# MAP Coordinating Committee Reaction Drafts for Initial Families of Measures

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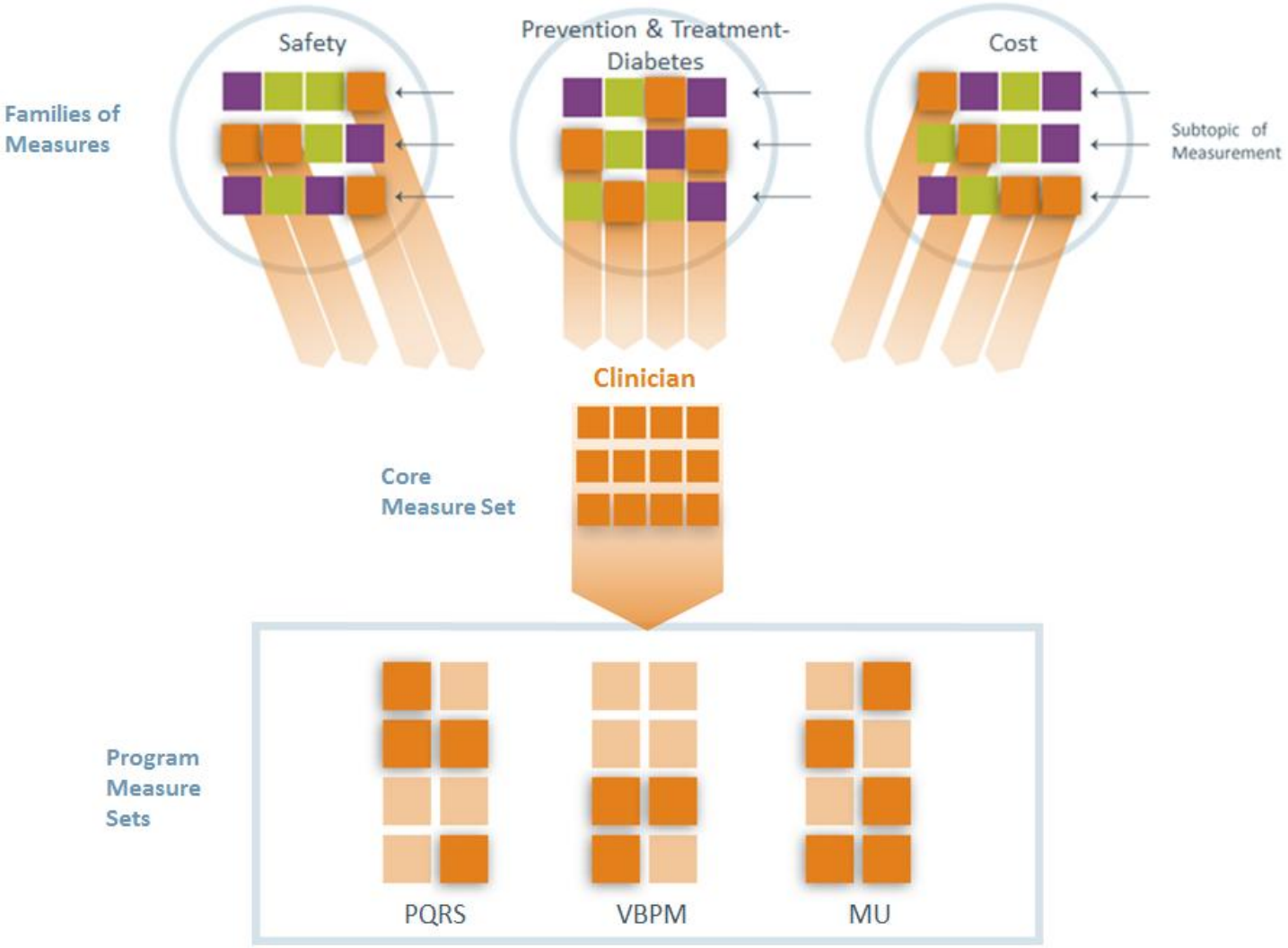
# Measure Applications Partnership: Families of Measures

Identification of "families of measures" is an important tactic in the MAP Strategic Plan (see page X) to promote alignment of performance measurement across programs and sectors and to ensure performance measures are high-impact, relevant, and actionable. Families of measures are defined as sets of related available measures and measure gaps that span programs, care settings, levels of analysis, and populations for specific topic areas related to the National Quality Strategy (NQS) priorities and high-impact conditions. Core measures sets, specific to a care setting, level of analysis, or population, will be drawn from the families of measures. Further, the core measure sets will guide MAP's pre-rulemaking input on program measure sets. Figure 1 illustrates how core measure sets and program measure sets are populated from families of measures.

*Figure 1 Families of Measures Populating a Core Measure Set and Program Measure Sets*



MAP's phased approach to identifying families of measures initially focused on three NQS priorities—Safety, Care Coordination, and Prevention and Treatment of the Leading Causes of Mortality. Within the prevention and treatment priority, families of measures have been identified for two high-impact conditions—diabetes and cardiovascular care. MAP chose to address these topics first as they build on MAP's prior work (e.g., MAP Safety Coordination Strategy) or represent areas in which there is a history of measure alignment issues (e.g., cardiovascular care). Families of measures also include measure gaps, and MAP has begun to define gap-filling pathways by characterizing measures gaps and potential barriers and solutions to filling those gaps.

## Approach to Identifying Families of Measures

MAP convened time-limited task forces, drawn from the membership of the MAP Coordinating Committee and workgroups, to advise the MAP Coordinating Committee on the identification of families of measures (See Appendix X for the 40-member Safety/Care Coordination Task Force roster and Appendix X for the 24-member Cardiovascular/Diabetes Task Force roster). Liaisons from the National Priorities Partnership (NPP) and NQF measure endorsement project Steering Committees also served on the task forces to provide insight from the NPP's input to the NQS and relevant endorsement project findings.

MAP engaged in a deliberate four-step process to identify each family of measures (see Appendix X and Appendix X for each task force's detailed approach):

1. ### Identify and prioritize high-leverage opportunities for improvement

   Within each NQS priority, MAP first identified and prioritized the areas of measurement that are considered the highest-leverage opportunities for improvement according to the well-vetted IOM criteria of impact, inclusiveness, and improvability (Institute of Medicine,2003). To prioritize the areas of measurement based on impact, MAP used the goals and associated metrics in the NQS 2012 Annual Progress Report, which were selected based on evidence and multi-stakeholder input and present the highest-leverage opportunities to improve health and provide better, more affordable care. Additionally, MAP highly considered measurement areas that are known to be disparities-sensitive and address inefficiencies, such as overuse of care. Lastly, MAP identified the highest-leverage improvement opportunities across the lifespan and the patient-focused episode of care, recognizing that measurement opportunities vary by age and the trajectory of care.

2. ### Scan of measures that address the high-leverage opportunities

   Next, MAP reviewed available measures that address the high-leverage improvement opportunities. The scan included the NQF-endorsed portfolio of measures, measures used in federal programs (including current measures and measures under consideration during the first year of MAP pre-rulemaking deliberations), and measures used in other public (i.e., Million Hearts Campaign and Partnership for Patients) and private sector efforts (e.g., eValue8, IHA P4P, Bridges to Excellence, health plan value-based purchasing programs). MAP recognizes this scan of measures is not comprehensive and aims to work with stakeholders to identify additional measures in use.

3. ### Define the family of measures for each high-leverage opportunity

   Subsequently, MAP used the MAP Measure Selection Criteria as a guide for considering: (1) how measures address relevant care settings, populations, and levels of analysis; (2) if measures are harmonized (across settings, populations, levels of analysis); (3) appropriate types of measures; and (4) attention to parsimony.

Finally, when constructing each family, MAP considered if the family adequately addresses issues such as cost of care, disparities, and the needs of vulnerable populations.

### 4. Establish gap-filling pathways

When selecting available measures for each family, MAP identified the high-leverage improvement opportunities that lack appropriate performance measures as measure gaps. Where no measure was currently available to address a gap, MAP generated measure ideas to fill the gap. Additionally, MAP made recommendations for modification of existing measures that do not adequately address the high-leverage opportunities but currently are considered the best alternative. The recommended modifications ranged from expansion to other settings, levels of analysis, and populations to bringing the measures forward for endorsement. With gaps identified, MAP began to explore opportunities to prioritize and fill gaps. Measure developers participated in MAP task force meetings, providing insight regarding areas where they may be currently or planning to address gaps identified by MAP.

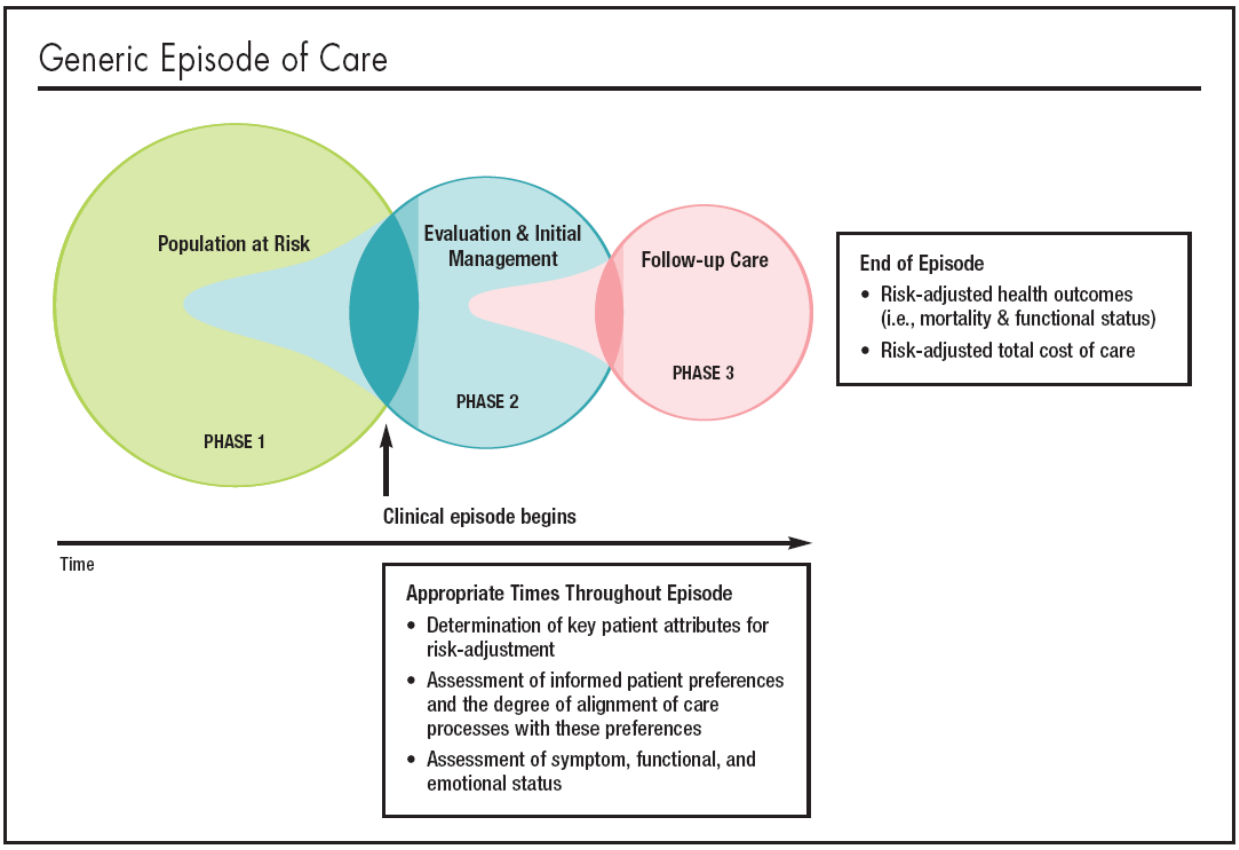
## Prevention and Treatment of the Leading Causes of Mortality—Cardiovascular Conditions and Diabetes

To promote the most effective prevention and treatment for the leading causes of mortality, the NQS establishes three goals: community interventions that result in improvement of social, economic, and environmental factors; interventions that result in adoption of the most important healthy lifestyle behaviors across the lifespan; and receipt of effective clinical preventive services across the lifespan in clinical and community settings. The initial focus area in the NQS for achievement of the prevention and treatment goals is cardiovascular health. Aligning with the NQS, MAP's identification of a prevention and treatment family of measures focuses on cardiovascular conditions; however, MAP expanded the scope of the family of measures to address an additional high-impact condition, diabetes, as an opportunity exists to coordinate prevention efforts for both conditions.

