee debated whether disparities and/or access should be separate domains or considerations in ranking all domains and sub-domains. Based on Committee discussion, disparities became a cross-check stream, as discussed in this report. The Committee reviewed disparities-sensitive domains prior to voting on the consolidated list of measure gaps.

[48] The online archive is available at the following link: http://www.qualityforum.org/MeasureDevelopmentandEndorsementAgenda.aspx#t=2&s=&p=2%7C.

NQF Member and Public Comments	Response
Next Phase of the Project Many commenters acknowledged the importance of the proposed next phase of the project, including the need for further work in measures for payment reform models and public reporting as well as a focus on the non-Medicare adult and maternal health/neo-natal populations. Commenters were supportive of NQF's proposed next steps for refining the working Measure Development and Endorsement Agenda. One commenter proposed that NQF consider combining beginning-of-life and end-of-life care issues, as these issues overlap with many of the existing sub-domains.	NQF appreciates the public comments on the next phase of the project, and recognizes the importance of further developing the Measure Development and Endorsement Agenda. The next phase of this project could focus on the measures needed for payment reform models and public reporting, as well as adults (non-Medicare) and maternal health/neonatal priority conditions and measure gaps.
Consolidated List Comments	
Prioritization of Domains/Sub-domains *Overall* One commenter questioned the value of prioritizing the list of gap sub-domains, noting that all or most of the sub-domains, within each domain, will be important in the development of composite measures.	The ranked domain list provided the opportunity for the Committee to concentrate on high-level measure gaps while the sub-domain list offered the group the opportunity to focus on the next level of granularity. Sub-domain prioritization results do not reflect the importance of each sub-domain but rather the relative prioritization of the sub-domains for future measure development.
Prioritization of Domains/Sub-domains *Importance of Palliative Care despite low voting results* Almost a third of the commenters raised concerns regarding the low prioritization of palliative care in the Measure Development and Endorsement Agenda. Commenters requested that palliative care, as a patient-centered, cost-effective approach, receive higher prioritization, citing the NPP's priority in this area and that palliative care meets the goals of the IHI Triple Aim while placing the patient and family at the center of services. Several commenters noted that progress has been made in developing measures in palliative care, but much work remains in developing additional palliative measures with robust reliability and usability for public reporting and payment. Two commenters specifically requested that the sub-domain of *Access to Spiritual, Cultural, and Psychological Needs* receive higher prioritization.	All of the domains and sub-domains on each of the gap prioritization lists are considered critical areas for measure development. The *Palliative Care* domain and sub-domain[49] prioritizations do not reflect their importance,[50] rather the relative prioritization of this area for future measure development. The Committee recognized the inherent overlap between *Palliative Care*, as a cross-cutting domain with other domains and sub-domains and noted that its importance will be further highlighted as these critical gap areas are filled.

[49] The consolidated, prioritized list of measure gaps includes *Palliative Care* as one of eight domains. In addition, five of the 38 sub-domains fall within the *Palliative Care* domain (*Advance Preparations Defined and Honored*; *Pain Management and Symptom Relief*; *Access to Supportive Services*; *Access to Spiritual, Cultural, and Psychological Needs*; *Caregiver/Family Burden*).

NQF Member and Public Comments	Response
Prioritization of Domains/Sub-domains *Complexity in Defining Palliative Care* Several commenters recognized the complexity in defining palliative care and how poorly understood the concept is, especially as it relates to hospice care and end of life care. One commenter suggested that the domain *Palliative Care* be termed instead "Palliative and Hospital Care." Several commenters noted that palliative care may have received fewer votes because it was narrowly defined and overlapped with other domains and sub-domains.	The Committee noted that palliative care elements overlap significantly with domains such as *Resource Use/Overuse*, *Care Coordination*, and *Patient & Family Engagement*. Indeed, the top five sub-domains of *Appropriateness/Efficiency*; *Shared Decision Making*; *Function, Symptoms, and Quality of Life*; and *Prevention of Adverse Events* are all relevant to palliative care. The cross-cutting nature of palliative care will be further highlighted as these critical gap areas are filled.
Additional Sub-domains for Consideration One commenter noted that "healthcare acquired conditions" was not included in any of the measure gap domains and sub-domains and requested its inclusion.	The sub-domain *Standardized HAI Rates* is a sub-domain under the *Safety* domain in both the Medicare list and the consolidated list, though infections do not account for all healthcare acquired conditions. This issue could be considered in the next phase of the project.
Additional Measures for Consideration *Longitudinal measures* One commenter referenced the need to support patients and families along the continuum of chronic disease, indicating the need for a longitudinal perspective to measurement.	The Committee discussed the importance of longitudinal measurement of quality and cost. The HIT presentation[51] to the Committee on meaningful use gaps included specific criteria for 2013 meaningful use measures. These criteria included, among other things, enabling longitudinal measurement.
Additional Measures for Consideration *Multiple Chronic Conditions Measures* One commenter noted that high priority measures for NQF's portfolio should be measures that focus on the care provided to patients with multiple serious chronic conditions, due to their vulnerability, progressive illness, age, the demonstrated lack of continuity in their care, and the high costs these patients incur.	NQF is currently working on a project that will define and endorse a Measurement Framework for Multiple Chronic Conditions (MCCs) as a foundation for the future endorsement of performance measures that explicitly address MCCs.

[50] NQF's commitment to palliative care as a priority is reflected in its inclusion in the NPP recommendations to the Secretary of HHS for the National Quality Strategy, the NPP convening on Palliative Care (Nov 2, 2010), and NQF's upcoming call for palliative care measures in 2011.

[51] See slides 32-38 from the link provided, also available at http://www.qualityforum.org/WorkArea/linkit.aspx?LinkIdentifier=id&ItemID=38989. See also, *Identification of Potential 2013 e-Quality Measures Report* (2010).

NQF Member and Public Comments	Response
Additional Measures for Consideration *Measures for hospital-based physicians* One commenter noted that there is a gap in performance measures for hospital-based physicians, specifically, accountability measures. The commenter asserted that hospital-based physicians are important in minimizing the effects of infectious disease in the hospital setting and in providing treatment to complex patients.	The Measure Prioritization Advisory Committee considered broad gaps in performance measures and did not stratify its gap prioritization by setting of care and level of analysis, with the exception of the *Ambulatory Setting* sub-domain under the domain of *Safety*. Other sub-domains, including *Standardized HAI* and *Prevention of Adverse Events* apply to all hospital practitioners.
Child Health Comments	
Defining the Age Range for "Child" One commenter asked for a definition of the age range for "child" used for this project.	The Committee chose to use ages 1-18 for defining the population of children for this project.
Needs of Specific Sub-Groups A few commenters questioned whether the Committee fully addressed the needs of specific sub-groups of children (e.g. tobacco use may not be a top priority for young children). One commenter also questioned whether the committee fully addressed the needs of children with multiple and complex chronic conditions. This commenter indicated that development of a balanced set of cross-cutting measures for "medically complex" children is an important priority.	The Committee considered stratification of the child health conditions and risks by age groups but chose not to do so. The Committee addressed the needs of "medically complex" children[52] through several measure gap sub-domains. These sub-domains include: *Having a Medical or Health Home*; *Access to Referrals and Appropriate Follow-Up*; *Burden of Illness, Symptoms, and Functional Status*; and *Medications (appropriateness, management, adherence)*.
Prioritization of Conditions and Risks and Sub-domains Several commenters asserted that in the list of child health conditions and risks, *Overweight/Obese* should be prioritized higher than *Tobacco Use*, given the downstream health effects and costs associated with childhood obesity. A few commenters also urged that *Brain Injury or Concussion* receive higher prioritization in the list of conditions and risks. In the list of child health measure gap sub-domains, one commenter noted that the low number of votes received for the sub-domains of *Medication and Sedation Safety* and *Pain Management* understate the importance of these areas in child health.	In the initial vote on the list of child health conditions and risks, *Overweight/Obesity* was ranked first by the Committee. However, after subsequent Committee deliberations, *Tobacco Use* was added to the list and received the most votes (29 votes). *Overweight/Obesity* ranked second (27 votes). The Committee discussed the importance of using a tiered approach in viewing the results, given that the ranking of some domains and sub-domains differed by a single vote at times. The Committee noted the importance of all the measure gap domains and sub-domains, despite the low rankings received by some.

