NATIONAL QUALITY FORUM

TO: NQF Members and Public

FR: NQF Staff

RE: Review draft of *National Voluntary Consensus Standards for Patient Outcomes: A Gaps in NQF-Endorsed Outcomes Measures Report*

DA: September 22, 2010

In 2010 the multi-phase Patient Outcomes project evaluated outcomes measures in a variety of areas. The Steering Committees 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, the Department of Health and Human Services requested an analysis of important gap areas in outcomes measures to inform measure development activities within the federal government. This analysis provides guidance to the measure developer community and the quality measurement enterprise to fill critical measure gaps and result in a portfolio of endorsed measures useful for providers, consumers, policymakers, and other stakeholders.

The draft document, *National Voluntary Consensus Standards for Patient Outcomes: A Gaps in NQF-Endorsed Outcomes Measures Report* is posted on the NQF website.

Pursuant to section II.A of the Consensus Development Process v. 1.8, this draft document is being provided to you at this time for purposes of review and comment only—not voting. You may post your comments and view the comments of others on the NQF website.

NQF Member comments must be submitted no later than 6:00 pm ET, October 21, 2010.
Public comments must be submitted no later than 6:00 pm ET, October 14, 2010.

NQF is now using a program that facilitates electronic submission of comments on this draft report. **All comments must be submitted using the online submission process.**

Supporting documents related to your comments may be submitted by **e-mail** to outcomes@qualityforum.org, with "*Comment—Patient Outcomes: Gaps Report*" in the subject line and your contact information in the body of the e-mail.

Thank you for your interest in NQF's work. We look forward to your review and comments.

NATIONAL QUALITY FORUM

NATIONAL VOLUNTARY CONSENSUS STANDARDS FOR PATIENT OUTCOMES: A GAPS IN NQF-ENDORSED® OUTCOMES MEASURES REPORT

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GAPS IN NQF-ENDORSED OUTCOMES MEASURES

INTRODUCTION

As part of the Patient Outcomes project, the Department of Health and Human Services requested an analysis of important gap areas in outcomes measures to inform measure development activities within the federal government. This analysis provides guidance to the measure developer community and the quality measurement enterprise to fill critical measure gaps and result in a portfolio of endorsed measures useful for providers, consumers, policymakers, and other stakeholders.

The NQF portfolio of endorsed consensus standards contains a substantial number of outcomes measures; however, stakeholders have identified additional important patient outcomes that are not addressed by current measurement, such as functional status and quality of life. Outcomes measures are inherently important to all stakeholders because such measures describe what happened over a course of care—the outcome. Outcomes measures reflect the combined efforts of providers, practitioners, and patients and the effectiveness of the care plan. During the discussions of NQF's three Patient Outcomes Steering Committees, the absence of important and needed outcomes measures was identified. This report outlines a framework for outcomes measurement and recommendations to fill the gaps.

TYPES OF OUTCOMES MEASURES

The Steering Committees of the Patient Outcomes project have identified various categories of outcomes measures that provide a basic framework for outcomes measurement:

- patient function, symptom management, health-related quality of life (physical, mental social);
- intermediate clinical outcomes (physiologic, biochemical);
- patient experience with care; patient knowledge, health literacy, language barriers, understanding, motivation; health risk status or behaviors (including adherence to medications or attendance to health care visits and procedures);

- service utilization as a proxy for patient outcome (e.g., change in condition) or as a potential indicator of efficiency;
- nonmortality clinical morbidity related to disease control and treatment, such as inability to do usual activities from poorly controlled asthma;
- healthcare-acquired adverse event or complication (nonmortality);
- end-of-life care; and
- mortality.

A review of the currently endorsed outcome consensus standards (Appendix A) reveals a focus on some categories such as mortality measures, intermediate clinical outcomes measures, and adverse outcomes. Very few outcomes measures have been endorsed in the categories of patient function, symptom management, health-related quality of life, risk factor modification, lifestyle optimization, or end-of-life care. The current portfolio emphasizes condition-specific measures rather than cross-cutting measures.

OTHER NQF ACTIVITIES IDENTIFYING GAPS IN MEASUREMENT

Other NQF activities provide additional guidance for identifying important and needed measures:

National Priorities Partnership (NPP),[1] a collaborative effort of 32 major national organizations that collectively influence every part of the healthcare system, has identified the following six Priorities as those with the greatest potential to eradicate disparities, reduce harm, and remove waste from the American healthcare system:

- **Patient and Family Engagement**—Patients who play an active role in their healthcare are critical to improved outcomes and lower costs.
- **Population Health**—Poor lifestyle choices and inconsistent use of preventive services have led to a decline in the health of many Americans. Sixty percent of American deaths are attributable to behavioral factors, social circumstances, and physical environmental exposures.

- **Safety**—Each year, 1.7 million infections occur in U.S. hospitals, accounting for nearly 99,000 associated deaths. It is estimated that preventable errors cost the United States $17-$29 billion per year in healthcare expenses, lost worker productivity, and disability.
- **Care Coordination**—A lack of care coordination leads to medical errors, higher costs, and unnecessary pain for patients and their families. Increased communication between patients and providers, stronger record keeping, and more efficient, patient-centered care can reduce harm while making healthcare more reliable and accessible.
- **Palliative and End-of-Life Care**—Unfortunately, more than one million people die each year without ever having access to hospice and palliative care services. Many of those lacking adequate access will endure prolonged and needless suffering and costly or ineffective treatments.
- **Overuse**—An estimated 30 percent of healthcare spending—$600-$700 billion—is unnecessary and wasteful. Overuse puts patients at risk, drains resources, and makes healthcare more costly, less accessible, and less effective. Beyond the negative impact of wasted resources that we can ill afford, inappropriate use can harm millions of Americans.