In identifying the prevention and treatment family of measures, MAP relied on several principles: person-centered approach, improving outcomes, and identifying the fewest measures needed to address the high-leverage improvement opportunities.

A **person-centered approach to measurement** considers stages of health and healthcare across the lifecycle (MAP Measure Selection Criterion #6: pertaining to measurement across the person-centered episode of care). Accordingly, MAP used the Patient-Focused Episodes of Care model, which consists of three phases for evaluating the efficiency of care over time, as a guiding framework for identifying the diabetes and cardiovascular care families of measures. The three phases across the patient-focused episode of care consider the population at risk, evaluation and initial management, and follow-up care. Diabetes and cardiovascular conditions are highly prevalent diseases for which people seek care in multiple settings across the health care delivery system. Performance measurement for these conditions has typically focused on a setting-specific approach. Rather than taking a setting-specific approach, MAP considered what opportunities exist to measure what patients need at each phase of the episode of care when identifying the high-leverage opportunities for measurement in cardiovascular care and diabetes. Figure 1 below represents the patient-focused episode of care.

Figure 1. Patient-Focused Episode of Care




MAP seeks to **improve outcomes** in the highest-leverage areas. Accordingly, MAP focused on outcome measures and processes most closely linked with outcomes when identifying families of measures. For example, outcome measures assessing control (e.g., blood pressure control) were preferred over process measures assessing screening and testing. Similarly, process measures assessing time to procedures (e.g., receiving percutaneous coronary intervention (PCI) upon hospital arrival within 90 minutes or less) were preferred over process measures that assess steps in care delivery (e.g. troponin results for acute myocardial infarction patients). Generally, this approach emphasizes assessing overall care management and systems-level improvement, rather than discrete care processes.

A family of measures seeks to align measures across settings and levels of analysis. MAP sought to **identify the fewest measures necessary to address the high-leverage improvement opportunities** (MAP Measure Selection Criteria #3, and 8 addressing high-impact conditions and parsimony). To create a parsimonious set of measures, MAP focused on the highest-impact opportunities at each phase of the episode of care that will improve quality in cardiovascular and diabetes care. MAP considered the inclusiveness—capturing a broad range of individuals with regard to age, gender, socioeconomic status, and ethnicity/ race—of a measure when selecting measures for the family. Accordingly, MAP sought to include measures with broad denominator populations (e.g., blood pressure control for all individuals) for accountability purposes that could then be stratified by more discrete populations (e.g., blood pressure control for individuals with cardiovascular conditions) for quality improvement.

Within the highest-leverage opportunities, MAP considered the **applicable settings and levels of analysis**. MAP notes that assessment at each level of the system—individual clinician, clinician groups, facilities, systems, and populations—provides a comprehensive picture of quality and helps identify targeted interventions at each level. Thus, MAP selected measures that cross levels of analysis and settings where those measures were available. Recognizing that few measures

will address all relevant settings and levels of analysis, MAP also selected measures that address one particular setting or level of analysis, focusing on measures that assess similar aspects of care. MAP recognizes that all areas of measurement may not be suitable for all levels of analysis. For example, mortality measures should not be applied to individual clinicians because it is not feasible to identify one clinician to attribute care to; these measures are best applied at a system level.

## Primary Prevention of Cardiovascular Conditions and Diabetes

Primary prevention addresses the first phase of the patient-focused episode of care, the population at risk. At this phase, there is an opportunity to identify risk factors and intervene prior to disease presentation. Strong evidence supports that addressing risk factors reduces the incidence of cardiovascular conditions and diabetes.

The Million Hearts initiative encourages targeted focus on the "ABCS"—aspirin for people at risk, blood pressure control, cholesterol management, and smoking cessation. Additional lifestyle risk factors, such as obesity and physical activity, also contribute to the incidence of cardiovascular conditions and diabetes[i]. Accordingly, MAP identified the highest leverage opportunities for assessing primary prevention of cardiovascular conditions as blood pressure control, lipid control, smoking prevention/cessation, diet/nutrition, activity/exercise, and weight/obesity.

Each of the high-leverage opportunities substantially influences cardiovascular and/or diabetes risk. For perspective, approximately one-third of adults in the U.S. has high blood pressure[ii], and 1 in 6 have high cholesterol levels[iii]. In both cases, many individuals are not even aware they have these risk factors[iv]. About 19% of American adults smoke cigarettes, and smoking remains the leading cause of preventable death in the U.S[v]. In addition, diet, activity, and obesity are closely linked. Over one-third of U.S. adults are now obese, placing them at higher risk of diabetes, heart disease, stroke, and other conditions. [vi]

While the purpose of primary prevention is to assess the care provided to the population at risk (those who do not yet have the disease), MAP sought to select measures that are inclusive of the entire population, regardless of the presence or absence of a condition. This approach helped achieve a parsimonious set of measures. Measures could be stratified by condition or other risk factors to support quality improvement activities. However, MAP did recognize that lipid control and blood pressure control are critical aspects of secondary prevention for cardiovascular conditions and diabetes, so some condition-specific measures were included (NQF #0064, Lipid control is noted in Table 1, Diabetes Measures Selected for Family).

MAP identified measures that address three of the high leverage opportunities: tobacco cessation (NQF #0028, #1406, #1651, #1654), weight and obesity (NQF #0421, #0024), and blood pressure control (NQF #0018); however, these measures do not address all applicable levels of analysis and settings. The remaining high leverage opportunities—lipid control, physical activity/exercise, and diet/nutrition are gaps. MAP also identified an additional gap: measures that assess if cardiometabolic risk was assessed and then acted upon.

Table 1. Primary Prevention of Cardiovascular Conditions and Diabetes Measures Selected for Family

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| **Smoking Cessation/Tobacco Use** | | |
| 0028 Endorsed | Measure pair: a. Tobacco Use Assessment, b. Tobacco Cessation Intervention | |

| | | |
|---|---|---|
| 1406 Endorsed | Risky Behavior Assessment or Counseling by Age 13 Years | |
| 1651 Recommended | TAM-1 Tobacco Use Screening | |
| 1654 Deferred | TAM-2 Tobacco Use Treatment Provided or Offered | |
| **Lifestyle Management** | | |
| 0421 Endorsed | Adult Weight Screening and Follow-Up | |
| 0024 Endorsed | Body Mass Index (BMI) 2 through 18 years of age | |
| **Blood Pressure** | | |
| 0018 Endorsed | Controlling High Blood Pressure | |
| **GAPS** | | |
| Lipid Control | • All levels of analysis | |
| Smoking Cessation | • Outcomes of smoking cessation interventions | |
| Lifestyle management | • Physical activity/ exercise, diet/nutrition across all levels of analysis and settings | |
| Cardiometabolic Risk | • Across all levels of analysis and settings | |

## Cost of Care

To cover each of the aims of the NQS, including affordability, MAP addressed cost of care within each family of measures. Additionally, MAP plans to identify a cost of care family of measures. When considering cost of care measures for prevention and treatment of diabetes and cardiovascular conditions, MAP recognized that cost of care measurement is relatively nascent and multiple methodological and implementation issues persist, resulting in multiple measure gaps. At the same time, there are many cost of care measurement needs—both direct and indirect costs, cost to different entities (e.g., cost to patients, cost to payers and purchasers), and cost per episodes versus total cost—all of which provide useful information from different perspectives. Finally, there are only a handful of cost of care measures in the portfolio of NQF-endorsed measures.

Recognizing the challenges inherent in cost of care measurement, MAP strongly supported incorporating cost measures into the cardiovascular and diabetes families of measures to gain experience measuring cost of care. Noting that measures will need to be improved and refined with broader use, MAP recommended caution in using cost measures for payment incentives at this time. Further, MAP recommends ultimately linking cost measures with outcome measures for an overall assessment of efficiency. MAP initially preferred population-based, rather than condition-specific or procedure-specific, measures as a starting place in order to gain experience and understand the costs across a system.

Table 2. Cost of Care Measures Selected for Family

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| 1598 Endorsed | Total Resource Use Population-based PMPM Index | |
| 1604 Endorsed | Total Cost of Care Population-based PMPM Index | |

## Cardiovascular Conditions

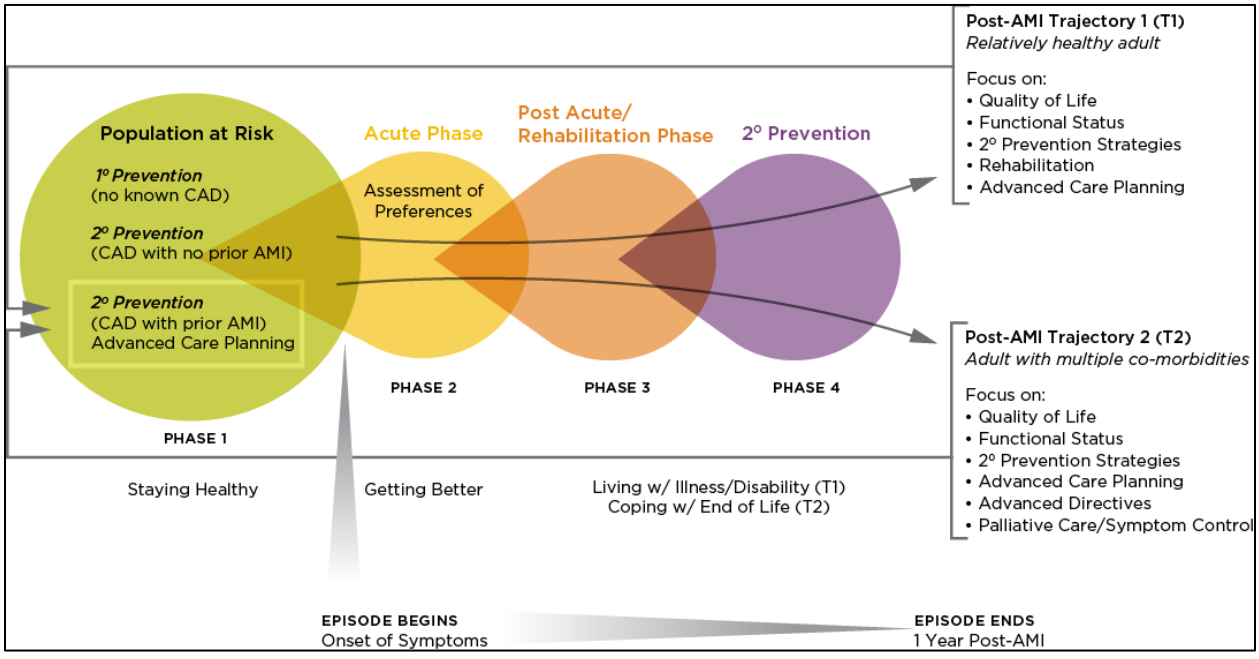
Beyond primary prevention for the population at risk, the remaining phases of the patient-focused episode of care address evaluation and management, and then initial management and follow-up care. To cover the highest-leverage opportunities in cardiovascular care, MAP focused on the cardiovascular conditions identified as high-impact conditions based on prevalence, associated morbidity and mortality, and cost of care (see Medicare High-Impact Conditions list). The high-impact cardiovascular conditions are ischemic heart disease, stroke/TIA, atrial fibrillation, and heart failure.