[52] The Committee considered specific issues related to children with special health care needs, including the greater amounts of health related services that they require. The Committee also considered multiple chronic conditions for children that cut across a range of community systems. Prior to prioritizing the list of child health conditions and risks, the Committee discussed the ability to manage chronic disease and disability over time.

NQF Member and Public Comments	Response
Additional Conditions and Risks for Consideration A few commenters suggested the following additions to the list of child health conditions and risks: substance abuse, safety/injury prevention, physical activity, and nutrition.	The Committee discussed 11 additional items for potential addition to the list of conditions and risks, including alcohol/substance abuse and physical inactivity. However, only *Oral Health Caries* and *Tobacco Use* were added to the list, based on extensive Committee deliberation. The Committee also considered adding a prevention block to the list of conditions and risks, but chose not to do so. The Committee did include *Brain Injury or Concussion* on the list. We recognize that Safety/Injury Prevention is a broader construct that was not included in the list.
Wellness Focus and Social Factors A few commenters on the list of child health conditions and risks noted the limitations inherent in considering child health through a medical lens as opposed to a wellness lens. These commenters advocated a greater focus on preventive care, healthy development, and further consideration of social factors (e.g. healthy social integration and child-friendly communities).	In developing and prioritizing the list of conditions and risks, the Committee considered the following factors: children are developing, dependent, disproportionately racially and ethnically diverse, and have varied and often delayed diagnoses. The Committee considered additional factors impacting the health of children, including community safety, support, and resources. In addition, the Committee considered adding a prevention block to the list of conditions and risks and a wellness domain under the child health stream, but chose not to do so because of the separate consideration of prevention under the topic of population health.
Developmental Issues One commenter suggested a stronger focus on developmental issues for the child health conditions and risks prioritized list.	Within the list of conditions and risks, *Risk of Developmental Delays or Behavioral Problems* and *Developmental Delays (diagnosis)* address key aspects of child development. In compiling and prioritizing the list of conditions and risks, the Committee considered the following factors: children are developing (i.e., healthy development and risks, lifelong impact), dependent, disproportionately racially and ethnically diverse, and have varied and often delayed diagnoses.
Additional Sub-domains for Consideration Several commenters proposed adding a social determinants sub-domain to the list of child health measure gaps. These commenters recognized the importance of social determinants in child health and noted its inclusion in the population health measure gap list.	While the Committee did not include social determinants as a separate sub-domain within the child health measure gaps list, it did consider the following factors: children are dependent and disproportionately racially and ethnically diverse. The Committee considered adding various population health-specific sub-domains to child health. However, the Committee chose not to do because of the separate consideration of the population health topic.

NQF Member and Public Comments	Response
Population Health Comments	
Additional Domains/Sub-domains for Consideration One commenter proposed adding the sub-domain of *Obesity* or *Weight Management* under the domain of *Lifestyle Behaviors* in the list of population health measure gaps.	The domain *Lifestyle Behaviors*, in the list of population health measure gaps, includes the sub-domains of *Physical Activity* and *Diet*. Both of these sub-domains focus on behaviors that address the risk factor of *Obesity* and *Weight Management*.
Definition of Social Determinants One commenter suggested that the Committee further define the sub-domain *Social Determinants* within the domain *Other Factors for a Community Health Index* in the list of population health measure gaps. The commenter suggested the sub-domain also include access to jobs, education, housing, density, and social infrastructure.	The Committee discussed the meaning of certain domains and sub domains but did not identify definitions.

Appendix C: Environmental Scan of Pipeline Measures

January 11, 2011

Table of Contents

Overview and Purpose

NQF National Quality Forum

- **Environmental Scan:** As part of the HHS Task 6.2 Measure Development and Endorsement Agenda Project, Booz Allen Hamilton (BAH) conducted an environmental scan to identify pipeline measures.
- **Pipeline measures** are defined as performance measures that meet the following criteria:
  - Include measure specifications
  - Are currently undergoing or have completed testing
  - Have not been submitted to NQF for endorsement

Methodology

NQF National Quality Forum

- **Step 1:** Pipeline Measure Identification
- **Step 2:** Pipeline Measure Classification
  - Consolidated List of Gap Domains and Sub-Domains
  - Systematic Review and Application of Decision Rules

Methodology: Pipeline Measure Identification

NQF National Quality Forum

- **Sources:** The environmental scan was conducted using two principal sources:
  - Interviews of measure developers (see appendix for a list of participating measure developers as well as additional detail regarding the interviews)
  - Searches of measure developers' websites
- **List of Search Terms:** Prior to beginning work, the BAH team worked with NQF to develop a list of key search terms, which included definitions of the National Priorities Partnership (NPP) priority areas and other measure categories and terms used.
- **Priorities:** The environmental scan focused on pipeline performance measures related to the NPP Priorities and Child Health. For the purposes of this analysis, the priority areas included:
  - Patient and Family Engagement
  - Population Health
  - Safety
  - Care Coordination
  - Palliative and End-of-Life Care
  - Overuse
  - Child Health

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Methodology: Pipeline Measure Classification

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Consolidated List of Measure Gap Domains and Sub-Domains

- **Classification:** Identified measures were classified using the consolidated list of measure gap domains and measure gap sub-domains (as shown in the next slide)
- **Consolidated list:** The consolidated list was constructed based on the Measure Prioritization Advisory Committee's prioritization of:
  - Medicare conditions as well as Medicare measure gap domains and sub-domains;
  - Child health conditions and risks as well as child health measure gap domains and sub-domains; and
  - Population health measure gap domains and sub-domains.

Note: The list of priorities was used to identify pipeline measures. However, as the project evolved, Committee members proposed classifying the pipeline measures using the consolidated list of gap domains and sub-domains.

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Methodology: Pipeline Measure Classification

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Consolidated List of Measure Gap Domains and Sub-Domains

The Measure Prioritization Advisory Committee, as part of the Measure Development and Endorsement Agenda Project, identified and prioritized the consolidated list of measure gap domains (right) and sub-domains (below).

Measure Gap Domains
Resource Use / Overuse
Care Coordination & Management
Health Status
Safety Processes & Outcomes
Patient & Family Engagement
System Infrastructure Supports
Population Health
Palliative Care

Domain 1: Care Coordination & Management
Communication
Medication Management (Appropriateness, Adherence)
Transitions
Having a Medical or Health Home
Appropriate and Timely Follow-up
Effective Care Plans
Help Coordinating Care
Domain 2: Systems Infrastructure Supports
System Capacity & HIT
Patient/Family Centered Systems of Care
Research, Quality Improvement, and Knowledge Dissemination
Workforce Development
Performance Measurement

Domain 3: Health Status
Function, Symptoms, and Quality of Life
Productivity
Well Being
Burden of Illness
Mortality/Length of Life
Domain 4: Palliative Care
Advance Preparations Defined and Honored
Pain Management and Symptom Relief
Access to Supportive Services
Access to Spiritual, Cultural, and Psychological Needs
Caregiver/Family Burden
Domain 5: Patient & Family Engagement
Shared Decision Making
Self-Management
Experience

Domain 6: Population Health
Effective Preventive Services
Healthy Lifestyle Behaviors
Population Health Outcomes
Community Index
Environmental Factors
Social Determinants
Domain 7: Resource Use/Overuse
Appropriateness/Efficiency
Direct Cost
Indirect Cost
Domain 8: Safety Processes & Outcomes
Prevention of Adverse Events
Medication Safety
Ambulatory Setting
Standardized HAI

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Methodology: Pipeline Measure Classification

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Systematic Review and Application of Decision Rules

- **Codebook of Decision Rules:** NQF staff completed a systematic review of the classification of pipeline measures using a codebook of decision rules to verify classification of the pipeline measures to the priorities, domains, and sub-domains.