The Prioritization of High-Impact Medicare Conditions and Measure Gaps (May 2010) report[2] of NQF's Measure Prioritization Advisory Committee (MPAC) provides strategic guidance for a measure development and endorsement agenda to address critical measure gaps and result in a portfolio of measures useful to consumers, purchasers, providers, policymakers, and other healthcare stakeholder groups. The Committee considered the prioritization of measure gaps, including the tension between the need for condition-specific measures and those that can be applied more generally across multiple conditions. The MPAC concluded that while arguments exist for either approach in terms of specificity, utility, and actionability, a balanced approach that incorporates measure sets that are applicable across populations and supplemented with disease-specific modular components as needed may prove most useful.

As part of their work, the MPAC considered the five dimensions of cost, prevalence, variability, improvability, and disparities to prioritize the 20 high-impact Medicare conditions. Although these dimensions are critical, the MPAC actively discussed other issues such as quality of life

and opportunity cost of disease and agreed that it would be an oversight to discount the burden of illness on patients, their families and caregivers, and society. The top 10 priority gap areas identified by the MPAC are: 1) appropriateness/efficiency, 2) communication, 3) patient follow-up, 4) direct costs, 5) effective preventive services, 6) functional status, 7) medication management, 8) accountability for care coordination, 9) use of care plans, and 10) patient engagement.

The Measure Development & Endorsement Agenda Project (ongoing) focuses on establishing a working Measure Development and Endorsement Agenda. NQF again convened the MPAC to use members' expertise to build on the recently completed gap prioritization work for the top 20 Medicare conditions. The MPAC is developing a consolidated list of measure gap domains and subdomains for a measure development and endorsement agenda. The MPAC priorities for the consolidated list include child health conditions and risks as well as child health measure gap domains and subdomains, population health measure gap domains and subdomains, and Medicare conditions as well as Medicare measure gap domains and subdomains. The top 10 gap areas the MPAC identified from the consolidated list include: 1) appropriateness/efficiency; 2) shared decision making; 3) function, symptoms, and quality of life; 4) prevention of adverse events; 5) communication; 6) effective preventive services; 7) medication management (appropriateness, adherence); 8) medication safety; 9) transitions; and 10) system capacity and HIT.

PATIENT OUTCOMES PROJECT RECOMMENDATIONS

During the evaluation of candidate consensus standards, the Technical Advisory Panels (TAPs) and Steering Committees of the Patient Outcomes project identified gaps in important outcomes measures that should be developed to create a comprehensive portfolio of outcomes measures for NQF. The Committees offered several general recommendations and numerous condition-specific recommendations.

General Recommendations

Patient-Reported Outcomes

The Main Steering Committee urged greater use of the patient or family as a data source for measuring healthcare outcomes. The patient's voice is not readily captured in traditional health records and data systems, yet the beneficiary of healthcare services is often in the best position to evaluate the effectiveness of those services. The outcomes of certain services, such as pain management, can be determined only through patient reports. Also, additional research is needed on what outcomes are most important to patients.

Many patient-reported outcome (PRO) tools have been developed for use in clinical trials to test the efficacy of medications and therapeutics. The Patient-Reported Outcomes Measurement Information System (PROMIS) is a network of NIH-funded primary research sites and coordinating centers working collaboratively to develop a series of dynamic tools to measure patient-reported outcomes (PROs)[3] reliably and validly. Some of these tools, which are well tested at the individual patient level, could be further developed as performance measures.

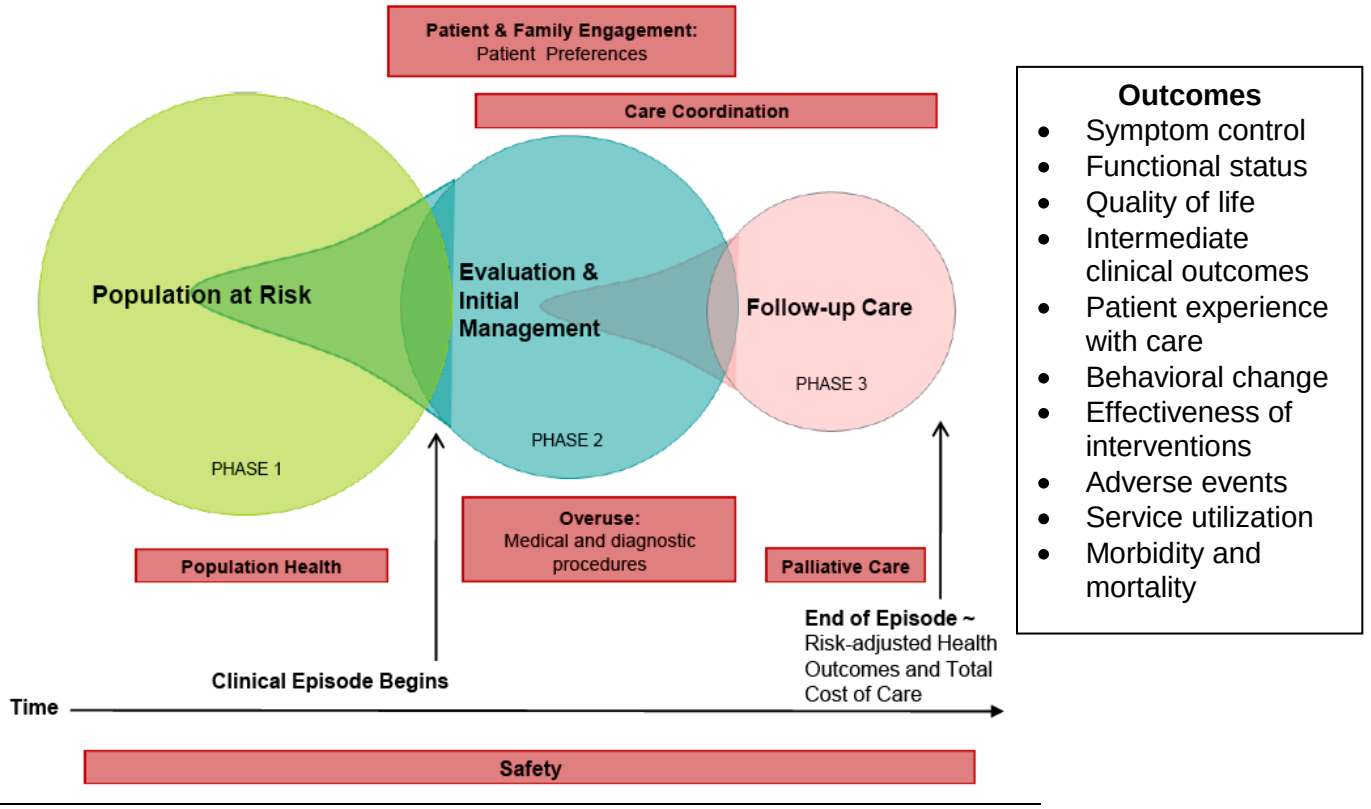
PRO tools and measurement are well positioned for incorporation into electronic health records (EHRs). Tools such as the PHQ 9 are often embedded into existing EHRs. The Quality Data Set (QDS)[4] has fields for "functional status assessment" and "health risk assessment" that capture numerical values for various tools and instruments of patient-reported data. According to NQF Senior Vice-President for Health Information Technology Floyd Eisenberg, MD, future measure re-tooling and the measure authoring tool have anticipated and are able to adapt patient-reported outcomes measures.