Each of the high-impact cardiovascular conditions causes substantial morbidity and mortality. Approximately 935,000 individuals have a heart attack in the U.S. each year, resulting in about 130,000 deaths[vii]. Nearly 800,000 people have a stroke annually, making it the fourth leading cause of death and a leading cause of serious long-term disability[viii]. Atrial fibrillation is the most common arrhythmia, affecting over 2 million Americans; it causes substantial morbidity and costs billions of dollars for treatment each year[ix]. In addition, heart failure leads to approximately 200,000 deaths annually, as well as high treatment costs. [x]

### *Acute Cardiovascular Conditions*

When the episode of care is adapted for acute conditions, the population at risk phase remains and is followed by the acute phase, the post-acute/rehabilitation phase, and the secondary prevention phase. Figure 2 below represents the patient-focused episode of care for acute cardiovascular conditions.

Figure 2. Patient-Focused Episode of Care for Acute Cardiovascular Conditions




During the acute phase, the highest leverage opportunities are those outcomes associated with diagnosis, procedures, and medication. In general, MAP preferred process measures that assess aspects later in the trajectory of care in settings that offer a broad range of services (e.g., median time to PCI). However, patients may present with AMI in settings that do not provide a full range of services. In these settings, process measures assessing intermediate steps

(i.e., median time to ECG) may enhance accountability. As such, MAP recognizes that ideally the outcome should be measured, but the family should also include important process measures to hold the entire system accountable.

In the post-acute phase, MAP emphasized the need for patient-reported outcome measures related to rehabilitation services and access to rehabilitation services. Many existing measures assess ordering rehabilitation services without determining the outcomes of those services or even if the services were received. Other existing measures have limitations as they represent specific functional status measures (e.g., swallowing, writing) that may not be broadly applicable to many individuals with any one condition. Finally, in the secondary prevention phase, MAP emphasized the need to assess medication management, focusing on persistence of medications, rather than ordering of medications, in the acute setting or on discharge.

MAP identified measures to address the high level opportunities for cardiovascular conditions—diagnostics, procedures, complications, rehabilitation and medications. For ischemic heart disease, MAP selected measures that address timing to procedures to ECG (NQF #0289, #0696), medication management and persistence (NQF #0068, #0066, #0070, #0075), and referral to rehabilitation (NQF #0642). MAP also selected a measure related to complications for ischemic heart disease (NQF #0709). For stroke/TIA MAP selected measures assessing diagnostics (NQF #0661), medication management (NQF #0437, #0241), and rehabilitations assessment (NQF #0441). Across both stroke and ischemic heart disease, gaps include obtaining rehabilitations services, outcomes related to rehabilitation, medication persistence and medication persistence. Additionally, MAP noted the need for measures assessing the appropriateness of CABG and PCI; while measures assessing overuse of imaging exist, a composite is needed.

Table 3. Acute Cardiovascular Conditions Measures Selected for Family

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| **Ischemic Heart Disease** | | |
| 0289 Endorsed | Median Time to ECG | This an intermediate process measure and should be used in facilities that do not offer PCI; facilities offering PCI should report NQF #0163. |
| 0163 Endorsed | Primary PCI received within 90 minutes of Hospital Arrival | This measure is preferred to NQF #0289 (median time to ECG) for facilities offering PCI, as it assesses processes more closely linked with outcomes. |
| *0669 Endorsed* | Cardiac Imaging for Preoperative Risk Assessment for Non-Cardiac Low-Risk Surgery | **For consideration by MAP Coordinating Committee.**<br><br>The CV/Diabetes Task Force was undecided on including these measures in the family. The task force would like to include measures of overuse, as overuse measures can have an impact on affordability and making care safer. However, these measures address individual procedures and may not substantially impact overuse. The task force would prefer measures that globally assess |
| *0670 Endorsed* | Cardiac stress imaging not meeting appropriate use criteria: Preoperative evaluation in low risk surgery patients | |
| *0671 Endorsed* | Cardiac stress imaging not meeting appropriate use criteria: Routine testing after percutaneous coronary intervention (PCI) | |
| *0672 Endorsed* | Cardiac stress imaging not meeting appropriate use criteria: Testing in | |

| | | |
|---|---|---|
| | asymptomatic, low risk patients | overuse. |
| *0355 Endorsed* | Bilateral Cardiac Catheterization Rate (IQI 25) | |
| 0696 Endorsed | The STS CABG Composite Score | |
| 0287 Endorsed<br>0288 Endorsed | Median time to Fibrinolysis<br>Fibrinolytic Therapy Received within 30 Min of ED Arrival | |
| 0068 Endorsed | IVD: use of Aspirin or another antithrombotic | |
| 0066 Endorsed | Chronic Stable Coronary Artery Disease: ACE Inhibitor or ARB Therapy--Diabetes or Left Ventricular Systolic Dysfunction (LVEF <40%) | |
| 0070 Endorsed | Chronic Stable Coronary Artery Disease: Beta-Blocker Therapy--Prior Myocardial Infarction (MI) or Left Ventricular Systolic Dysfunction (LVEF <40%) | |
| 0075 Endorsed | IVD: Complete lipid profile and LDL control <100 | |
| 0642 Endorsed | Cardiac Rehabilitation Patient Referral From an Inpatient Setting | MAP noted a prominent measure gap in patient-reported outcomes measures for rehabilitation. While measure #0642 focuses on referrals, MAP recognizes an opportunity for increased rates of referral for cardiac conditions |
| 0709 Endorsed | Proportion of patients with a chronic condition that have a potentially avoidable complication during a calendar year. | Explore expanding the denominator population to include individuals over 65. Consider how to provide data stratified by condition. |
| **Stroke** | | |
| 0661 Endorsed | OP–23: ED–Head CT Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke who Received Head CT Scan Interpretation Within 45 minutes of Arrival. | |
| 0437 Endorsed | Stroke and Stroke Rehabilitation: Thrombolytic Therapy | |
| 0241 Endorsed | Stroke and Stroke Rehabilitation: Anticoagulant Therapy Prescribed for Atrial Fibrillation at Discharge | |
| 0441 Endorsed | Assessed for Rehabilitation | MAP noted a prominent measure gap in patient-reported outcomes measures for rehabilitation; however, MAP recognizes the importance of the intermediate step to determine if rehabilitation services are |

| | | |
|---|---|---|
| | | needed. |
| **GAPS** | | |
| Diagnostics/Procedures | • Composite measure assessing appropriateness of all cardiac imaging. The composite should be able to be stratified by procedure for quality improvement purposes<br>• Appropriateness of CABG and PCI at the provider and system levels of analysis | |
| Rehabilitation | • Patient-reported outcomes related to rehabilitation, assessed at the facility, system, and community levels of analysis | |
| Medication Persistence | • Medication management measures that focus on persistence of medications for secondary prevention<br>o ACE/ARB, beta blocker, statin persistence for ischemic heart disease<br>o Anticoagulants, statins, and hypertensive medication for stroke | |

### *Chronic Cardiovascular Conditions*

MAP considered measurement opportunities for the evaluation and ongoing management phase and follow-up care phase on the episode of care. Within the evaluation and initial management phase of care, the highest-leverage opportunities focus on identifying patient preferences and care coordination; however, MAP will address these topics in other families of measures that cut across diseases (see page XX for measures included in the care coordination family of measures). For the follow-up care phase, MAP emphasized the need for medication management measures that focus on the persistence of medications, rather than ordering or prescribing medications. Several aspects of medication management have been assessed for a long time and, when the measure is "topped out," it no longer represents a significant opportunity for improvement. MAP identified measures to address some aspects of medication management (NQF #1525, #0081, 0083), noting that other aspects of medication management (i.e., persistence of ACE/ARBs, beta blockers) remain gaps. Additionally, MAP noted the need for measures addressing early identification of decompensated heart failure and assessment of functional status.

Table 4. Chronic Cardiovascular Condition Measures Selected for Family

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| **Atrial Fibrillation** | | |
| 1525 Endorsed | Chronic Anticoagulation Therapy | |
| **Heart Failure** | | |
| 0081 Endorsed | Heart Failure (HF): Angiotensin-Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy for Left Ventricular Systolic Dysfunction (LVSD) | While MAP emphasizes measures assessing persistence of medications, there is variation in prescribing ACE/ARBs across providers. |
| 0083 Endorsed | Heart Failure : Beta-blocker therapy for Left Ventricular Systolic Dysfunction | |
| **GAPS** | | |
| Functional Status | • Assessment of functional status at all levels of analysis and settings | |
| Medications | • Medication management measures the focus on persistence of medications for as part of follow-up care<br>o ACE/ARB , beta blockers | |
| Diagnostics | • Early identification of heart failure decompensation | |

### *Mortality*

Recognizing that mortality indicators are meaningful outcome measures for providers and consumers, MAP included measures of mortality in the cardiovascular family of measures. MAP preferred a 30-day period to extend the window of accountability beyond acute hospitalization. Similarly, MAP preferred an all-cause mortality rate to capture the multiple factors that can contribute to death. For example, an individual who dies of heart failure may have multiple factors contributing to death, of which heart failure is only one. While mortality measures exclude patients who are receiving the Medicare hospice benefit, MAP notes that mortality measures also need to account for patients receiving palliative care.