- **Key Classification Rules:** Each measure was classified according to:
  - All applicable priority areas
  - Up to 2 domains which most closely aligned with the subject and purpose of the measure across 8 total domains
  - Up to 2 sub-domains which most closely aligned with the subject and purpose of the measure across 38 total sub-domains

- **International Measures:** 189 measures were from international sources. Analysis of these measures is presented in the Appendix.

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Environmental Scan: Findings and Themes

Pipeline Measures by Priority Area

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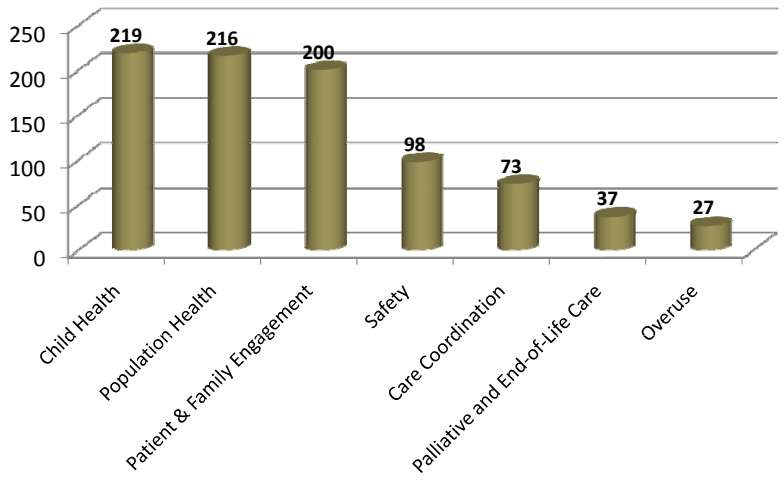

Note: n= 653 measures
Each measure was classified in all applicable priority areas. Only U.S. measures are included in this analysis.

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Pipeline Measures by Gap Domain

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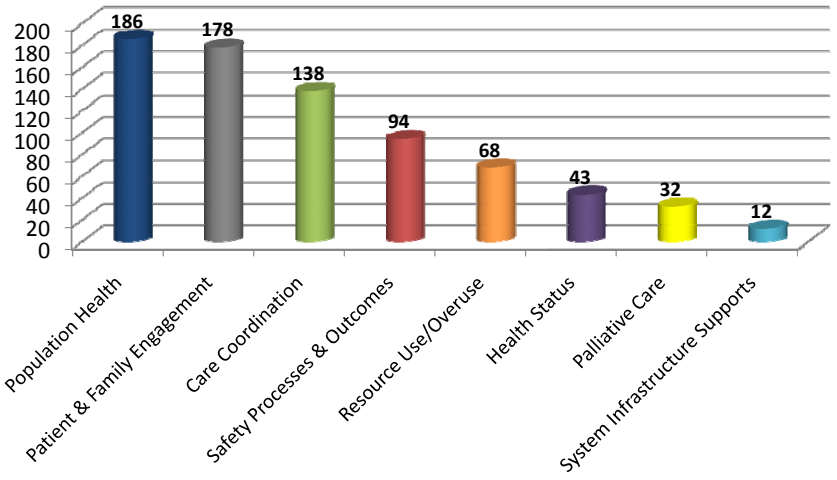

Note: n=653 measures
Each measure was classified in up to 2 domains which most closely aligned with the subject and purpose of the measure. Only U.S. measures are included in this analysis.

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Pipeline Measures by Gap Sub-Domain

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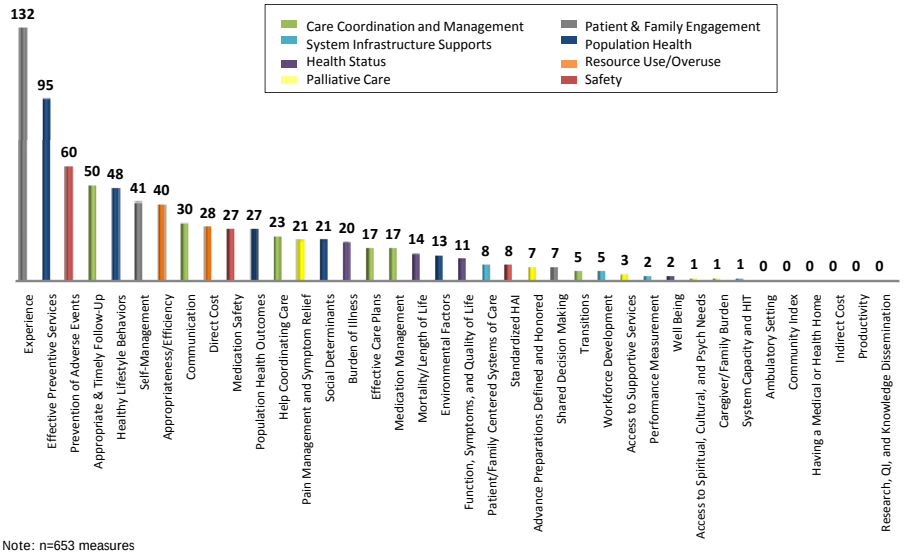

Note: n=653 measures
Each measure was classified in up to 2 sub-domains which most closely aligned with the subject and purpose of the measure. Only U.S. measures are included in this analysis.

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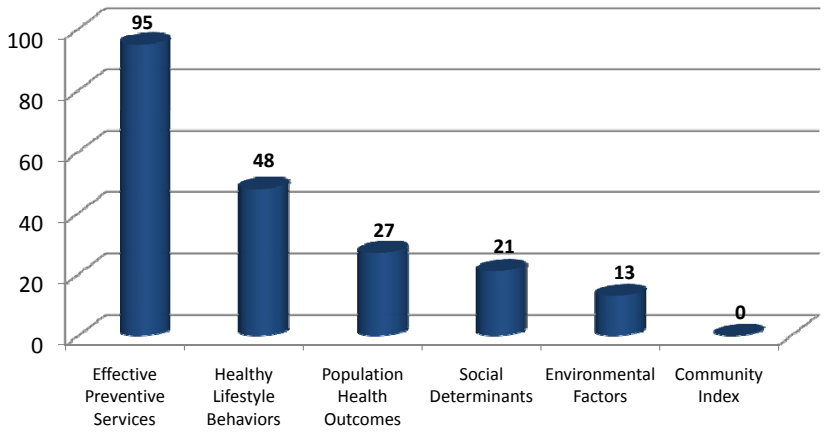
Population Health: Breakdown by Sub-Domains



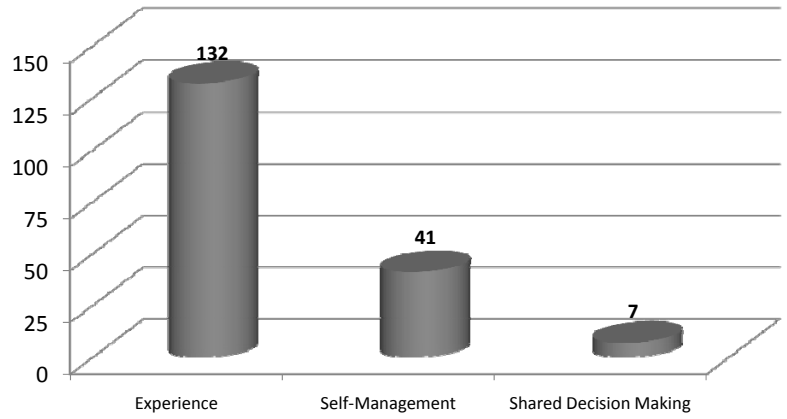
Note: n=186 measures. Each measure was classified in up to 2 sub-domains which most closely aligned with the subject and purpose of the measure; 18 *Population Health* measures were classified in 2 *Population Health* sub-domains. Only U.S. measures are included in this analysis. *Effective Preventive Services* includes Cardiovascular Disease Prevention, Early and Continuous Screening, Child and Adolescent Health, Cancer Prevention, Injury Prevention, Vaccine-Preventable Illness. *Healthy Lifestyle Behaviors* includes Physical Activity, Diet, Smoking, Risky Alcohol Use, Health Promotion.