Patient-Focused Episodes of Care

The Steering Committees' recommendations strongly support NQF's ongoing work on patient-focused episodes of care. An episode of care is defined as "a series of temporally contiguous healthcare services related to the treatment of a given spell of illness or provided in response to a specific request by the patient or other relevant entity."[5] A generic episode of care model, which can be used to track the core components—population at risk, evaluation and initial management, and follow-up care—that must be measured and evaluated over the course of an

episode of care has been combined with the work of NPP to provide an integrated framework for performance measurement:

INTEGRATED FRAMEWORK FOR PERFORMANCE MEASUREMENT



The Patient Outcomes Steering Committees recommend that outcomes measure development take a patient-centered view and address episodes of care rather than narrowly focus on one procedure or intervention. The timeframe for an episode of care for patients with chronic disease may be years and decades. Certain elements of the patient-focused episode of care model deserve emphasis:

- **Appropriateness**—Outcomes measures generally do not address appropriateness of procedures or interventions for a particular patient. Appropriate patient selection, based on evidence-based effectiveness data and shared decision making with informed patients, should be included in outcomes measurement.

- **Longitudinal Outcomes**—Most outcomes measures look at rather limited timelines, such as 30 days, and rarely 6 months. For many patients, the true outcome of their conditions extends much longer into several years or more. Measures with a longer timeframe are needed to provide better information on the effectiveness of healthcare services and interventions. Measures should consider the influence of patient decision making on outcomes, such as at the end of life, when mortality may not represent a poor outcome.
- **Including Influences of Communities and Environment**—The influences of the community and environment play a significant role in the health of a population, particularly when taking a longer-term view. Often what the community does might be more important to the health of more people than what the traditional healthcare system does. The episode of care should include community and environmental influences as part of the system, and information systems should be planned to incorporate data from nontraditional sources.

Functional Status Measures

Very few measures of functional status have been endorsed to date. The Committees highlighted an urgent need to develop measures that evaluate the improvement or maintenance of functioning as outcomes of healthcare services and interventions. Functional status and participation may address activities of daily living (ADLs); employment, including absenteeism and presenteeism; school attendance and achievement; or participation in usual activities such as walking, exercise regimens, or sports. Assessing functional status is important for patients with chronic diseases as well as for patients undergoing procedures intended to improve symptoms or functioning. A variety of tools is available and used to assess patient functioning as part of clinical care. Additional development is needed to transform these tools into performance measures.

Broader Measures

During their deliberation of candidate measures, the Steering Committees noted that many measures could apply to broader populations than specified. Below are examples of some of the limitations the committee identified:

- **Age Limitations—**Measures often have limited age inclusion, such as excluding children or patients over or under age 65 years. For example, *OT1-015-09 Risk-adjusted case mix adjusted elderly surgery outcome (ACS)* focuses on multiple outcomes for a variety of types of surgery but only for patients age 65 years and older. The developers justify the age limitation by noting that the most significant surgical complications occur in the elderly; however, the Steering Committee noted that information on surgical outcomes for younger patients also are important. The Committee recommended that the measure be expanded to include all ages and could be stratified by age bands.
- **Data Availability Limitations—**Measure developers report their measures are limited to population due to the developmental database available to them. Measure *OT1-017-09 30-Day Post-Hospital HF Discharge Care Transition (Brandeis/CMS)* is limited to "Medicare fee-for-service" patients because this was the only dataset available to the developers with all the required data elements. Similarly, *OT1-030-09 Patients Hospitalized with AMI with Potentially Avoidable Complications (Bridges to Excellence)* is limited to patients under 65 years of age because the commercial dataset available to developers does not include Medicare patients. The topics of both of these measures are not restricted in importance to certain age groups. To develop the broadest, most useful measures, use of combined datasets such as available in health information exchanges should be a fundamental starting point for measure development. Developers should look ahead to future data sources, such as EHRs, when developing measures so that eventual retooling does not require complete redevelopment of measures.
- **Absence of Data for Secondary Diagnosis—**Frequently the denominator population for a measure is identified using diagnosis codes either from discharge or encounter, though often limited to the primary diagnosis. Measure *OT1-010-09 Acute Myocardial Infarction (AMI) Mortality Rate (AHRQ)* captures only patients with AMI as the primary diagnosis; however, 30 percent of AMIs occurring in hospitals are coded as the secondary diagnosis, most often complicating the course of a surgical procedure. The Steering Committee recommended further development of the measure or a companion measure to include all AMIs.
- **Lack of Applicability to all Appropriate Settings of Care—**Measures are typically developed for use in a specific setting of care, though the measure focus can apply to