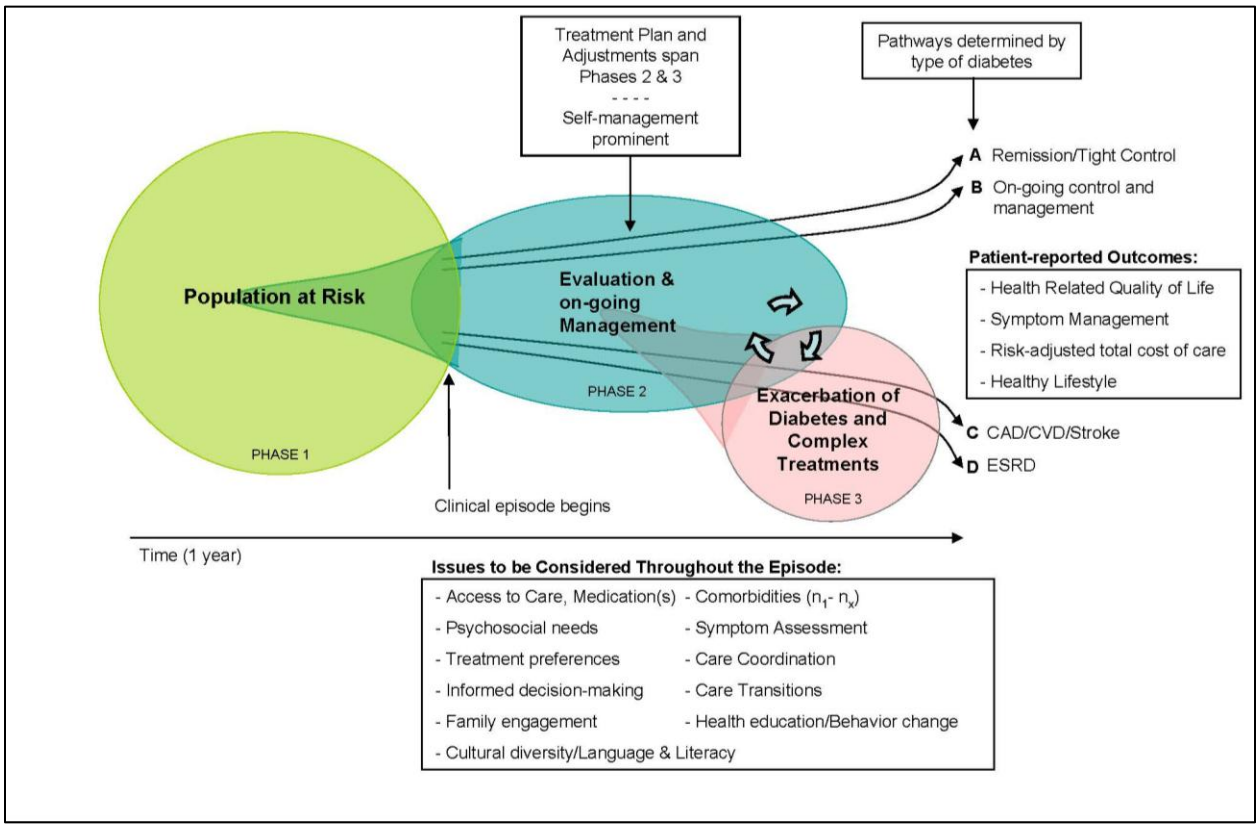
Table 5. Cardiovascular Conditions Mortality Measures Selected for Family

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| 0119 Endorsed (part of 0696 composite) | Risk-Adjusted Operative Mortality for CABG | |
| 0122 Endorsed | Risk-Adjusted Operative Mortality MV Replacement + CABG Surgery | |
| 0230 Endorsed | Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following acute myocardial infarction (AMI) hospitalization for patients 18 and older | |
| 0535 Endorsed | 30-day all-cause risk-standardized mortality rate following percutaneous coronary intervention (PCI) for patients without ST segment elevation myocardial infarction (STEMI) and without cardiogenic shock | |
| 0536 Endorsed | This measure estimates hospital risk-standardized 30-day all-cause mortality rate following percutaneous coronary intervention (PCI) in patients who are 18 years of age or older with STEMI or cardiogenic shock at the time of procedure. The measure uses clinical data available in the National Cardiovascular Data Registry (NCDR) CathPCI Registry for risk adjustment. For the purpose of development, the measure cohort was derived in a Medicare fee-for-service (FFS) population of patients 65 years of age or older with a PCI. | |
| 0229 Endorsed | Heart failure (HF) 30-day mortality rate | |

## Diabetes

Diabetes is the seventh leading cause of death in the U.S., and leads to significant morbidity and costs. It is estimated that about 8% of the U.S. population has diabetes[xi]. The diabetes adaptation of the episode of care model begins with the population at risk, followed by the evaluation and on-going management of care phase, and then the exacerbation of diabetes and complex treatments phase. Figure 3 below represents the patient-focused episode of care for diabetes.

### Figure 3. Patient-Focused Episode of Care for Diabetes




MAP identified high-leverage improvement opportunities across the episode of care for diabetes. Within the evaluation and ongoing-management phase, implementation of evidence-based guidelines for glycemic control, blood pressure control, and lipid control can lead to incremental improvements and reduction in the risk of complications. Within the exacerbation of diabetes and complex treatment phase, ongoing evaluation and management of dental health, eye health, as well as prevention of peripheral neuropathy and nephropathy, are opportunities for measurement. MAP noted that focusing on upstream evaluation and ongoing management can prevent downstream complications. Accordingly, to identify a parsimonious set of measures, MAP emphasized individual measures of evaluation and on-going management rather than individual measures assessing management of exacerbations of diabetes and complex treatments. Issues related to the exacerbation of diabetes and complex treatments could be included in a composite measure that assesses whether diabetes care is comprehensive. Accordingly, MAP identified measures to address glycemic control and lipid control (NQF #0575, #0064), noting that upstream measures of diabetes management are more suitable for the family of measures than measures of downstream sequelae of diabetes.

When identifying diabetes composite measures to be included in the family, MAP determined that both available composite measures are valuable and reflect two different approaches to measurement. One composite combines the rates of its individual components into an average score, while the other composite uses all-or-none scoring.

Table 6. Diabetes Measures Selected for Family

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| 0575 Endorsed | Comprehensive Diabetes Care: HbA1c control (<8.0%) | |
| 0064 Endorsed | Diabetes Measure Pair: A Lipid management: low density lipoprotein cholesterol (LDL-C) <130, B Lipid management: LDL-C <100 | MAP notes that forthcoming NHLBH guidelines could change the LDL targets. Adjusting measures to align with new guidelines will be addressed through the NQF-endorsement process. |
| **Composites** | | |
| 0729 Endorsed | Optimal Diabetes Care | MAP suggests that both diabetes composites consider addressing BMI. |
| 0731 Endorsed | Comprehensive Diabetes Care | |
| **GAPS** | | |
| Glycemic Control | • Measures addressing glycemic control for complex patients (e.g. geriatric population, multiple chronic conditions) at the clinician, facility and system levels of analysis<br>• Pediatric glycemic control<br>• Measures addressing glycemic control at the facility level | |
| Lipid Control | • Measures addressing lipid control at the facility level of analysis | |
| Sequelae of exacerbations | • Measures addressing sequelae of diabetes exacerbations at all levels of analyses | |

## Summary of the Prevention and Treatment Family of Measures

The tables below summarize the prevention and treatment family of measures along the patient-focused episode of care. As the primary prevention measures apply to both cardiovascular conditions and diabetes care, the measures are repeated in each table.

The bolded high leverage opportunities represent areas where the task force has identified measures to populate the family; non-bolded entries are considered gaps.

### Acute Cardiovascular Conditions Family of Measures

| | Primary Prevention | | Acute Phase | | Post-Acute/Rehab Phase | | Secondary Prevention |
|---|---|---|---|---|---|---|---|
| | Outpatient | Inpatient | Outpatient | Inpatient | Outpatient | Inpatient | Outpatient |
| Clinician Group/ Individual | • **Smoking Cessation/ Tobacco Use (0028, 1406);**<br>• **Lifestyle Management – Weight/Obesity (0024, 0421)**<br>• **Blood Pressure Control (0018)**<br>• Lipid Control<br>• Lifestyle Management – Diet/nutrition<br>• Lifestyle Management – Activity/Exercise<br>• Cardiometabolic risk | • Smoking Cessation/ Tobacco Use | • **IHD Complications (0709)** | • **IHD Procedures – CABG (0696)**<br>• **Stroke Anticoag for afib at d/c (0241)** | • **IHD Complications (0709)** | • **IHD Rehab (0642)** | • **IHD Medications – Aspirin (0068)**<br>• **IHD Medications – ACE/ARB (0066)**<br>• **IHD Medications – Beta Blocker (0070)**<br>• **IHD Secondary Prevention – Lipids (0075)** |

| | Primary Prevention | | Acute Phase | | Post-Acute/Rehab Phase | | Secondary Prevention |
|---|---|---|---|---|---|---|---|
| | Outpatient | Inpatient | Outpatient | Inpatient | Outpatient | Inpatient | Outpatient |
| | • **Resource Use (1598 and1604)** | | | | | | |
| Provider/ Facility | • Smoking Cessation/ Tobacco Use<br>• Lipid Control<br>• Lifestyle Management – Weight/Obesity<br>• Lifestyle Management – Diet/nutrition<br>• Lifestyle Management – Activity/Exercise<br>• Cardiometabolic risk | • **Smoking Cessation/ Tobacco Use (1651, 1654)** | • IHD **Diagnostic - ECG (0289)**<br>• IHD **Medications - fibrinolysis (0287/ 0288)**<br>• Stroke **Diagnostic - CT (0661)**<br>• IHD *Cardiac imaging (NQF 0669, 0670, 0671, 0672)* | • IHD **Diagnostic - ECG (0289)**<br>• IHD **Procedures - PCI(0163)**<br>• IHD **Procedures - CABG (0696)**<br>• IHD **Medications - fibrinolysis (0287/0288)**<br>• IHD *Bilateral cardiac cath (0355)*<br>• IHD Cardiac imaging composite<br>• IHD Appropriateness for CABG and non-emergent PCI<br>• Stroke **Diagnostic - CT (0661)**<br>• Stroke | • IHD Outcomes related to rehab<br>• Stroke Anticoagulants, statins, anti-hypertensive<br>• Stroke Obtaining rehab services<br>• Stroke Outcomes related to rehab (includes functional status)<br>• Mortality – **IHD AMI (0230)**<br>• Mortality – **IHD PCI (535)**<br>• Mortality – **IHD PCI (536)**<br>• Mortality – **HF (229)** | • IHD Outcomes related to rehab<br>• Stroke **Rehab – assessment (0441)**<br>• Stroke Obtaining rehab services<br>• Stroke Outcomes related to rehab (includes functional status)<br>• Mortality – **IHD AMI (0230)**<br>• Mortality – **IHD PCI (535)**<br>Mortality – **IHD PCI (536)**<br>• Mortality – **HF (229)** | • Stroke Anticoagulants, statins, anti-hypertensive<br>• Stroke High risk medication management |

| | Primary Prevention | | Acute Phase | | Post-Acute/Rehab Phase | | Secondary Prevention |
|---|---|---|---|---|---|---|---|
| | Outpatient | Inpatient | Outpatient | Inpatient | Outpatient | Inpatient | Outpatient |
| | | | | **Medications - Thrombolytic (0437)**<br>• **Mortality – IHD CABG (0119)**<br>• **Mortality – IHD CABG/MV (0122)** | | | |
| System | • **Lifestyle Management – Weight/Obesity (0024)**<br>• **Blood Pressure Control (0018)**<br>• Smoking Cessation/ Tobacco Use<br>• Lipid Control<br>• Blood pressure Control<br>• screening<br>• Lifestyle Management – Diet/nutrition<br>• Lifestyle Management – Activity/Exercise<br>• Cardiometabolic risk | | • **IHD Complications (0709)**<br>• **IHD** Cardiac imaging composite<br>• **IHD** Global resource measures<br>• **IHD** Appropriateness for CABG and non-emergent PCI<br>• **Stroke Medications -Thrombolytic (0437)** | | • **IHD Complications (0709)**<br>• **IHD Rehab (0642)**<br>• **IHD** outcomes related to rehab<br>• **Stroke** Anticoagulants, statins, anti-hypertensive<br>• **Stroke** obtaining rehab services | | • **IHD Secondary Prevention – Lipids (0075)**<br>• **Stroke** Anticoagulants, statins, anti-hypertensive<br>• **IHD** Medications--ACE/ARB, beta blocker, statin persistence |
| | • **Resource Use (1598 and1604)** | | | | | | |

| | Primary Prevention | | Acute Phase | | Post-Acute/Rehab Phase | | Secondary Prevention |
|---|---|---|---|---|---|---|---|
| | Outpatient | Inpatient | Outpatient | Inpatient | Outpatient | Inpatient | Outpatient |
| Community | • **Smoking Cessation/Tobacco Use (1406, 1651, 1654);**<br>• **Lifestyle Management – Weight/Obesity (0024, 0421)**<br>• **Blood Pressure Control (0018)**<br>• Cardiometabolic risk<br>• Lipid Control<br>• Lifestyle Management – Diet/nutrition<br>• Lifestyle Management – Activity/Exercise | | • **IHD Diagnostic – ECG (0289)**<br>• **IHD Procedures – PCI (0163)**<br>• **IHD Procedures – CABG (0696)**<br>• **IHD Medications – Fibrinolysis (0287/ 0288)**<br>• **IHD Complications (0709)**<br>• **IHD** *Cardiac imaging (0669)*<br>• **Stroke Medications -Thrombolytic (0437)**<br>• **Mortality – IHD – CABG (0119)**<br>• **Mortality – IHD CABG/MV (0122)** | | • **IHD Avoidable complication (0709)**<br>• **IHD** Outcomes related to rehab<br>• **Stroke Rehab – assessment (0441)**<br>• **Stroke** Anticoagulants, statins, anti-hypertensive | | • **Stroke** Anticoagulants, statins, anti-hypertensive<br>• **IHD** Medications-- ACE/ARB, beta blocker, statin persistence |
| | • **Resource Use (1598 and1604)** | | | | | | |