Themes: Population Health

- **Wide Range of measure developers:** 24 measure developers contributed measures that applied to this domain, including government agencies, health plans, and professional associations.
- **Preventive services:** The measures in the *Effective Preventive Services* sub-domain largely focused on immunizations and screening for diseases and conditions at clinically appropriate times.
- **Lifestyle behaviors:** Measures of *Healthy Lifestyle Behaviors* address risk factors including tobacco use* (20), alcohol use (8), body weight (7), lack of physical activity (5), diet (4), drug use (3)*, and unsafe sexual practices (2).

*One measure addresses two risk factors: tobacco use and drug use.

Patient & Family Engagement: Breakdown by Sub-Domains



Note: n=178 measures. Each measure was classified in up to 2 sub-domains which most closely aligned with the subject and purpose of the measure; 2 *Patient and Family Engagement* measures were classified in 2 *Patient and Family Engagement* sub-domains. Only U.S. measures are included in this analysis. *Self-Management* includes Activation and Consumer Empowerment. *Shared Decision Making* includes Bridge Gap Between Expert and Public Knowledge and Patient Communication and Knowledge Regarding Consent & Safety. *Experience* includes Satisfaction, Health Literacy, and Communication, Respect and Cultural Sensitivity.

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Themes: Patient & Family Engagement

- **Patient experience:** A majority of measures in this domain are measures of patient experience (132/178).
- **NYSDOH AIDS Institute**: Nearly half of the measures in this domain (85/178) were developed by the New York State Department of Health AIDS Institute to assess specific components of HIV-positive adult and adolescent patients' engagement and experience with care.
- **CAHPS:** Almost a quarter of the measures in this domain (44/178) are patient-reported assessments of experience with care, originating from various versions of the Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey.
- **Patient Self-Management:** Within the *Self-Management* sub-domain, measures tended to assess the delivery of information and counseling to patients to help them self-manage chronic conditions.

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Care Coordination and Management: Breakdown by Sub-Domains

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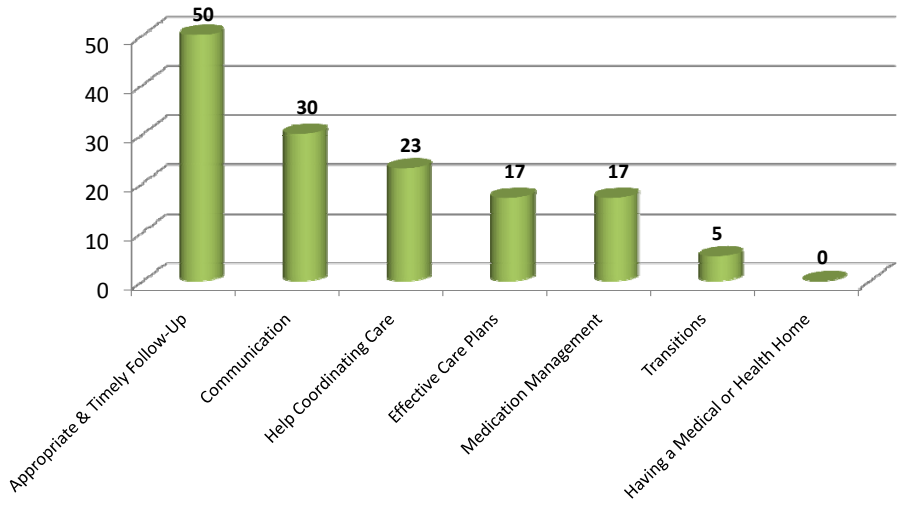

Note: n=138 measures. Each measure was classified in up to 2 sub-domains which most closely aligned with the subject and purpose of the measure; 4 *Care Coordination* measures were classified in 2 *Care Coordination* sub-domains. Only U.S. measures are included in this analysis. *Transitions* includes Accountability and Success/Failure Rates.

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Themes: Care Coordination and Management

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- **CAHPS Survey:** Several measures in this domain are patient-reported assessments of experience with care and care coordination. Many are from various versions of the Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey.
- **NYSDOH AIDS Institute:** Nearly a third of the measures in this domain (42/138) were developed by the New York State Department of Health AIDS Institute to assess specific components of care coordination for HIV-positive adult and adolescent patients.
- **Transitions:** The *Transitions* sub-domain includes several measures of unplanned readmission rates for patients with conditions that need support during discharge or transfer (e.g., asthma).

C-18

Patient Safety Processes and Outcomes: Breakdown by Sub-Domains

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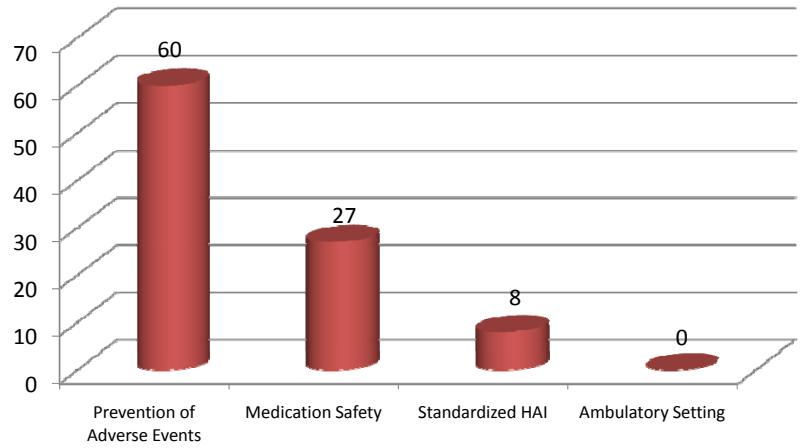

Note: n=94 measures. Each measure was classified in up to 2 sub-domains which most closely aligned with the subject and purpose of the measure; 1 *Patient Safety* measure was classified in 2 *Patient Safety* sub-domains. Only U.S. measures are included in this analysis.

C-19

Themes: Patient Safety Processes and Outcomes

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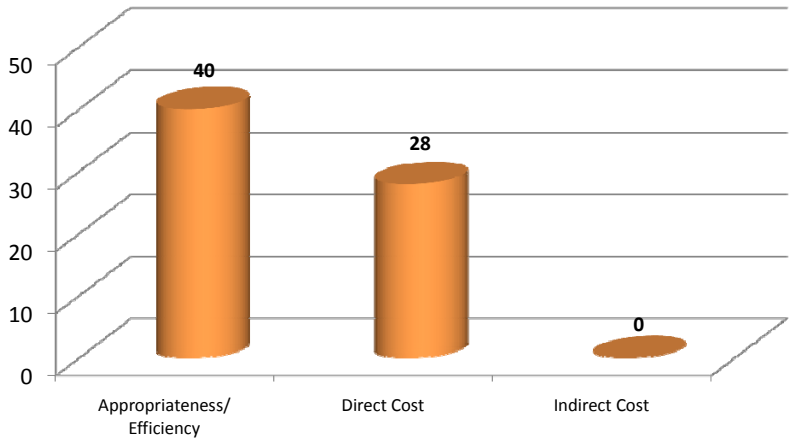
- **Adverse events:** The measures in the *Prevention of Adverse Events* sub-domain largely focus on processes or protocols aimed at preventing errors and adverse events (e.g. iatrogenic pneumothorax, transfusion reaction, pressure ulcer development).