many care settings. In reviewing several candidate measures for adverse events in mental health facilities, the Mental Health Steering Committee did not support numerous similar measures for various settings of care and recommended that appropriate measures (falls, readmissions, etc.) include all potential settings of care in one measure that could be stratified by setting if needed. The Committee believed that specifically excluding behavioral health facilities is not warranted for important cross-cutting measures.

In summary, as the quality measurement enterprise matures, greater collaboration among measure developers is needed to ensure the most efficient use of measure development resources. Many of the currently endorsed measures could be expanded in their applicability, such as by maximizing age inclusions and applying measures to all appropriate settings of care. Combining datasets, using clinically enriched datasets, and planning for transition to EHR data are additional strategies that would yield the most useful measures and maximize the dollars spent on measure development. Measure development resources should be provided to knowledgeable and skilled measure developers who are willing to tackle these challenges.

Cross-Cutting Measures

The Main Steering Committee was enthusiastic about the few cross-cutting measures submitted to the Patient Outcomes project. *OT2-022-09: Proportion of patients with a chronic condition that have a potentially avoidable complication during a calendar year (Bridges to Excellence)* and *OT1-015-09 Risk-adjusted case mix adjusted elderly surgery outcome (ACS)* include patients with multiple chronic conditions or undergoing a variety of surgeries. Patient outcomes measures associated with improved medication management in patients at high risk for medication errors that are not linked to a limited number of disease state specific outcomes are needed to ensure medication management methodologies utilized by health plans, health systems, and physician groups translate into improved medication effectiveness and safety. These measures capture a large number of patients, often with conditions or surgeries that are not otherwise captured in condition-specific measures.

Population Health

The Patient Outcomes project has recommended several population based measures that cannot be attributed to any specific healthcare entity but that provide a critical view of the overall quality and can be followed to monitor improvements. To understand how improvements can be achieved, companion measures at the provider level (facility and clinician) are needed. There are a growing number of community and regional reporting mechanisms to distribute population-level information. Local and regional comparisons can identify areas for quality improvement and promote best practices that will impact the population level results.

Disparities

The Steering Committees evaluated each measure's ability to address disparities of care. In the measures the Committees evaluated, too often the data elements that would allow for stratification by disparities were not specified. Therefore, the Committee recommended that measure developers create specifications that include stratification by demographic characteristics, allowing for an evaluation of performance of care to detect disparities by socioeconomic status. In addition, the Committees reinforced the NQF measure evaluation criterion that "risk models should not obscure disparities in care for populations by including factors that are associated with differences/inequalities in care such as race, socioeconomic status, or gender (e.g., poorer treatment outcomes of African American men with prostate cancer, inequalities in treatment for CVD risk factors between men and women). It is preferable to stratify measures by race and socioeconomic status rather than adjusting out differences."

Risk Adjustment

Risk adjustment is an essential component of useful outcomes measures. Choice of methodology for risk adjustment often weights sensitivity versus specificity. The Committees have noted that many developers have chosen methodologies that favor specificity and generate results with limited variation and usefulness as performance measures. For measures to be actionable, outcomes measures must provide differentiation in performance. Additionally, broader thinking on risk-adjustment methodology is needed to enrich risk adjustment with a patient-centered perspective of care and consider risk stratification.

Data Availability

Availability of necessary data was frequently found to be an impediment to better measures. While developers may be constrained to the data that is currently available, developers should also plan for EHR retooling in the near future. Additionally, collection of data that remains proprietary does not contribute to the quality measurement enterprise or the collaborative efforts to improve quality. Any data collected or supported by any public funds should be available for use in performance measurement.

Public Reporting

The Main Steering Committee considered the challenges of moving strictly health services research methodology to performance measurement for public reporting. More information is needed on how patient reports reflect the quality of care and how different reporting systems make a difference to the patients themselves. Research is needed to discover what will actually move the public.

Crosswalk of Existing Measures

As the library of NQF-endorsed measures grows, a crosswalk of the measures would be useful to understand which patients are being measured and which are not. For example, the NQF portfolio contains many measures for patients with cardiovascular conditions and very few for patients with dermatologic conditions. There is currently overlap among the various measures, such as *OT2-015-09 Risk-adjusted case mix adjusted elderly surgery outcome (ACS)* and *0534 Hospital specific risk-adjusted measure of mortality or one or more major complications within 30 days of a lower extremity bypass (LEB)*, which will capture many of the same patients, thereby adding to burden of measurement without adding significant information. A high-level view of the existing measures and which patients are being measured will aid in understanding where measure development is needed.

Condition-Specific Recommendations

The framework for outcomes measures created using both the types of outcomes measures and the integrated patient-focused episodes of care framework is useful to highlight gaps in existing

outcomes measures. During the discussions of the Technical Advisory Panels (TAPs) of the Patient Outcomes project, gaps in important outcomes measures for specific conditions were identified

Cardiovascular Disease

Many outcomes measures have been developed and endorsed for CAD, AMI, PCI, and CABG, though they tend to focus on acute events or procedures rather than on the entire episode of care (Table 1). To date there are no endorsed measures addressing effectiveness of treatment (medication or procedures) in controlling symptoms, maintaining function, determining changes in health status or quality of life during the episode of care. Measures are needed to evaluate the appropriate use and effectiveness of medication management, procedures, and cardiac rehabilitation services. Measures to evaluate the care for cardiovascular conditions such as atrial fibrillation, peripheral vascular disease, and cerebral vascular disease are also needed.