Table 8. Chronic Cardiovascular Conditions Family of Measures

| | Primary Prevention | | Evaluation and Initial Management | | Follow-Up Care |
|---|---|---|---|---|---|
| | Outpatient | Inpatient | Outpatient | Inpatient | Outpatient |
| Clinician Group/ Individual | • **Smoking Cessation/ Tobacco Use (0028, 1406);**<br>• **Lifestyle Management – Weight/Obesity (0024, 0421)**<br>• **Blood Pressure Control (0018)**<br>• Lipid Control | • Smoking Cessation/ Tobacco Use | • **HF** Functional status | • **HF** Functional status | • **Afib Medications – anti-coagulation (1525)**<br>• **HF Medications – ACE/ARB(0081)**<br>• **HF Medications – Beta -blocker (0083)**<br>• **HF** Medications-- ACE/ARB, beta blocker |

| | Primary Prevention | | Evaluation and Initial Management | | Follow-Up Care |
|---|---|---|---|---|---|
| | Outpatient | Inpatient | Outpatient | Inpatient | Outpatient |
| | • Lifestyle Management –Diet/nutrition<br>• Lifestyle Management – Activity/Exercise<br>• Cardiometabolic risk | | | | persistence |
| | • **Resource Use (1598 and 1604)** | | | | |
| Provider/ Facility | • Smoking Cessation/ Tobacco Use<br>• Lipid Control<br>• Lifestyle Management – Weight/Obesity<br>• Lifestyle Management –Diet/nutrition<br>• Lifestyle Management – Activity/Exercise<br>• Cardiometabolic risk | • **Smoking Cessation/ Tobacco Use (1651, 1654)** | • **HF** Functional status<br>• **Mortality – HF (229)** | • **HF** Functional status<br>• **Mortality – HF (229)** | • **HF Medications – Beta -blocker (0083)**<br>• **HF** Medications-- ACE/ARB, beta blocker persistence<br>• **HF** Early identification of decompensated HF |
| System | • **Lifestyle Management – Weight/Obesity (0024)**<br>• **Blood Pressure Control (0018)**<br>• Smoking Cessation/ Tobacco Use<br>• Lipid Control<br>• Blood pressure Control<br>• screening<br>• Lifestyle Management –Diet/nutrition<br>• Lifestyle Management – Activity/Exercise<br>• Cardiometabolic risk | | • Mortality<br>• **HF** Functional status | | • **HF** Medications-- ACE/ARB, beta blocker persistence |
| | • **Resource Use (1598 and 1604)** | | | | |

| | Primary Prevention | | Evaluation and Initial Management | | Follow-Up Care |
|---|---|---|---|---|---|
| | Outpatient | Inpatient | Outpatient | Inpatient | Outpatient |
| Community | • **Smoking Cessation/Tobacco Use (1406, 1651, 1654);**<br>• **Lifestyle Management – Weight/Obesity (0024, 0421)**<br>• **Blood Pressure Control (0018)**<br>• Cardiometabolic risk<br>• Lipid Control<br>• Lifestyle Management –Diet/nutrition<br>• Lifestyle Management – Activity/Exercise | | • Mortality<br>• **HF** Functional status | | • **HF** Medications--ACE/ARB, beta blocker persistence |
| | • **Resource Use (1598 and 1604)** | | | | |

Table 9. Diabetes Family of Measures

| | Primary Prevention of CV and DM | | Evaluation & ongoing management | | Exacerbation of Diabetes and Complex Treatments | |
|---|---|---|---|---|---|---|
| | Outpatient | Inpatient | Outpatient | Inpatient | Outpatient | Inpatient |
| Clinician Group/ Individual | • **Smoking Cessation/ Tobacco Use (0028, 1406);**<br>• **Lifestyle Management – Weight/Obesity (0024, 0421)**<br>• **Blood Pressure Control (0018)**<br>• Lipid Control<br>• Lifestyle | • Smoking Cessation/ Tobacco Use | • **Glycemic control/ HbA1c (0575);**<br>• **Lipid Control (0064)**<br>• **Composite (0729 and 0731)**<br>• Glycemic control for complex patients<br>• Pediatric glycemic control<br>• Lifestyle | • No high-leverage opportunities for measurement | • Sequelae of diabetes exacerbations | • No high-leverage opportunities for measurement |

| | Primary Prevention of CV and DM | | Evaluation & ongoing management | | Exacerbation of Diabetes and Complex Treatments | |
|---|---|---|---|---|---|---|
| | Outpatient | Inpatient | Outpatient | Inpatient | Outpatient | Inpatient |
| | Management – Diet/nutrition<br>• Lifestyle Management – Activity/Exercise<br>• Cardiometabolic risk | | Management – Diet/nutrition<br>• Lifestyle Management – Activity/Exercise<br>• Blood Pressure Control | | | |
| | • Resource Use (1598 and 1604) | | | | | |
| Provider/ Facility | • Smoking Cessation/ Tobacco Use<br>• Lipid Control<br>• Lifestyle Management – Weight/Obesity<br>• Lifestyle Management – Diet/nutrition<br>• Lifestyle Management – Activity/Exercise<br>• Cardiometabolic risk | • **Smoking Cessation/ Tobacco Use (1651, 1654)** | • Glycemic control/ HbA1c<br>• Glycemic control for complex patients<br>• Pediatric glycemic control<br>• Lipid Control<br>• Lifestyle Management – Diet/nutrition<br>• Lifestyle Management – Activity/Exercise<br>• Blood Pressure Control | • No high-leverage opportunities for measurement | • Sequelae of diabetes exacerbations | • No high-leverage opportunities for measurement |
| | • Resource Use (1598 and 1604) | | | | | |

| | Primary Prevention of CV and DM | | Evaluation & ongoing management | | Exacerbation of Diabetes and Complex Treatments | |
|---|---|---|---|---|---|---|
| | Outpatient | Inpatient | Outpatient | Inpatient | Outpatient | Inpatient |
| System | • **Lifestyle Management – Weight/Obesity (0024)**<br>• **Blood Pressure Control (0018)**<br>• Smoking Cessation/ Tobacco Use<br>• Lipid Control<br>• Blood pressure Control<br>• screening<br>• Lifestyle Management –Diet/nutrition<br>• Lifestyle Management – Activity/Exercise<br>• Cardiometabolic risk | | • **Composite (0729 and 0731)**<br>• **Glycemic control/ HbA1c (0575)**<br>• **Lipid Control (0064)**<br>• Glycemic control for complex patients<br>• Pediatric glycemic control<br>• Lipid Control<br>• Lifestyle Management –Diet/nutrition<br>• Lifestyle Management – Activity/Exercise<br>• Blood Pressure Control | | • Sequelae of diabetes exacerbations | • No high-leverage opportunities for measurement |
| | • Resource Use (1598 and 1604) | | | | | |
| Community | • **Smoking Cessation/Tobacco Use (1406, 1651, 1654);**<br>• **Lifestyle Management – Weight/Obesity (0024, 0421)**<br>• **Blood Pressure Control (0018)**<br>• Cardiometabolic risk<br>• Lipid Control<br>• Lifestyle Management –Diet/nutrition<br>• Lifestyle Management – Activity/Exercise | | • **Glycemic control/ HbA1c (0575);**<br>• **Lipid Control (0064)**<br>• Lifestyle Management –Diet/nutrition<br>• Lifestyle Management – Activity/Exercise<br>• Blood Pressure Control | | • Sequelae of diabetes exacerbations | |
| | • Resource Use (1598 and 1604) | | | | | |

## Appendices

1. Detailed Methods for CV Task Force- Include in Public Comment Draft
2. Chart with Impact, Improvability, and Inclusiveness

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## Safety Family of Measures

**Themes from the Identification of the Safety Family of Measures**

One of the major recommendations that emerged from the first year of MAP's work was to identify "*a national core set of safety measures that are applicable to all patients.*" In this report, MAP builds on this recommendation by providing input on a family of measures for safety that includes existing measures and gap areas across settings, levels of analysis, and public and private sector programs. The safety family of measures is intended to serve as the national core set, as well as to inform MAP's pre-rulemaking activities.

MAP's approach to developing a safety family of measures involved first identifying and prioritizing high-leverage opportunities for improvement. MAP considered the NQS goals for the priority of "making care safer by reducing harm caused in the delivery of care," which are reducing: 1) preventable hospital admissions and readmissions, 2) incidence of adverse healthcare-associated conditions, and 3) harm from inappropriate or unnecessary care. In identifying and prioritizing high-leverage opportunities, MAP also honed in on the key focus areas of HHS' Partnership for Patients and the Healthcare-Acquired Infection Initiative, as well as the Medicare Hospital-Acquired Conditions program. The topics and subtopics addressed within the measure family are displayed in Table 1.

**Table 1 – Safety Priority Topic and Subtopic Areas**

| Topic | Subtopic |
|---|---|
| **Healthcare-Acquired Infections** | Catheter-Associated Urinary Tract Infections (CAUTI) |
| | Central Line-Associated Blood Stream Infections (CLABSI) |
| | Methicillin-Resistant Staphylococcus aureus (MRSA) |
| | C. difficile |
| | Surgical Site Infection |
| | Sepsis |
| | Ventilator-Associated Pneumonia (VAP) |
| **Medication/Infusion Safety** | Adverse Drug Events |
| | Blood Incompatibility |
| | Manifestations of Poor Glycemic Control |
| **Pain Management** | Effectiveness, Medication Overuse, Patient Experience |
| **Venous Thromboembolism** | Deep Vein Thrombosis (DVT) |
| | Pulmonary Embolism (PE) |
| **Perioperative/Procedural Safety** | Foreign Object Retained After Surgery |
| | Trauma (burn, shock, laceration, puncture, iatrogenic pneumothorax) |
| | Air Embolism |
| **Injuries from Immobility** | Pressure Ulcers |
| | Falls |
| **Safety-Related Overuse & Appropriateness** | Imaging |
| | Antibiotics |
| **Obstetrical Adverse Events** | Pre-Delivery, Delivery, Post-Delivery |
| **Complications-Related Mortality** | Failure to Rescue |

Four themes resonated throughout MAP's identification of the safety family of measures. Predominant themes included the importance of creating and maintaining a culture of safety, need for patient and caregiver engagement in treatment planning and decisions, challenges to reporting meaningful safety information, and cost of care implications.