- **Healthcare Associated Infections:** A majority of the *Standardized HAI* sub-domain is comprised of outcome measures of rates of sepsis and/or healthcare associated infections.

C-20

Resource Use / Overuse: Breakdown by Sub-Domains



Note: n=68 measures. Only U.S. measures are included in this analysis. *Direct Cost* includes Overuse of Procedures and Surgery, Medication Overuse, Avoidable ED and Hospital Readmission, Duplicate Testing.

C-21

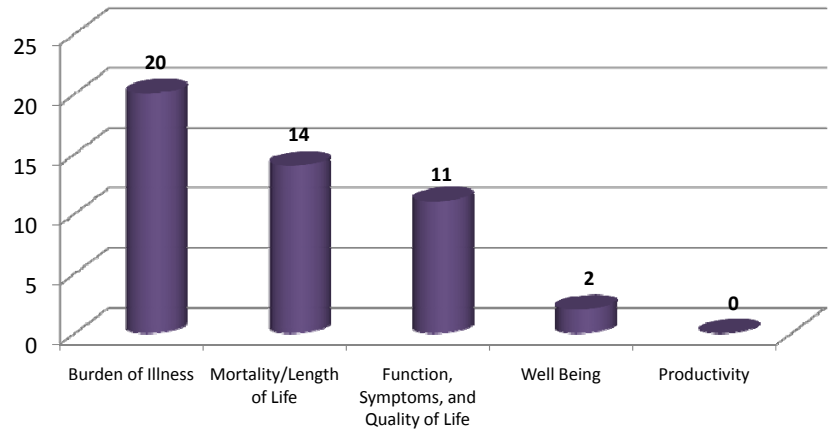
Themes: Resource Use / Overuse

- **Direct cost:** More than three-quarters of the *Direct Cost* sub-domain (22/28) is comprised of measures from The American Board of Medical Specialties Research and Education Foundation and assess specific episodes of care (e.g. hospitalization for community-acquired pneumonia, 12 months of GERD treatment).

- **Clinical Effectiveness:** Measures within the *Appropriateness/Efficiency* sub-domain were largely comprised of rates of procedures or therapies and measures of adherence to clinical practice guidelines.

C-22

Health Status: Breakdown by Sub-Domains



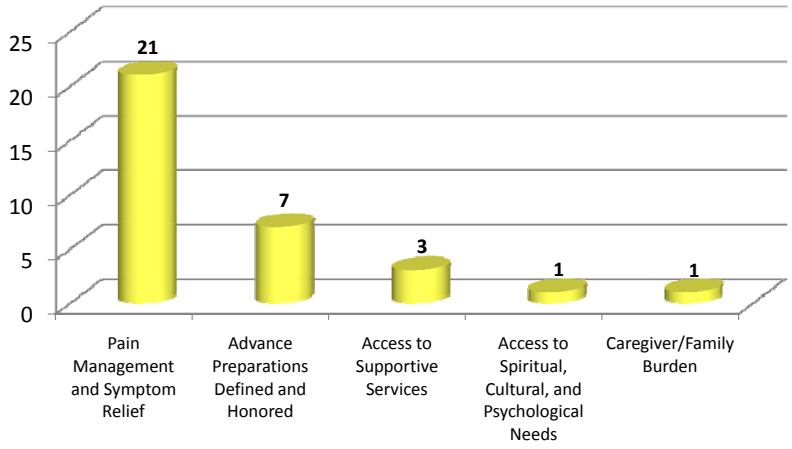
Note: n=43 measures. Each measure was classified in up to 2 sub-domains which most closely aligned with the subject and purpose of the measure; 4 *Health Status* measures were classified in 2 *Health Status* sub-domains. Only U.S. measures are included in this analysis. The original request for pipeline measures did not include the domain of *Health Status*; this may account for the low number of measures within this domain.

Themes: Health Status

Population Surveys and Analyses: More than half of the measures in this domain originated from large-scale population surveys and analyses (25/43), including:

- America's Health Rankings (4)
- CDC's Behavioral Risk Factor Surveillance System (12) and
- The State of the USA (9)

Palliative Care: Breakdown by Sub-Domains



Note: n=32 measures. Each measure was classified in up to 2 sub-domains which most closely aligned with the subject and purpose of the measure; 1 *Palliative Care* measure was classified in 2 *Palliative Care* sub-domains. Only U.S. measures are included in this analysis.

C-25

Themes: Palliative Care

- **AMDA:** More than half of the measures in this domain (19/32) are from The American Medical Directors Association (AMDA), which represents long-term care providers.
- **Hospital ICU:** 5 measures in this domain are specified for use in a hospital ICU:
  - 3 measures applied to the sub-domain *Advance Preparations Defined and Honored*, and were related to the documentation of advance directives, health care proxies, and resuscitation status.
  - 2 measures applied to *Pain Management and Symptom Relief*.

C-26

System Infrastructure Supports: Breakdown by Sub-Domains

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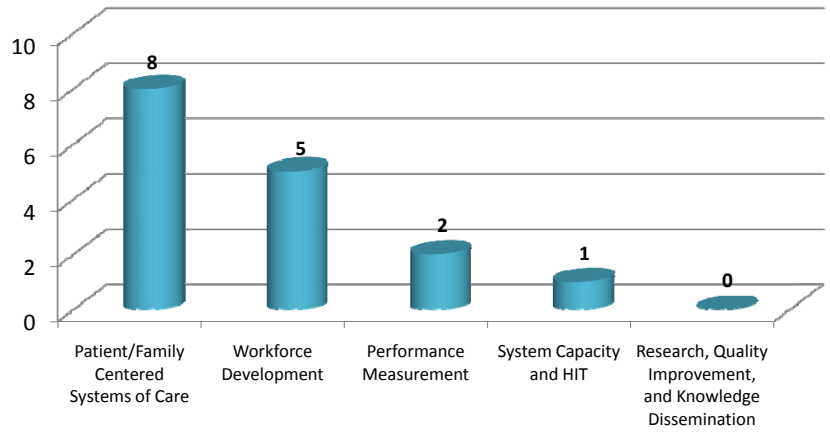

Note: n=12 measures. Each measure was classified in up to 2 sub-domains which most closely aligned with the subject and purpose of the measure; 4 *System Infrastructure Supports* measures were classified in 2 *System Infrastructure Supports* sub-domains. Only U.S. measures are included in this analysis. The original request for pipeline measures did not include the domain of *System Infrastructure Supports*. This may account for the low number of measures within this domain.

C-27

Themes: System Infrastructure Supports

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- **Competency Assessment Instrument (CAI):** CAI measures comprise more than half of the measures (7/12) in this domain. The CAI assesses 15 competencies (e.g. skill advocacy) needed to provide quality care for individuals with severe and persistent mental illness.
- **Public Health Infrastructure:** Included in this domain is a measure from America's Health Rankings of the annual investment in public health programs to monitor and improve population health.

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Additional Information

C-29

Methodology: Measure Developer Interviews

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- **Initial list of measure developers:** Prior to beginning the measure developer interviews, NQF and the BAH team developed the list of stakeholders to contact based on NQF's list of measure developers.
- **Initial Contact with more than 100 measure developers:** An initial e-mail was sent to more than 100 measure developers briefly describing the project, the information we wanted to gather, and requesting an interview. A follow up email was sent to non-responders one week later.
- **Priority Area Definitions:** A list of priority area definitions was sent with a meeting invitation to help interviewees think about their measurement using a similar framework to that used by the team.
- **Interviews:** Interviews were scheduled for 30 minutes; actual interviews lasted from 15 minutes to 30 minutes. Of the 112 measure developers contacted:
  - 33 interviews were conducted;
  - 51 developers did not respond;
  - 21 reported they do not develop measures;
  - 1 declined an interview but provided measures, and
  - 6 declined to participate.