Table 1: Gap Areas in NQF-Endorsed® and Candidate Outcomes Measures for Cardiovascular Conditions

Table Key: NQF-Endorsed® measures are in **black.** Candidate measures in the Patient Outcomes project are in **red.** **Gray** boxes identify gaps in measures.

Type of Outcomes Measure	Coronary Artery Disease (CAD)	Acute Myocardial Infarction (AMI)	Heart Failure	Atrial Fibrillation	Stroke
Patient function, symptoms, health-related quality of life (physical, mental, social)					
Intermediate clinical outcomes (physiologic, biochemical)	**0075** IVD: LDL <100 (NCQA) **0073** IVD: BP< 140/90 (NCQA)				
Patient and/or caregiver experience with care; knowledge, understanding, motivation; health-risk status/ behavior (including adherence)	**0543** CAD and MPR for statins (CMS) **0551** ACEI/ARB use and persistence among members with coronary artery disease at high risk for coronary events (IMS Health)				
Healthcare service	**OT1-008-09** Hospital	**0505** Thirty-day all-	**0277** Congestive		

Type of Outcomes Measure	Coronary Artery Disease (CAD)	Acute Myocardial Infarction (AMI)	Heart Failure	Atrial Fibrillation	Stroke
utilization as proxy for patient outcome (e.g., change in condition) or potential indicator of efficiency	30-day risk-standardized readmission rates Following PCI (CMS)	cause risk standardized readmission rate following acute myocardial infarction (AMI) hospitalization	heart failure admissions (AHRQ) **0330** 30-Day all-cause risk standardized readmission rate following heart failure hospitalization (risk adjusted)		
Non-mortality clinical morbidity related to disease control and treatment					
Healthcare-acquired adverse event or complication (nonmortality)	**0130** CABG: deep sternal wound infection rate (STS) **0129** CABG: prolonged intubation (STS) **0115** CABG: surgical re-exploration (STS) **0114** CABG: Post-op renal failure (STS)			OT1-007-09 Hospital risk-standardized complication rate following ICD (CMS)	

Type of Outcomes Measure	Coronary Artery Disease (CAD)	Acute Myocardial Infarction (AMI)	Heart Failure	Atrial Fibrillation	Stroke
	0131 Post-op stroke/CVA (STS)				
Mortality	**0133** PCI mortality(risk adjusted) (ACC) **0535** 30-Day all-cause, risk standardized mortality following PCI for patients without STEMI and cardiogenic shock (CMS) **0536** 30-Day all-cause, risk standardized mortality following PCI for patients with STEMI or cardiogenic shock (CMS) **0119** Risk-adjusted operative mortality for CABG (STS) **0122** Risk-adjusted	**0161** AMI inpatient mortality (risk-adjusted) (TJC) **0230** Acute myocardial infarction 30-day mortality (CMS) OT1-010-09 AMI mortality rate (AHRQ)	**0229** Heart failure 30-day mortality (CMS) **0358** Congestive heart failure mortality (IQI 16) (risk adjusted) (AHRQ)		

Type of Outcomes Measure	Coronary Artery Disease (CAD)	Acute Myocardial Infarction (AMI)	Heart Failure	Atrial Fibrillation	Stroke
	operative mortality MVR+CABG surgery (STS) **0123** Risk-Adjusted Operative Mortality for AVR+CABG				
Composite	**0076** CAD: optimally managed modifiable risk (Minn Comm Measure)) OT1-013-09 CABG composite score (STS)	OT1-016-09 30-Day post-hospital AMI discharge care transition composite measure (CMS)	OT1-017-09 30-Day post-hospital HF discharge care transition composite measure (CMS)		

Metabolic Conditions, Including Diabetes and Chronic Kidney Disease (CKD)

For diabetes, NQF-endorsed outcomes measures primarily focus on control of risk factors (Table 2). None of the measures assesses a patient's symptom management or functional status nor the outcome of lifestyle and behavioral improvement strategies, such as weight reduction, smoking cessation, and exercise. Patient reported outcomes are critical to assess the effectiveness of healthcare services, as are measures of shared decision making and effectiveness of self-management.

The only outcomes measures for CKD to date address dialysis adequacy. Additional measures are urgently needed to address functional status, effectiveness of preserving kidney function, quality of life, and appropriate use of healthcare services. Measures for CKD are also needed to address better integration of care with primary physicians, improve patient awareness and involvement in shared decision making and prepare the patient better for their treatment modality of choice. Specific examples of needed measures include measurement of eGFR and classification of disease into one of 5 categories; referral of the patient with Stage 4 CKD to a nephrologist; and documentation that the nephrologist discussed therapeutic modalities with the patient including end of life options, preemptive transplantation, home hemodialysis or peritoneal dialysis or in-center dialysis,

Table 2: Gap Areas in NQF-Endorsed® and Candidate Outcomes Measures for Metabolic Conditions

Table Key: NQF-Endorsed® measures are in **black**. Candidate measures in the Patient Outcomes project are in **red**. **Gray** boxes identify gaps in measures.