*Culture of Safety*

An overarching theme from the safety discussions was the importance of creating a "culture of safety" at every site of care. This culture of safety is patient-centered and requires multidisciplinary teamwork to protect patients from potential harm. It requires a non-punitive environment in which health professionals of all types and at all levels are encouraged to report errors and adverse events, with a true emphasis on the needs of the patient and family. Establishing a culture of safety requires organizational leadership to be actively engaged, as leaders play a critical role in demonstrating the importance of patient safety through their decisions. Currently, performance measurement is extremely limited in this area. As measurement continues to evolve, it will be essential to identify effective methods for assessing an organizational culture of safety.

*Patient and Caregiver Engagement*

The importance of including patient and caregiver preferences in treatment planning and decisions was another dominant theme in MAP's discussion about the safety family of measures. Matching treatments to patient goals can prevent harmful complications and side effects by reducing unwanted treatment and testing. MAP encourages the increased development and use of patient-reported outcome measures to assess patient understanding and alignment of treatment with patient goals. MAP plans to identify a patient and family engagement measure family as part of its future work.

*Reporting Meaningful Safety Information*

The challenge of providing meaningful performance information related to patient safety was another significant theme during MAP's safety discussions regarding reporting rare events, making comparisons, and supporting consumer decision-making. The messaging and context in which rare, serious reportable events are reported is critical. The occurrence of these kinds of events is very low by definition. To address concerns around the small numbers, MAP suggests creating a single composite measure that encompasses the most significant events. This composite could potentially be used for public reporting and payment programs while still providing the necessary detail for quality improvement purposes. Additionally, the use of standard definitions in safety measurement is important so that providers across all settings can accurately benchmark against one another to ensure consumers and purchasers can make informed choices. Finally, reporting performance scores as rates, rather than ratios, provides more understandable information for consumer decision-making.

*Cost of Care Implications*

Over the years, there have been many studies trying to quantify the cost of adverse events that occur within healthcare settings. Regardless of the actual dollar amount, it is understood that unsafe care is costly. The intent of selecting performance measures for a safety family is to promote reductions in the occurrence of adverse events across a variety of areas. MAP also recognized that there was a strong relationship between appropriate care and safe care. More specifically, MAP considered cost of care through the inclusion of overuse measures in the safety family of measures that could result in potential harm to patients. Throughout its deliberations, MAP

frequently discussed the importance of balancing the risk of a treatment or test with the benefit of that treatment or having that test result. MAP plans to identify a measure family focusing on cost of care measures as part of its future work.

**Selecting a Safety Family of Measures**

In order to identify existing measures for the safety measure family, MAP considered 316 measures that focused on the nine safety topic areas (Table 1). From this list, MAP identified for the family 55 existing measures as well as several gap areas. MAP noted the limitations of existing measures and suggested possible modifications that could allow a measure to be applied more broadly or show more meaningful results.

Although process measures tied closely to desired outcomes support improvement in healthcare, MAP preferred outcome measures over process and structural measures in selecting the family. The consensus was that outcome measures provide more flexibility for providers working to improve their quality, and more actionable information for purchasers deciding which healthcare options they should provide to their employees as well as patients making individual choices about where to receive care.

In discussions about data sources, MAP favored clinical data abstracted from the medical record, though it is more resource intensive to collect, over administrative data derived from billing codes and claims. As adoption of HIT becomes more widespread, it is anticipated that the ability to gather clinical data directly from the medical record will become more feasible.

*Healthcare-Acquired Infections*

MAP preferred the Center for Disease Control and Prevention's National Healthcare Safety Network (NHSN) methodology and chose four NHSN outcome measures for high-impact HAIs. Two of these, addressing C. difficile (NQF #1717) and MRSA (NQF #1716), were included in the family, pending completion of the NQF endorsement process. MAP also included a surgical site infection outcome measure (NQF #0753), encouraging expansion of the measure to include additional procedures and the pediatric population. The HAI measure group also includes a Surgical Care Improvement Project (SCIP) infection process measure (NQF #0529) to ensure antibiotics are discontinued appropriately after surgery, with the suggestion to expand to office-based and ambulatory surgery center settings. An influenza vaccination coverage measure for healthcare personnel (NQF #0431) was included with the recommendation to expand the denominator to all personnel working at the facility, rather than just healthcare personnel. MAP also included two measures to address sepsis: an outcome measure specifically designed to capture information about low-birth rate infants that develop sepsis (NQF #0304) and a composite measure that analyzes emergency department adult patients who develop severe sepsis and septic shock (NQF #0500). MAP noted that post-discharge follow-up for infection is an important missing component in HAI measurement.

Ultimately, MAP did not put forward a measure that captures ventilator associated pneumonia, but noted that this is an important safety topic that needs to be addressed. Measure development is underway for ventilator-associated event monitoring, and MAP would support a well-constructed measure that is specified for broad settings in this area.

Table 2. Healthcare-Acquired Infections Measures and Gaps for the Safety Family of Measures

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| #0138 Endorsed | National Healthcare Safety Network (NHSN) Catheter-Associated Urinary Tract Infection (CAUTI) Outcome Measure | Measure should be expanded beyond current settings. |
| #0139 Endorsed | National Healthcare Safety Network (NHSN) Central Line-Associated Bloodstream Infection (CLABSI) Outcome Measure | Measure should be expanded beyond current settings. |
| #0304 Endorsed | Late Sepsis or Meningitis in Very Low Birth Weight (VLBW) Neonates (risk-adjusted) | |
| #0431 Endorsed | Influenza Vaccination Coverage among Healthcare Personnel | Measure should be expanded to all personnel working at healthcare facilities. |
| #0500 Endorsed | Severe Sepsis and Septic Shock: Management Bundle | |
| #0529 Endorsed | SCIP INF–3 Prophylactic Antibiotics Discontinued within 24 Hours after Surgery End Time (48 hours for cardiac surgery) | Measure should be expanded to ASC and office-based procedures. |
| #1716 Submitted | National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Methicillin-resistant Staphylococcus aureus (MRSA) Bacteremia Outcome Measure | Measure should be included pending receipt of NQF endorsement. |
| #1717 Submitted | National Healthcare Safety Network (NHSN) Facility-wide Inpatient Hospital-onset Clostridium difficile Infection (CDI) Outcome Measure | Measure should be included pending receipt of NQF endorsement. |
| | | |
| Healthcare-Acquired Infections Priority Gap Areas | • VRE outcome measure<br>• Ventilator-associated events for acute, PAC, LTCH and home health settings<br>• Post-discharge follow up on infections in ambulatory settings<br>• Special considerations for the pediatric population related to ventilator associated events and C. difficile<br>• Infection measures reported as rates, rather than ratios (more meaningful to consumers)<br>• Sepsis (healthcare-acquired and community-acquired) incidence, early detection and monitoring | |

*Medication/Infusion Safety*

MAP included seven measures in the safety family that address medication and infusion safety while acknowledging the great need for further measure development in this area. Discussion regarding this complex topic reflected the varied concerns of the group, such as the lack of strong outcome measures and the need to expand measure denominators to include broader populations. MAP recommended the Improvement in Management of Oral Medications measure (#0176), suggesting the specifications be expanded to include clinician offices, in addition to the home health setting. Themes from the discussion revolved around the importance of patient-reported measures about understanding the purpose, dosage, and potential side effects of their medications. Though MAP included the Reconciled Medication List Received by Discharged Patients measure (NQF #0646), it was noted that a reconciled medication list is not sufficient if the patient does not also understand the information on the list. This raised the important role of the community pharmacist in providing patient education, and the need for improved health literacy of multiple stakeholders.

Shared accountability among providers was another theme throughout these discussions, as mistakes often occur during care transitions when the possibilities become greater for the administration of the wrong

medication, wrong dosage, drug-allergy, or drug-drug interactions. In light of these possibilities, MAP included 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 (NQF #0022) and recommended expanding the denominator beyond the currently specified 65 and over population. MAP also recognized the need for electronic prescribing, as evidenced by its recommendation of Adoption of Medication e-Prescribing (NQF #0486) for the safety family of measures.

Table 3. Medication/Infusion Safety Measures and Gaps for the Safety Family of Measures

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| #0176 Endorsed | Improvement in Management of Oral Medications | Measure should be expanded to clinician office/clinic. |
| #0419 Endorsed | Documentation of Current Medications in the Medical Record | Measure should be expanded to include acute care facility. |
| #0646 Endorsed | Reconciled Medication List Received by Discharged Patients (Inpatient Discharges to Home/Self Care or Any Other Site of Care) | |
| #0554 Endorsed | Medication Reconciliation Post-Discharge (MRP) | Consider a shortened time window for reconciliation for this measure. |
| #0486 Endorsed | Adoption of Medication e-Prescribing | Measure should be expanded to include how e-prescribing is used. |
| #0293 Endorsed | Medication Information | Measure should be expanded beyond discharges from the ED. |
| #0022 Endorsed | 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. | Measure should be expanded beyond ≥65 population. |
| | | |
| Medication/Infusion Safety Priority Gap Areas | • Outcomes – injury/mortality related to inappropriate drug management<br>• Patient-reported measures of understanding medications (purpose, dosage, side effects, etc.)<br>• Total number of adverse drug events that occur within all settings (including administration of wrong medication, wrong dosage, drug-allergy or drug-drug interactions)<br>• Polypharmacy and use of unnecessary medications for all ages, especially with high-risk medications<br>• Comprehensive medication review<br>• Role of community pharmacist or home health in reconciliation<br>• Blood Incompatibility<br>•Manifestations of Poor Glycemic Control<br>•Air Embolism | |

*Pain Management*

In discussions about pain management, MAP recognized that pain is a universal and often inevitable complication of illness and treatment that needs to be managed across settings. MAP noted that managing pain involves a careful balance of avoiding under-treatment and over-treatment, and working closely with patients to understand their needs and goals. MAP included five measures that assess and treat pain in the safety family of measures. Many of the measures available for pain management are currently specified for hospice and palliative care, such as its Comfortable Dying measure (NQF #0209) and the Hospice and Palliative Care – Pain Screening, and Pain Assessment measures (NQF #1634, #1637); MAP therefore recommended that these be included in the family but be expanded to a broader population and age range. MAP also included Improvement in Pain Interfering with Activity (NQF #0177), a home health measure that MAP encouraged broadening to other settings, and Patients Treated with an Opioid who are Given a Bowel Regimen (NQF #1617), a measure currently focused on pain management in the vulnerable adult population but addressing a potential complication applicable to all populations.