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Participating Measure Developers

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Interviewed

- 3M Health Information Systems
- Agency for Healthcare Research and Quality (AHRQ)
- American Academy of Audiology
- American Academy of Dermatology
- American Academy of Neurology
- American Academy of Ophthalmology
- American Board of Internal Medicine
- American Board of Medical Specialties
- American College of Cardiology/American Hospital Association Task Force on Performance Measures
- American College of Emergency Physicians
- American College of Radiology
- American Medical Association (AMA)
- American Nurses Association
- Association of State and Territorial Health Organizations
- California Material Quality Care Collaborative
- Centers for Disease Control and Prevention (CDC)
- Centers for Medicare and Medicaid Services (CMS)
- Child and Adolescent Health Measurement Initiative (CAHMI)
- The Dartmouth Institute for Health Policy and Clinical Practice
- HealthPartners
- Hospital Corporation of America
- The Joint Commission
- Kaiser Permanente
- Mathematica Policy Research
- Minnesota Community Measurement
- National Committee for Quality Assurance (NCQA)
- New York State Department of Health
- Oklahoma Foundation for Medical Quality
- Society for Vascular Surgery
- Society of Critical Care Medicine
- Society of Thoracic Surgeons
- University of Wisconsin, Population Health Institute
- VHA, Inc.

No Interview But Provided Measures

- American College of Rheumatology

Other Organizations Contacted

- 21 organizations indicated that they do not develop measures
- 51 organizations did not respond
- 6 organizations declined to participate

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U.S. and International Pipeline Measures by Priority Area

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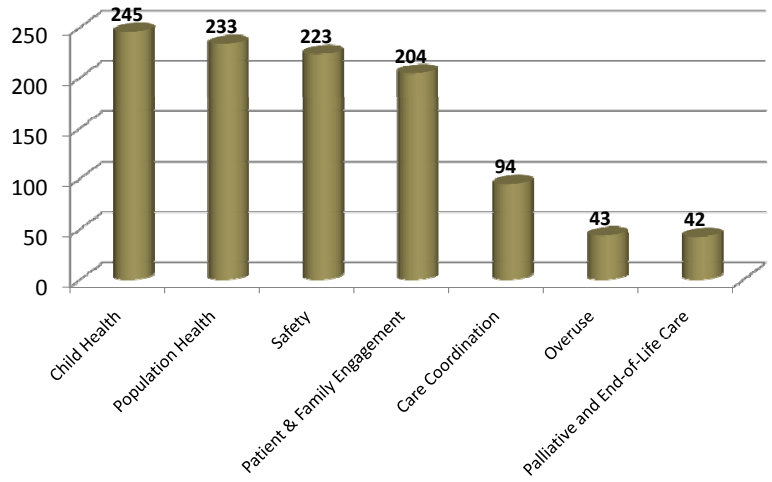

Note: n=842, includes 653 US measures and 189 International measures
Each measure was classified in all applicable priority areas.

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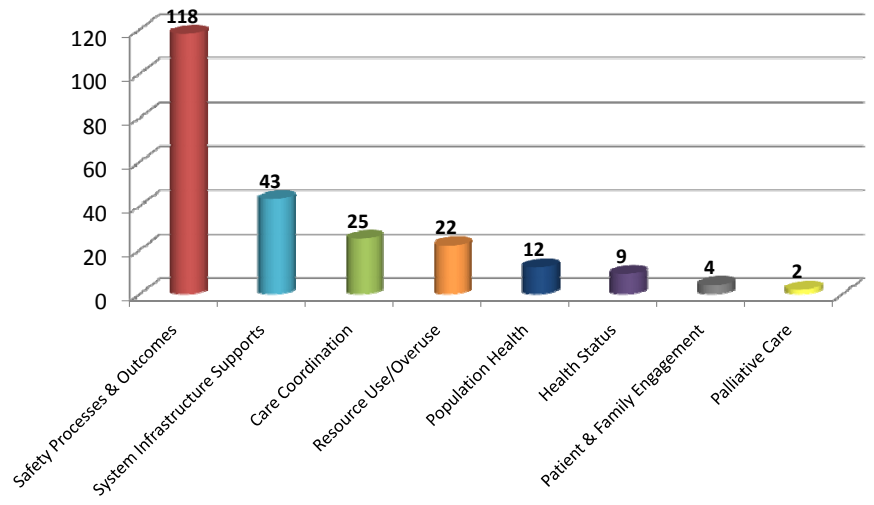
International Pipeline Measures by Gap Domain

NQF National Quality Forum



Note: n=189 measures
Each measure was classified in up to 2 sub-domains which most closely aligned with the subject and purpose of the measure.

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US and International Pipeline Measures by Gap Sub-Domain

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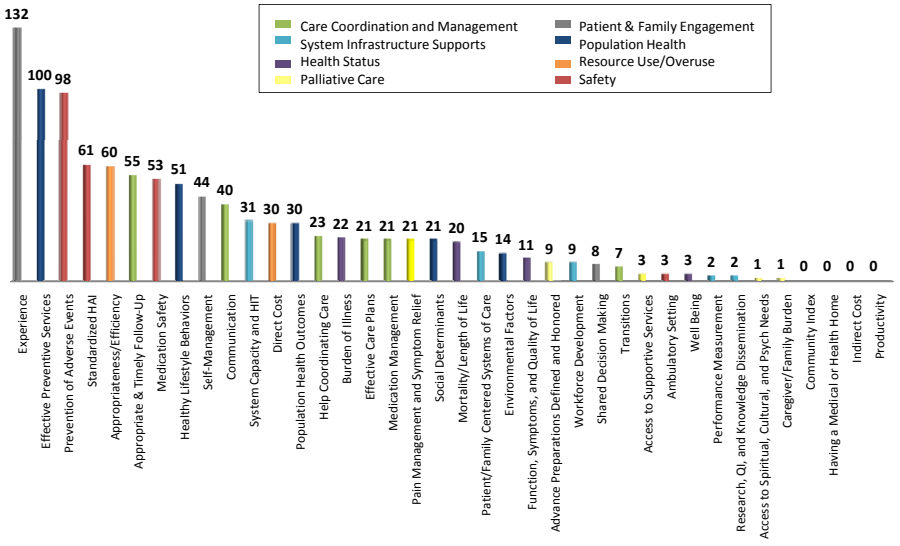

Note: n=842 measures, includes 189 international measures
Each measure was classified in up to 2 sub-domains which most closely aligned with the subject and purpose of the measure.

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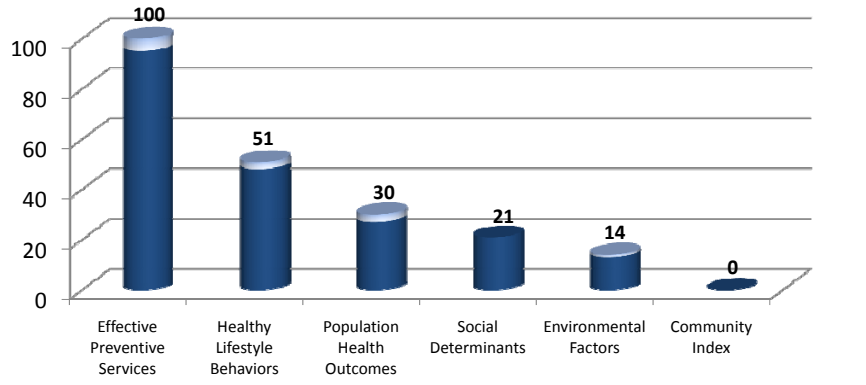
Population Health: Breakdown by Sub-Domains

NQF National Quality Forum



Note: n=198, includes 186 US measures and 12 International measures; Each measure was classified in up to 2 sub-domains which most closely aligned with the subject and purpose of the measure; 18 US *Population Health* measures were classified in 2 *Population Health* sub-domains. *Effective Preventive Services* includes Cardiovascular Disease Prevention, Early and Continuous Screening, Child and Adolescent Health, Cancer Prevention, Injury Prevention, Vaccine-Preventable Illness. *Healthy Lifestyle Behaviors* includes Physical Activity, Diet, Smoking, Risky Alcohol Use, Health Promotion.