Type of Outcomes Measure	Diabetes	Chronic Kidney Disease (CKD)
Patient function, symptoms, health-related quality of life (physical, mental, social)		
Intermediate clinical outcomes (physiologic, biochemical)	**0059** Hemoglobin A1c management—Percentage of adult patients with diabetes aged 18-75 years with most recent A1c level greater than 9.0% (poor control) (Alliance/NCQA) EC-013-09** Comprehensive diabetes care: HbA1c control (<8.0%) (NCQA) **0064** Diabetes measure pair: A) Lipid management: low density lipoprotein cholesterol (LDL-C) <130, B) Lipid management: LDL-C <100 * -A) Percentage of adult patients with diabetes aged 18-75 years with most recent (LDL-C) <130 mg/dL; B) Percentage of patients 18-75 years of age with 0547diabetes whose most recent LDL-C test result during the measurement year was <100 mg/dL (Alliance/NCQA) **0061** Blood pressure management—Percentage of adult patients with diabetes aged 18-75 years with most recent blood pressure <140/80 mm Hg (Alliance/NCQA)	

Type of Outcomes Measure	Diabetes	Chronic Kidney Disease (CKD)
	OT1-009-09 Optimal diabetes care—Composite "all or none" measure of BP< 130/80 and LDL < 100 and Hgb A1c < 8 and non-smoker and daily aspirin if age 41+ years. (Minnesota Community Measurement)	
Patient and/or caregiver experience with care; knowledge, understanding, motivation; health-risk status/ behavior (including adherence)	**0550** CKD, diabetes and hypertension—Medication possession ratio (MPR) for ACEI/ARB therapy (CMS) **0547** Diabetes and MPR for statin therapy (CMS) **0545** MPR for chronic meds (oral hypoglycemic, statins and ACEI/ARBs) in diabetics over age 18 years (CMS)	
Healthcare service utilization as proxy for patient outcome (e.g., change in condition) or potential indicator of efficiency	**0272** Diabetes, short-term complications (PQI 1) [AHRQ]	
Non-mortality clinical morbidity related to disease control and treatment	**0274** Diabetes, long-term complications (PQI 3) [AHRQ] **0285** Lower extremity amputations among patients with diabetes (PQI 16) [AHRQ]	
Healthcare-acquired adverse event or complication (non-mortality)		
Mortality		

Cancer

The Main Steering Committee and Cancer TAP were extremely disappointed at the few outcomes measures submitted for cancer care. Very few outcomes measures for cancer have been endorsed to date (Table 3), and those that have focus primarily on end-of-life care. More outcomes measures for cancer patients are urgently needed, such as functional status and quality-of-life measures for cancer patients during and after therapy, symptom management and effectiveness, patient experience with cancer care, patient safety measures specific to cancer treatment, cancer treatment morbidity, and survival rates for the major cancers. Population-level measures of cancer incidence are needed to understand community and environmental contributions to the development of cancer.

Table 3: Gap Areas in NQF-Endorsed® and Candidate Outcomes Measures for Cancer-Related Conditions

Table Key: NQF-Endorsed® measures are in **black**. Candidate measures in the Patient Outcomes project are in **red**. **Gray** boxes identify gaps in measures.

Type of Outcomes Measure	Prostate Cancer	Breast Cancer	Lung Cancer	Endometrial Cancer	Colorectal Cancer	Other Cancers	General Cancer Measures
Patient function, symptoms, health-related quality of life (physical, mental, social)							
Intermediate clinical outcomes (physiologic, biochemical)							
Patient and/or caregiver experience with care; knowledge, understanding, motivation; health-risk status/ behavior (including adherence)							

Type of Outcomes Measure	Prostate Cancer	Breast Cancer	Lung Cancer	Endometrial Cancer	Colorectal Cancer	Other Cancers	General Cancer Measures
Healthcare service utilization as proxy for patient outcome (e.g., change in condition) or potential indicator of efficiency			**0459**: Risk adjusted morbidity after lobectomy for lung cancer		OT2-002-09: Risk adjusted colorectal surgery outcome measure	0460:Risk-adjusted morbidity for esophagectomy for cancer	
Non-mortality clinical morbidity related to disease control and treatment							
Healthcare-acquired adverse event or complication (non-mortality)							

Type of Outcomes Measure	Prostate Cancer	Breast Cancer	Lung Cancer	Endometrial Cancer	Colorectal Cancer	Other Cancers	General Cancer Measures
Mortality						**0360**: Risk-adjusted esophageal resection mortality rate **0365**: Risk-adjusted pancreatic resection mortality rate	**0211**: Percentage of patients who died from cancer with more than one emergency room visit in the last days of life (NCI) **0212**: Percentage of patients who died from cancer with more than one hospitalization in the last 30 days of life to hospice **0213**: Percentage of patients who died from cancer admitted to the ICU in the last 30 days of life **0214**: Proportion dying from cancer in an acute care

Type of Outcomes Measure	Prostate Cancer	Breast Cancer	Lung Cancer	Endometrial Cancer	Colorectal Cancer	Other Cancers	General Cancer Measures
							setting **0215**: Percentage of patients who died from cancer not admitted

Pulmonary/ICU Conditions

To date, NQF has not endorsed any outcomes measures for asthma or COPD. For patients with COPD, additional measures for pulmonary rehabilitation (PR) would be useful, such as appropriateness or selection of referral for PR, evaluation of quality of life for patients not receiving PR, adherence/completion rates for PR, and patient assessment of PR services. For patients with asthma, functional status including absenteeism or presenteeism for work or school and patient reported outcomes of asthma management are needed. Hospital admissions and ED visits may reflect effectiveness of asthma management but may also reflect outpatient healthcare resource availability. For intensive care patients, return to the ICU or recidivism would be another important outcomes measure.