Table 4. Pain Management Measures and Gaps for the Safety Family of Measures

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| #0177 Endorsed | Improvement in Pain Interfering with Activity | Measure should be expanded beyond home health to all care settings. |
| #0209 Endorsed | Comfortable Dying: Pain Brought to a Comfortable Level Within 48 Hours of Initial Assessment | Measure should be expanded beyond the hospice setting. |
| #1617 Endorsed | Patients Treated with an Opoid who are Given a Bowel Regimen | |
| #1634 Endorsed | Hospice and Palliative Care – Pain Screening | Measure should be expanded beyond hospice or palliative care patients. |
| #1637 Endorsed | Hospice and Palliative Care – Pain Assessment | Measure should be expanded beyond hospice or palliative care patients. |
| | | |
| Pain Management Priority Gap Areas | • Effectiveness of pain management paired with patient experience and balanced by overuse/misuse monitoring<br>• Assessment of depression with pain | |

*Venous Thromboembolism*

MAP chose four measures addressing deep vein thrombosis/pulmonary embolism (DVT/PE) for its safety measure family. Two of these measures identify patients with DVT/PE on anticoagulation for at least three months after the diagnosis (NQF #0581, #0593), and one captures the number of potentially preventable venous thromboembolisms (VTEs) that occur in a facility (NQF #0376). A notable theme from this discussion was that evidence suggests the existing process measures are closely aligned with outcomes for this particular condition; all of the above are process measures. MAP did choose Post-operative PE or DVT (NQF #0450) as an outcome measure for surgical patients with the recommendation to expand the specifications to all medical patients. Therapeutic monitoring for adherence to VTE medications and medication side effects to protect against possible undesirable consequences of using medications rather than mechanical interventions to prevent and

treat VTE is important. MAP also wanted to see expanded settings for many of these measures that are currently specified only for acute care facilities.

Table 5. Venous Thromboembolism Measures and Gaps for the Safety Family of Measures

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| #0376 Endorsed | VTE-6: Incidence of Potentially-Preventable VTE | Measure should reflect updated evidence (use of pharmacologic versus mechanical interventions). |
| #0450 Endorsed | PSI 12: Post-Operative PE or DVT | Measure should be expanded to include medical patients. |
| #0581 Endorsed | Deep Vein Thrombosis Anticoagulation >= 3 Months | Measure requires pharmacy plan and should be expanded to include maintained in therapeutic range. Could combine measure with #0593. |
| #0593 Endorsed | Pulmonary Embolism Anticoagulation >= 3 Months | Measure requires pharmacy plan and should be expanded to include maintained in therapeutic range. Could combine measure with #0581. |
| | | |
| Venous Thromboembolism Priority Gap Areas | • Adherence to VTE medications, monitoring of therapeutic levels and medication side effects<br>• Monitoring for VTE recurrence<br>• VTE outcome measures for ASCs and PAC/LTC settings | |

*Perioperative/Procedural Safety*

Due to the rare occurrence of many of the measures in the perioperative/procedural safety topic, (e.g. foreign object retained after surgery, burn, laceration, puncture, iatrogenic pneumothorax) discussion revolved around the unique challenges of measuring and reporting these events. MAP recognized concerns regarding reporting these serious events due to the small numbers, and suggested creating a single composite measure that encompasses the most significant serious reportable events. Although complications composites are available for both the adult and pediatric populations, MAP reviewed the component measures of each composite and decided against including the composite measures, so composites of serious report events remains a gap. For the safety family, it recommended six available measures that capture information about these events such as Accidental puncture or laceration (NQF #0344), Foreign Body Left in During Procedure (NQF #0363), and Wrong Site, Wrong Side, Wrong Patient, Wrong Procedure, Wrong Implant (NQF #0267).

Additionally, MAP recognized that perioperative/procedural safety is a subtopic for which checklists are particularly useful, and therefore recommended that the Safe Surgery Checklist measure be brought forward for NQF endorsement and inclusion into the safety measure family. For all remaining six measures chosen for this subtopic, the group noted that the measures should be expanded to include all settings in which relevant procedures are performed. Further, MAP sought a measure addressing iatrogenic pneumothorax, but raised concern that the denominator of the currently available measure is too broad and should be specified to only apply to “at risk” patients in a facility to capture accurate data.

Table 6. Perioperative/Procedural Safety Measures and Gaps for the Safety Family of Measures

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| #0263 Endorsed | ASC-1: Patient Burn -Percentage of ASC admissions Experiencing a Burn Prior to Discharge | Measure should be expanded to include all procedural settings. |
| #0267 Endorsed | ASC-3: Wrong Site, Wrong Side, Wrong Patient, Wrong Procedure, Wrong Implant | Measure should be expanded to include all procedural settings. |
| #0344 Endorsed | Accidental Puncture or Laceration (PDI 1) (risk adjusted) | Measure should be expanded to include all procedural settings. |
| #0345 Endorsed | PSI 15: Accidental Puncture or Laceration | Measure should be expanded to include all procedural settings. |
| #0362 Endorsed | Foreign Body Left after Procedure (PDI 3) | Measure should be expanded to include all procedural settings. |
| #0363 Endorsed | Foreign Body Left in During Procedure (PSI 5) | Measure should be expanded to include all procedural settings. |
| Not Endorsed | Safe Surgery Checklist | Measure should be brought to NQF for endorsement. |
| | | |
| Perioperative/Procedural Safety Priority Gap Areas | • Single composite measure that encompasses all, or most significant, "never events"<br>• Iatrogenic Pneumothorax measures: modify denominator to include patients receiving treatments putting them at risk for this complication<br>• Anesthesia events (inter-op MI, corneal abrasion, broken tooth, etc.)<br>• Perioperative respiratory events<br>• Perioperative blood loss or transfusion/over-transfusion<br>• Altered mental status in Perioperative period | |

*Injuries from Immobility*

Of the six measures recommended for the safety family that address injuries from immobility, MAP focused largely on outcome and paired measures, specifically addressing falls and pressure ulcers. MAP cautioned that it will be important to monitor for unintended consequences potentially resulting from application of these measures, such as increased use of indwelling catheters or use of restraints. MAP reaffirmed the importance of having a culture of safety in place for all facilities to responsibly manage these types of events if they should occur, and encourage disclosure rather than hide negative outcomes. MAP noted the need for a standard definition of falls across settings, as well as consistent staging requirements for pressure ulcer prevention and treatment. Although it is more resource intensive for providers to conduct a one-day prevalence study to gather data for the measure, MAP recommended a Pressure Ulcer Prevalence measure (NQF #0201).

Table 7. Injuries from Immobility Measures and Gaps for the Safety Family of Measures

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| #0141 Endorsed (paired with #0202) | Patient Fall Rate | |
| #0181 Endorsed | Increase in Number of Pressure Ulcers | |
| #0201 Endorsed | Pressure Ulcer Prevalence | |
| #0202 Endorsed (paired with #0141) | Falls with Injury | |
| #0266 Endorsed | ASC-2: Patient Fall | Measures 0141 and 0202 should be harmonized. |
| #0674 Endorsed | Percent of Residents Experiencing One or More Falls with Major Injury (Long Stay) | |
| | | |
| Injuries from Immobility Priority Gap Areas | • Standard definition of falls across settings to avoid potential confusion related to two different fall rates<br>• Evaluating bone density, prevention and treatment of osteoporosis in ambulatory settings | |

*Safety-Related Overuse and Appropriateness*

MAP established that for the purpose of selecting overuse measures for the safety family, measures that assess harm to the patient should be given high priority. MAP highlighted the need to weigh the benefits and risks prior to ordering tests and treatments. Factors include time, money, and physical and emotional stress on vulnerable patients and their caregivers. MAP emphasized that care should match patient goals and preferences in addition to being evidence-based.

MAP chose twelve measures involving appropriate use of tests and treatments for the safety family. Examples include Low Back Pain: Use of Imaging Studies (NQF #0052) and Antibiotic Treatment for Adults with Acute Bronchitis: Avoidance of Inappropriate Use (NQF #0058). Among the twelve measures, MAP included three measures specified for the pediatric population, such as Appropriate Treatment for Children with Upper Respiratory Infection (NQF #0069). All of these were process measures; however, the consensus was that these were important processes to include in the absence of better outcome measures. MAP noted a need to improve communication about the scores of these measures: a lower score is a positive indicator for some of the measures and for others a lower score is a negative indicator, which is confusing. For example, for the Appropriate Testing for Children with Pharyngitis measure (NQF #0002), a higher score indicates better performance (i.e. appropriate testing); whereas for the Appropriate Treatment for Children with Upper Respiratory Infection measure (NQF #0069), a lower score is preferable.

Table 8. Safety-Related Overuse & Appropriateness Measures and Gaps for the Safety Family of Measures

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| #0002 Endorsed | Appropriate Testing for Children with Pharyngitis | |
| #0052 Endorsed | Low Back Pain: Use of Imaging Studies | Measure should be expanded to include individuals over 50 years old. |

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| #0058 Endorsed | Antibiotic Treatment for Adults with Acute Bronchitis: Avoidance of Inappropriate Use | |
| #0069 Endorsed | Appropriate Treatment for Children with Upper Respiratory Infection (URI) | |
| #0305 Endorsed | LBP: Surgical Timing | |
| #0309 Endorsed | LBP: Appropriate Use of Epidural Steroid Injections | |
| #0656 Endorsed | Otitis Media with Effusion: Systemic Corticosteroids – Avoidance of Inappropriate Use | |
| #0657 Endorsed | Percentage of Patients Aged 2 months through 12 years with a Diagnosis of OME who were not Prescribed Systemic Antimicrobials | |
| #0659 Endorsed | Endoscopy & Polyp Surveillance: Colonoscopy Interval for Patients with a History of Adenomatous Polyps- Avoidance of Inappropriate Use | |
| #0667 Endorsed | Inappropriate Pulmonary CT Imaging for Patients at Low Risk for Pulmonary Embolism | |
| #0668 Endorsed | Appropriate Head CT Imaging in Adults with Mild Traumatic Brain Injury | |
| #0755 Endorsed | Appropriate Cervical Spine Radiography and CT Imaging in Trauma | |
| | | |
| Safety-Related Overuse & Appropriateness Priority Gap Areas | • Consistency in scoring for public reporting: should be clear if high or low scores are desired<br>• Chemotherapy appropriateness, including dosing<br>• Over diagnosis, under diagnosis, misdiagnosis<br>• Use of sedatives, hypnotics, atypical anti-psychotics, pain medications (with chronic pain management)<br>• Treatment given that is not matched to patient goals, especially with palliative and end-of-life care<br>• Antibiotic use for sinusitis<br>• Use of cardiac CT and stenting | |

*Obstetrical Adverse Events*

MAP included four measures related to obstetrical adverse events in the safety family of measures: three outcome measures and one process measure. MAP deliberated carefully about whether to include a measure of healthy term births. A unique aspect of maternity care is that ostensibly no illness or injury is being treated; rather, the clinical team is assisting in a normal biological process that should result in a healthy outcome. In addition, the health of both mother and baby at the time of delivery are heavily influenced by prenatal care, or lack thereof. MAP's consensus was that a system measure that captures whether this healthy outcome was attained is important. Given the measures available, MAP included both the Healthy Term Newborn measure (NQF #0716) and the Under 1500 gram Infant Not Delivered at Appropriate Level of Care measure (NQF #0477) in the family as representative of healthcare system success. Further, MAP included a measure of elective deliveries prior to 39 weeks gestation (NQ #0469) and a measure of elective C-sections (NQF #0471), but cautioned that monitoring for potential undesirable consequences, such as providers waiting too long to deliver

babies, is important. These two measures should be reported with the Healthy Term Newborn measure as a balancing measure. MAP also noted that maternity care makes up a significant portion of healthcare services, and there is a dearth of measures in this area.