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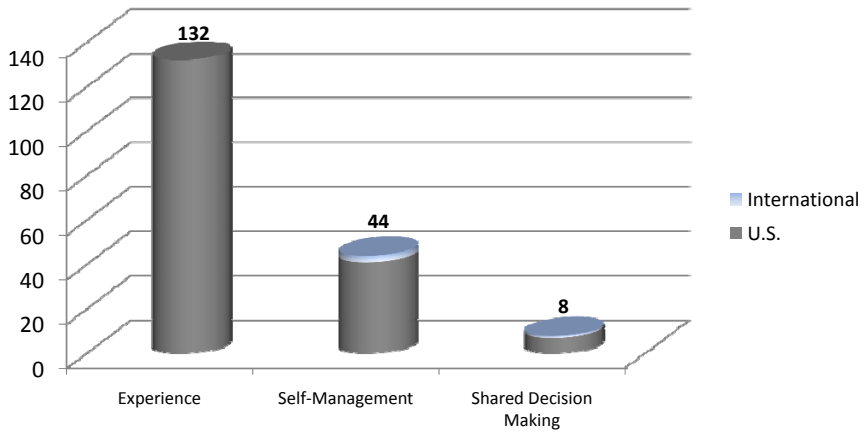
Patient & Family Engagement: Breakdown by Sub-Domains

NQF National Quality Forum



Note: n=182, includes 178 US measures and 4 International measures; Each measure was classified in up to 2 sub-domains which most closely aligned with the subject and purpose of the measure; 2 US *Patient and Family Engagement* measures were classified in 2 *Patient and Family Engagement* sub-domains. *Self-Management* includes Activation and Consumer Empowerment. *Shared Decision Making* includes Bridge Gap Between Expert and Public Knowledge and Patient Communication and Knowledge Regarding Consent & Safety. *Experience* includes Satisfaction, Health Literacy, and Communication, Respect and Cultural Sensitivity.

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Care Coordination and Management: Breakdown by Sub-Domains

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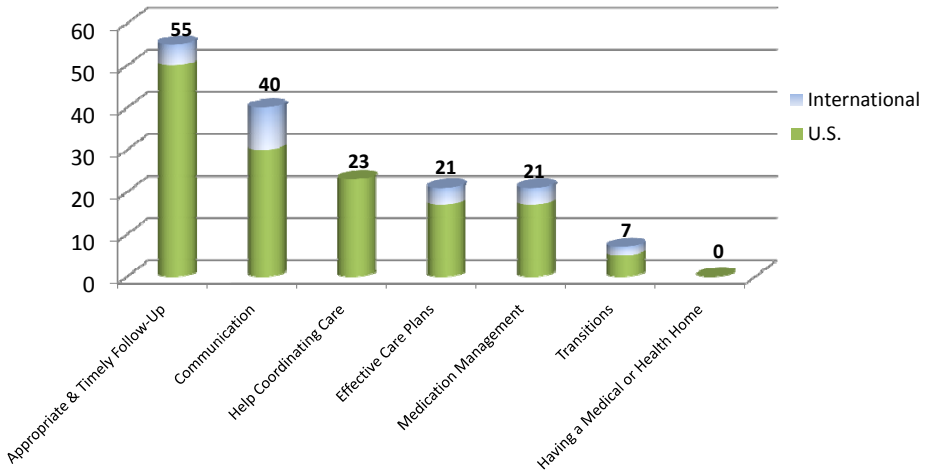

Note: n=163, includes 138 US measures and 25 International measures; Each measure was classified in up to 2 sub-domains which most closely aligned with the subject and purpose of the measure; 4 US *Care Coordination* measures were classified in 2 *Care Coordination* sub-domains. *Transitions* includes Accountability and Success/Failure Rates.

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Patient Safety Processes and Outcomes: Breakdown by Sub-Domains

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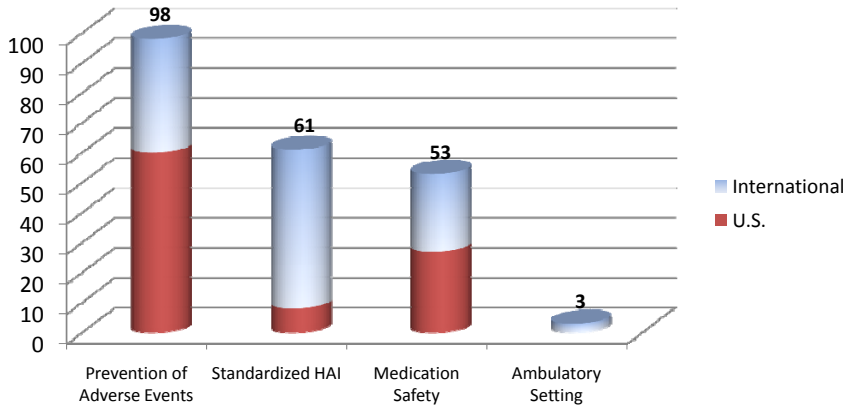

Note: n=212, includes 94 US measures and 118 International measures; Each measure was classified in up to 2 sub-domains which most closely aligned with the subject and purpose of the measure; 1 US and 2 International *Patient Safety* measures were classified in 2 *Patient Safety* sub-domains.

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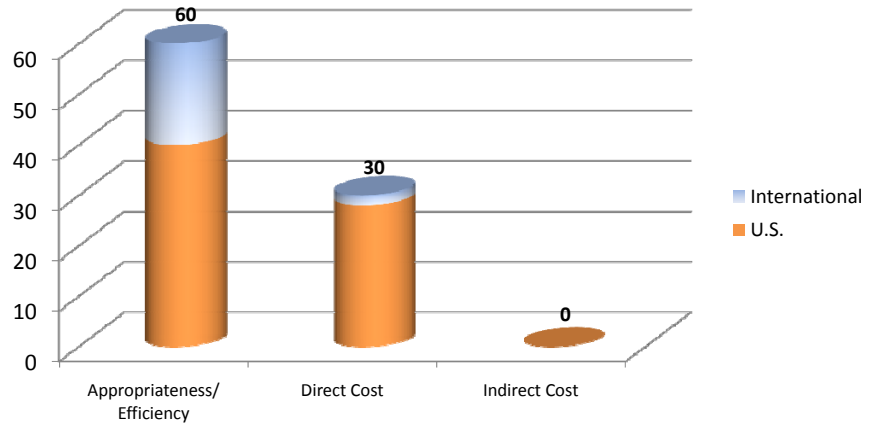
Resource Use / Overuse: Breakdown by Sub-Domains

NQF National Quality Forum



Note: n=90, includes 68 US measures and 22 International measures
Direct Cost includes Overuse of Procedures and Surgery, Medication Overuse, Avoidable ED and Hospital Readmission, Duplicate Testing.