Bone and Joint Conditions

The only endorsed outcomes measure for bone and joint conditions is *354 Hip fracture mortality rate (AHRQ)*. Outcomes measures for arthritis and osteoporosis have not been submitted for consideration. Measures of the effectiveness of symptom management and functional status for patients with arthritis are urgently needed. Many functional status assessment tools exist and are used during patient care, but few have been developed and tested for use as performance measures. As younger patients are undergoing joint replacement, measures of appropriate selection for surgery, functional improvement, patient experience, racial/ethnic disparities, morbidity, and mortality all after surgery are needed. For older patients, outcomes measures for hip fractures are particularly important to assess the post-operative functional status and recovery. For osteoporosis, measures of treatment effectiveness, symptom management, and disability are needed as well as population measures of nontraumatic fractures to assess whether preventive measures are effective.

GI and Biliary Conditions

Gallbladder disease, gastroesophageal reflux disease (GERD), and ulcers are important conditions that have not been addressed in outcomes measurement. Measures of symptom management; appropriate, effective, and efficient use of diagnostic studies and interventions; and adverse events are important measures for these conditions.

Infectious Disease

Pneumonia, sinusitis, and urinary tract infections (UTIs) are common infections that account for many ambulatory care visits and occasional hospital admissions. Several outcomes measures for pneumonia have been endorsed (e.g., mortality and readmission), though no outcomes measures address sinusitis or UTIs. Measures for appropriate evaluation and appropriate use of antibiotics are needed.

Eye Care

Several outcomes measures for eye care (glaucoma, cataracts, macular degeneration, and diabetic retinopathy) have been endorsed (Table 4). Measures of patient function, symptoms, health-related quality of life (physical, mental, social), intermediate clinical outcomes (physiologic, biochemical), and nonmortality clinical morbidity related to disease control and treatment are all potential important outcomes for eye care. Eye care measures should look at appropriate therapies that improve patients' visual function and quality of life while decreasing costs. Measures that address appropriateness of services and treatment and composites that represent comprehensive eye care for given conditions should be prioritized.

Table 4: Gap Areas in NQF-Endorsed® and Candidate Outcomes Measures for Eye-Related Conditions

Table Key: NQF-Endorsed® measures are in **black**. Candidate measures in the Patient Outcomes project are in **red**. **Gray** boxes identify gaps in measures.

Type of Outcomes Measure	Glaucoma	Cataract
Patient function, symptoms, health-related quality of life (physical, mental, social)		**0565** 20/40 or better visual acuity within 90 days after cataract surgery
Intermediate clinical outcomes (physiologic, biochemical)	**0563** Reduction in IOP >15%	
Patient and/or caregiver experience with care; knowledge, understanding, motivation; health-risk status/ behavior (including adherence)		
Healthcare service utilization as proxy for patient outcome (e.g., change in condition) or potential indicator of efficiency		**0564** Cataract surgery complications within 30 days requiring additional surgery
Non-mortality clinical morbidity related to disease control and treatment		
Healthcare-acquired adverse event or complication (non-mortality)		
Mortality		

NOTES

1. National Quality Forum (NQF), *National Priorities Partnership*, Washington, DC: NQF. Available at www.nationalprioritiespartnership.org. Last accessed August 2010.
2. NQF, *The Prioritization of High-Impact Medicare Conditions and Measure Gaps*, Washington, DC: NQF; 2010.
3. Patient-Reported Outcomes Measurement Information System (PROMIS). Available at www.nihpromis.org/default.aspx . Last accessed July 2010.
4. NQF, *Quality Data Set Model*, Washington, DC: NQF; 2010. Available at www.qualityforum.org/Projects/h/QDS_Model/Quality_Data_Set_Model.aspx. Last accessed August 2010.
5. NQF, *Measurement Framework: Evaluating Efficiency Across Patient-focused Episodes of Care*. Washington, DC: NQF; 2010. Available at www.qualityforum.org/Publications_Old/2010/01/Measurement_Framework__Evaluating_Efficiency_Across_Patient-Focused_Episodes_of_Care.aspx. Last accessed August 2010.

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APPENDIX A: NQF-Endorsed® Outcomes Measures as of April 2010

NQF #	Title	Steward
Cross-Cutting Measures		
541	Proportion of days covered (PDC): 5 rates by therapeutic category	NCQA
542	Adherence to chronic medications	CMS
22	Drugs to be avoided in the elderly: a. Patients who receive at least one drug to be avoided, b. Patients who receive at least two different drugs to be avoided	NCQA
138	Urinary catheter-associated urinary tract infection for intensive care unit (ICU) patients	CDC
139	Central line catheter-associated blood stream infection rate for ICU and high-risk nursery (HRN) patients	CDC
140	Ventilator-associated pneumonia for ICU and high-risk nursery (HRN) patients	CDC
141	Patient fall rate	ANA
201	Pressure ulcer prevalence	TJC
202	Falls with injury	ANA
263	Patient burn	ASCQC
265	Hospital transfer/admission	ASCQC
266	Patient fall	ASCQC
267	Wrong site, wrong side, wrong patient, wrong procedure, wrong implant	ASCQC
299	Surgical site infection rate	CDC
337	Decubitus ulcer (PDI 2)	AHRQ
344	Accidental puncture or laceration (PDI 1) (risk adjusted)	AHRQ