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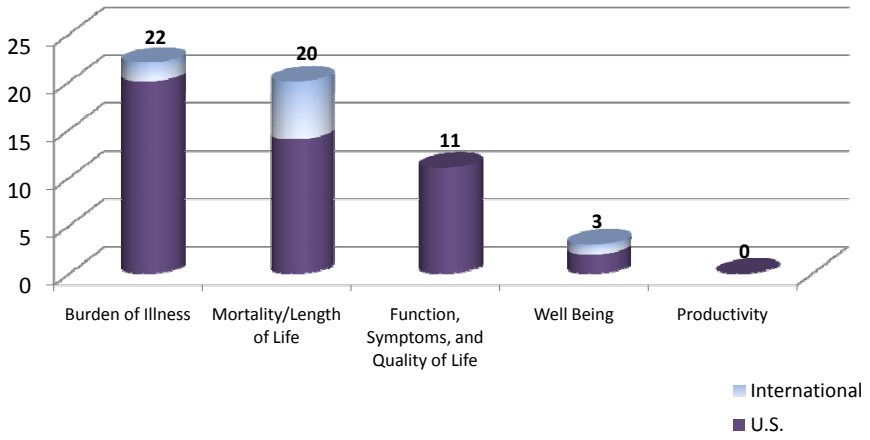
Health Status: Breakdown by Sub-Domains

NQF National Quality Forum



Note: n=52, includes 43 US measures and 9 International measures; Each measure was classified in up to 2 sub-domains which most closely aligned with the subject and purpose of the measure; 4 US *Health Status* measures were classified in 2 *Health Status* sub-domains. The original request for pipeline measures did not include the domain of *Health Status*. This may account for the low number of measures within this domain.

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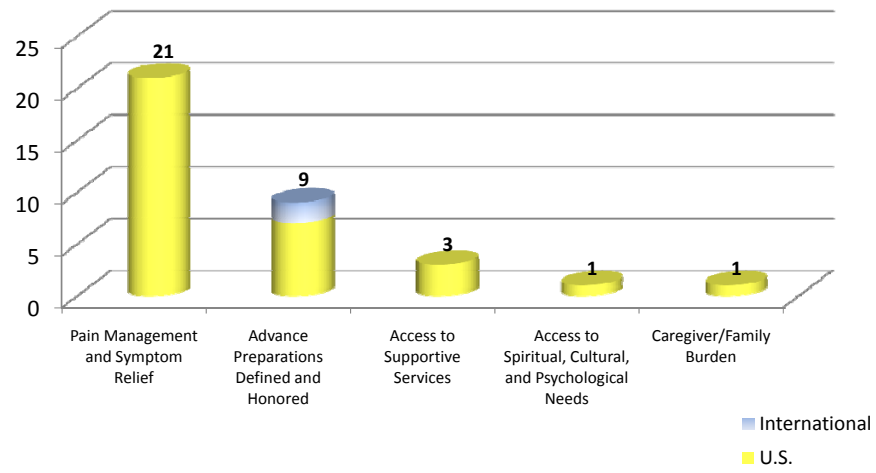
Palliative Care: Breakdown by Sub-Domains



Note: n=34, includes 32 US measures and 2 International measures; Each measure was classified in up to 2 sub-domains which most closely aligned with the subject and purpose of the measure; 1 US *Palliative Care* measure was classified in 2 *Palliative Care* sub-domains.

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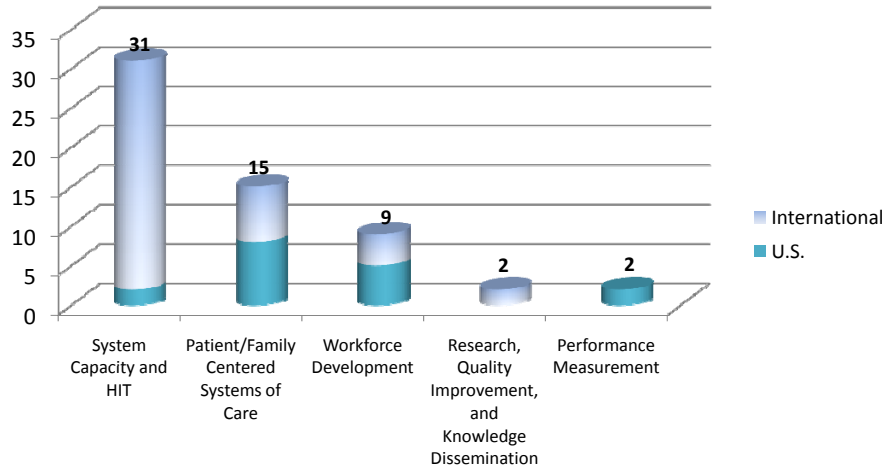
System Infrastructure Supports: Breakdown by Sub-Domains



Note: n=55, includes 12 US measures and 43 International measures. Each measure was classified in up to 2 sub-domains which most closely aligned with the subject and purpose of the measure; 4 US *System Infrastructure Supports* measures were classified in 2 *System Infrastructure Supports* sub-domains.
The original request for pipeline measures did not include the domain of *System Infrastructure Supports*. This may account for the low number of measures within this domain.

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U.S. and International Measure Counts

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Domain	Sub-Domain	U.S. Measures with Overlap	International Measures with Overlap	Total Measures with Overlap	# of Overlapping US Measures	# of Overlapping International Measures	Total Measures (n)
Population Health	Effective Preventive Services	95	5	100	18	0	198
	Healthy Lifestyle Behaviors	48	3	51			
	Population Health Outcomes	27	3	30			
	Social Determinants	21	0	21			
	Environmental Factors	13	1	14			
	Community Index	0	0	0			
Patient & Family Engagement	Experience	132	0	132	2	0	182
	Self-Management	41	3	44			
	Shared Decision Making	7	1	8			
Care Coordination & Management	Appropriate & Timely Follow-Up	50	5	55	4	0	163
	Communication	30	10	40			
	Help Coordinating Care	23	0	23			
	Effective Care Plans	17	4	21			
	Medication Management	17	4	21			
	Transitions	5	2	7			
	Having a Medical or Health Home	0	0	0			

Note: Each measure was classified in up to 2 sub-domains which most closely aligned with the subject and purpose of the measure.

U.S. and International Measure Counts (Continued)

NQF National Quality Forum

Domain	Sub-Domain	U.S. Measures with Overlap	International Measures with Overlap	Total Measures with Overlap	# of Overlapping US Measures	# of Overlapping International Measures	Total Measures (n)
Safety Processes & Outcomes	Prevention of Adverse Events	60	38	98	1	2	212
	Standardized HAI	8	53	61			
	Medication Safety	27	26	53			
	Ambulatory Setting	0	3	3			
Resource Use/ Overuse	Appropriateness/Efficiency	40	20	60	0	0	90
	Direct Cost	28	2	30			
	Indirect Cost	0	0	0			
Health Status	Burden of Illness	20	2	22	4	0	52
	Mortality/Length of Life	14	6	20			
	Function, Symptoms, and Quality of Life	11	0	11			
	Well Being	2	1	3			
	Productivity	0	0	0			

Note: Each measure was classified in up to 2 sub-domains which most closely aligned with the subject and purpose of the measure.

U.S. and International Measure Counts (Continued)

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Domain	Sub-Domain	U.S. Measures with Overlap	International Measures with Overlap	Total Measures with Overlap	# of Overlapping US Measures	# of Overlapping International Measures	Total Measures (n)
Palliative Care	Pain Management and Symptom Relief	21	0	21	1	0	34
	Advance Preparations Defined and Honored	7	2	9			
	Access to Supportive Services	3	0	3			
	Access to Spiritual, Cultural, and Psychological Needs	1	0	1			
	Caregiver/Family Burden	1	0	1			
System Infrastructure Supports	System Capacity and HIT	1	30	31	4	0	55
	Patient/Family Centered Systems of Care	8	7	15			
	Workforce Development	5	4	9			
	Performance Measurement	2	0	2			
	Research, Quality Improvement, and Knowledge Dissemination	0	2	2			

Note: Each measure was classified in up to 2 sub-domains which most closely aligned with the subject and purpose of the measure.

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