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NQF #	Title	Steward
345	Accidental puncture or laceration (PSI 15)	AHRQ
346	Iatrogenic pneumothorax (PSI 6) (risk adjusted)	AHRQ
347	Death in low mortality DRGs (PSI 2)	AHRQ
348	Iatrogenic pneumothorax in non-neonates (PDI 5) (risk adjusted)	AHRQ
349	Transfusion reaction (PSI 16)	AHRQ
350	Transfusion reaction (PDI 13)	AHRQ
351	Death among surgical inpatients with serious, treatable complications (PSI 4)	AHRQ
352	Failure to rescue in-hospital mortality (risk adjusted)	Children's Hospital of Philadelphia
353	Failure to rescue 30-day mortality (risk adjusted)	Children's Hospital of Philadelphia
362	Foreign body left after procedure (PDI 3)	AHRQ
363	Foreign body left in during procedure (PSI 5)	AHRQ
364	Incidental appendectomy in the elderly rate (IQI 24) (risk adjusted)	AHRQ
367	Post operative wound dehiscence (PDI 11) (risk adjusted)	AHRQ
368	Post operative wound dehiscence (PSI 14) (risk adjusted)	AHRQ
376	Incidence of potentially preventable VTE	TJC
450	Postoperative DVT or PE (PSI 12)	AHRQ
531	Patient safety for selected indicators	AHRQ
533	Postoperative respiratory failure (PSI #11)	AHRQ
554	Medication reconciliation post-discharge (MRP)	NCQA
167	Improvement in ambulation/locomotion	CMS
171	Acute care hospitalization (risk-adjusted)	CMS
173	Emergent care (risk adjusted)	CMS

NQF #	Title	Steward
174	Improvement in bathing	CMS
175	Improvement in bed transferring	CMS
176	Improvement in management of oral medications	CMS
177	Improvement in pain interfering with activity	CMS
178	Improvement in status of surgical wounds	CMS
179	Improvement in dyspnea	CMS
181	Increase in number of pressure ulcers	CMS
182	Residents whose need for more help with daily activities has increased	CMS
183	Low-risk residents who frequently lose control of their bowel or bladder	CMS
184	Residents who have a catheter in the bladder at any time during the 14-day assessment period. (risk adjusted)	CMS
185	Recently hospitalized residents with symptoms of delirium (risk-adjusted)	CMS
186	Recently hospitalized residents who experienced moderate to severe pain at any time during the 7-day assessment period	CMS
187	Recently hospitalized residents with pressure ulcers (risk adjusted)	CMS
191	Residents who lose too much weight	CMS
192	Residents who experience moderate to severe pain during the 7-day assessment period (risk-adjusted)	CMS
193	Residents who were physically restrained daily during the 7-day assessment period	CMS
194	Residents who spent most of their time in bed or in a chair in their room during the 7-day assessment period	CMS
195	Residents with a decline in their ability to move about in their room and the adjacent corridor.	CMS

NQF #	Title	Steward
196	Residents with a urinary tract infection	CMS
197	Residents with worsening of a depressed or anxious mood.	CMS
198	High-risk residents with pressure ulcers	CMS
199	Average-risk residents with pressure ulcers	CMS
422	Functional status change for patients with knee impairments	FOTO
423	Functional status change for patients with hip impairments	FOTO
424	Functional status change for patients with foot/ankle impairments	FOTO
425	Functional status change for patients with lumbar spine impairments	FOTO
426	Functional status change for patients with shoulder impairments	FOTO
427	Functional status change for patients with elbow, wrist or hand impairments	FOTO
428	Functional status change for patients with general orthopedic impairments	FOTO
429	Change in basic mobility as measured by the AM-PAC	CREcare
430	Change in daily activity function as measured by the AM-PAC	CREcare
442	Functional communication measure: writing	American Speech-Language-Hearing Association
443	Functional communication measure: swallowing	American Speech-Language-Hearing Association
444	Functional communication measure: spoken language expression	American Speech-Language-Hearing

NQF #	Title	Steward
		Association
445	Functional communication measure: spoken language comprehension	American Speech-Language-Hearing Association
446	Functional communication measure: reading	American Speech-Language-Hearing Association
447	Functional communication measure: motor speech	American Speech-Language-Hearing Association
448	Functional communication measure: memory	American Speech-Language-Hearing Association
449	Functional communication measure: attention	American Speech-Language-Hearing Association
200	Death among surgical in-patients with treatable serious complications (failure to rescue)	AHRQ
530	Mortality for selected conditions	AHRQ
5	CAHPS clinician/group surveys - (adult primary care, pediatric care, and specialist care surveys)	AHRQ
6	CAHPS Health Plan Survey v 4.0 - adult questionnaire	AHRQ
7	NCQA supplemental items for CAHPS 4.0 adult questionnaire (CAHPS 4.0H)	NCQA
8	Experience of Care and Health Outcomes (ECHO) Survey (behavioral health, managed care versions)	AHRQ
9	CAHPS Health Plan Survey v 3.0 children with chronic conditions supplement	AHRQ
10	Young Adult Health Care Survey (YAHCS)	Oregon Health & Science University

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NQF #	Title	Steward
11	Promoting Healthy Development Survey (PHDS)	Oregon Health & Science University
166	HCAHPS	AHRQ
228	3-Item Care Transition Measure (CTM-3)	University of Colorado Health Sciences Center
517	CAHPS® Home Health Care Survey	CMS
327	Risk-adjusted average length of inpatient hospital Stay	Premier, Inc
328	Inpatient hospital average length of stay (risk adjusted)	United Health Group
329	All-cause readmission index (risk adjusted)	United Health Group
330	30-Day all-cause risk standardized readmission rate following heart failure hospitalization (risk adjusted)	CMS
331	Severity-standardized average length of stay—routine care (risk adjusted)	Leapfrog Group
332	Severity-standardized ALOS — special care	Leapfrog Group
333	Severity-standardized ALOS — deliveries	Leapfrog Group
495	Median time from ED arrival to ED departure for admitted ED patients	CMS
496	Median time from ED arrival to ED departure for discharged ED patients	CMS
497	Admit decision time to ED departure time for admitted patients	CMS
498	Door to diagnostic evaluation by a qualified medical personnel	LSU
499	Left without being seen	LSU