Table 9. Obstetrical Adverse Events Measures and Gaps for the Safety Family of Measures

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| #0469 Endorsed | PC-01 Elective Delivery Prior to 39 Completed Weeks Gestation | The contraindications list should be expanded for this measure. |
| #0471 Endorsed | PC-02 Cesarean Section | |
| #0477 Endorsed | Under 1500g Infant Not Delivered at Appropriate Level of Care | |
| #0716 Endorsed | Healthy Term Newborn | |
| | | |
| Obstetrical Adverse Event Priority Gap Areas | • Obstetrical adverse event index<br>• Overall complications composite measure<br>• Measures using NHSN definitions for infections in newborns | |

*Complications-Related Mortality*

MAP believed that measuring mortality is extremely important, and equally important to measure accurately. MAP recommended one complications-related mortality outcome measure for the safety family, Death Among Surgical Inpatients with Serious, Treatable Complications (NQF #0351). Complications-related mortality raised several measurement concerns, such as lack of a present-on-admission (POA) indicator for some measures—where without this exclusion, measure results may be misleading. Another concern raised was the quality of information conveyed through public reporting of a measure. MAP noted that to make meaningful distinctions between low and high-performing hospitals, mortality measures need proper risk-adjustment, exclusions, and POA indicators. In addition, mortality measures need to be constructed in such a way as not to penalize providers that are delivering hospice and/or palliative care in accordance with the patient's preferences.

Table 10. Complications-Related Mortality Measure and Gaps for the Safety Family of Measures

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| #0351 Endorsed | Death among Surgical Inpatients with Serious, Treatable Complications (PSI 4) | Measure should include POA indicators. |
| | | |
| Complications-Related Mortality Priority Gap Areas | • Preferably expressed as a ratio instead of percentage<br>• Questions of how to accommodate small numbers<br>• Expand to PAC/LTC settings<br>• Failure to Rescue | |

# Care Coordination Family of Measures

**Themes from the Identification of the Care Coordination Family of Measures**

In developing the care coordination family of measures, MAP considered the NQS goals for the priority of "promoting effective communication and coordination of care," which are: 1) improving the quality of care transitions and communications across care settings, 2) improving the quality of life for patients with chronic illness and disability by following a current care plan that anticipates and addresses pain and symptom management, psychosocial needs, and functional status, and 3) establishing the quality of life for patients with chronic illness and disability by following a current care plan that anticipates and addresses pain and symptom management, psychosocial needs, and functional status. Additionally, MAP sought to build on prior NQF work addressing care coordination quality measurement including the NQF-Endorsed Definition and Framework for Measuring and Reporting Care Coordination and the Preferred Practices and Performance Measures for Measuring and Reporting Care Coordination to identify high-leverage opportunities for measurement. Using these prior efforts as a foundation, MAP identified six priority topic areas for aligning care coordination quality measurement, which were broken into a number of subtopics based on available measures. The topics and subtopics addressed within the measure family are displayed in Table 11.

**Table 11 – Care Coordination Priority Topic and Subtopic Areas**

| Topic | Subtopic |
|---|---|
| **Avoidable Admissions and Readmissions** | Avoidable Admissions |
| | Avoidable Readmissions |
| | Avoidable ED Visits |
| **System Infrastructure Support** | Health Information Technology (HIT) |
| | Medical Homes; Accountable Care Organizations |
| | Tracking/Reminder Systems |
| **Care Transitions** | Effectiveness |
| | Timeliness |
| **Communication** | Patient Communication |
| | Provider Communication |
| **Care Planning** | General |
| | Condition Specific |
| | Patient Preference at End of Life |
| **Patient Surveys Related to Care Coordination** | Patient Experience and Perception of Care Coordination |

Four themes resonated throughout the course of MAP's identification of the care coordination family of measures. Predominant themes included the importance of patient and caregiver engagement, access to resources in the community, involvement of the entire healthcare system in coordination of care, continued challenges of collecting meaningful data for quality measurement, and cost of care implications.

*Patient and Caregiver Engagement*

MAP emphasized that patient and caregiver engagement should be the focus of a care coordination family of measures. The NQF definition of care coordination is a "function that helps ensure that the patient's needs and preferences for health services and information sharing across people, functions, and sites are met over time[i]." MAP underscored the importance of shared decision-making and including the patient and family/caregiver in care decisions and planning. Care should be aligned with patient goals and preferences to prevent the provision of unwanted treatments. Additionally, MAP noted that measures should ensure patient and caregiver understanding and agreement with the plan of care. MAP plans to identify a patient and family engagement measure family as part of its future work.

*Access to Community Resources*

MAP recognized the vital role that community resources play in keeping patients as independent as possible and receiving the "right" level of care. Resources such as home health, telehealth, and community pharmacists are crucial parts of effective care transitions, and access to such services helps prevent avoidable hospital admissions and readmissions as well as reduces overuse and inefficiencies. MAP recognized the importance of assessing the ability of patients to connect with resources available in their community, helping facilitate that connection, and the need for measures that address the role of the community and resources available to patients.

*System-Wide Engagement in Care Coordination*

MAP acknowledged that truly successful care coordination only occurs when the entire healthcare system is engaged. MAP members noted that care coordination is about what happens in the space between providers, and existing measures fail to capture shared accountability throughout the system. Available care coordination measures are mostly hospital-centric, reinforcing the silos within the system. While these measures can show system success, measures specified for only one setting or level of analysis do not hold the entire system accountable. Existing measures of clinician care coordination are generally physician-focused and do not apply to other members of the multidisciplinary care team, such as nurses, social workers, and allied health professionals. MAP recognized the need for measures that reflect and promote shared accountability across the system including, but not limited to, developing or modifying measures for accountable care organizations (ACOs) or patient-centered medical homes (PCMHs).

*Data Issues*

MAP discussed issues of data sources and data collection for care coordination measures. Provider communication measures need to address both the sending and receiving of information, but current measures lack this bi-directionality. MAP noted the need for continued development of interoperable health records that can be exchanged and used for automated, real-time measurement systems. More comprehensive patient-reported data relating to care coordination is also needed. Patients and caregivers provide a practical viewpoint and add great value to defining effective care coordination process components. MAP encourages further development of patient-reported measures of care coordination.

*Cost of Care Implications*

Care coordination impacts both quality and cost: preventing harmful and costly complications, improving patient outcomes, and lowering costs by reducing readmissions, ED visits, and duplicative services. Poor care coordination

can lead to overuse, misuse, and inefficiency, driving up costs while simultaneously lowering quality through duplication and unnecessary services. The rate of hospital readmissions among Medicare beneficiaries within 30 days of discharge is one indicator of good care coordination. Nearly 20% of Medicare patients discharged from the hospital are readmitted within 30 days, translating to 2.6 million seniors readmitted at a cost of over $26 billion every year[ii]. Better care coordination can lead to fewer readmissions and ED visits, improving outcomes and satisfaction, while reducing costs. MAP plans to identify a cost of care measure family as part of its future work.

**Selecting a Care Coordination Family of Measures**

In identifying the care coordination measure family, MAP considered a total of 135 measures focusing on the six care coordination topic areas (Table 11). A set of 62 available measures and a number of measure gaps were identified. MAP noted the limitations of existing measures and possible modifications that could allow a measure to be applied more broadly or to show more meaningful results.

*Avoidable Admissions and Readmissions*

Avoidable admissions and readmissions are good examples of the need for shared accountability. Though avoidable readmissions are not exclusively related to the quality of care received in the hospital setting, available readmission measures are generally hospital-centric. MAP recognized that the existence of these measures has prompted improvement, but measurement in this area must be expanded to address shared accountability across the entire health system. In the meantime, MAP included several existing measures within the care coordination family as an important signal of the significance of the issue and commitment to reducing avoidable admissions and readmissions.

When considering the available measures of avoidable admissions and readmissions, a number of issues resonated throughout the discussion. MAP raised concerns that the current state of the art of risk adjustment is inadequate to address the complexity of measurement in this area. Specifically, some members noted that vulnerable populations may have different rates of hospitalization and re-hospitalization and level-setting will be particularly important for applying measures to performance-based payment programs. MAP also questioned the time period for these measures: Is 30 days the appropriate time window of accountability? Additionally, MAP agreed that readmission measures should exclude planned readmissions, as those readmissions are purposeful and do not imply poor quality of care. Finally, when measuring avoidable admissions and readmissions in programs, programs should include monitoring for mortality, average length of stay, observation days, ED visits, patient experience, and post-discharge follow-up.

MAP had a lengthy discussion about whether to include potentially avoidable complications measures for hospitalized acute myocardial infarction, stroke, and pneumonia patients (NQF #0704, #0705, #0708) in the care coordination family of measures. MAP concluded that these measures were meaningful to consumers and promoted parsimony, as each measure addresses multiple complications, including readmissions. A similar, broader measure of potentially avoidable complications for patients with any of six chronic conditions over a calendar year (NQF #0709) was also included. MAP did note that none of these complications measures included the present-on-admission indicator, which should be considered for these measures in the future.

MAP also engaged in substantial discussion regarding the available readmissions measures, considering both condition-specific and hospital-wide approaches. Ultimately, the Plan All-Cause Readmissions measure (NQF #1768) and the Hospital-Wide All-Cause Unplanned Readmission measure (NQF #1789) were chosen for the care

coordination family. MAP found that inclusion of the all-plan and hospital-wide measures was a more parsimonious option than the condition-specific measures. MAP also raised concern that having multiple differing condition-specific measures addressing the same area of performance potentially creates confusion for consumers and purchasers as well as providers.

Regarding the Plan All-Cause Readmissions measure (NQF #1768), MAP noted that purchasers are pushing plans to be more accountable regarding readmissions and this measure helps illustrate plans' role in this area. MAP raised concern that the measure does not take into account planned versus unplanned readmissions. Additionally, only like plans should be compared to one another when publicly reporting the measure. For example, plans that exclusively serve vulnerable populations should not be compared to plans that serve broader populations.

Regarding the Hospital-Wide All-Cause Unplanned Readmission measure (NQF #1789), MAP noted the advantages of measuring overall readmissions, separating planned from unplanned readmissions, and including risk adjustment. Some MAP members raised that comparisons using this measure should be limited to hospitals serving similar populations and that it is critical to better understand how the measure performs before it is considered for performance-based payment programs to ensure that safety net hospitals serving large vulnerable populations are not unfairly penalized.

Finally, MAP included four additional measures of avoidable admissions and emergency department visits (NQF #0171, #0173, #0265, #1381) in the care coordination family. Two of these measures (NQF #0171, #0173) address patients who are receiving home care services and become hospitalized or visit the emergency department. MAP recommended that these measures be expanded beyond the home health setting to include other post-acute and long-term care settings. Currently, measures are being developed related to readmissions from skilled nursing facilities. Patients undergoing procedures in an ambulatory surgery center (ASC) and requiring transfer and/or admission to a hospital upon discharge from the ASC are addressed by NQF #0265. A measure for assessing the number of patients with asthma, a pediatric high-impact condition, having one or more visits to the emergency department within a 12-month period (NQF #1381), is also included in the family.

Table 12. Avoidable Admissions/Readmissions Measures and Gaps for the Care Coordination Family of Measures

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| #0171 Endorsed | Acute Care Hospitalization (risk-adjusted) | Measure could be expanded to more post-acute and long-term care settings in the future. |
| #0173 Endorsed | Emergent Care (risk adjusted) | Measure could be expanded to more post-acute and long-term care settings in the future. |
| #0265 Endorsed | Hospital Transfer/Admission | |
| #0704 Endorsed | Proportion of Patients Hospitalized with AMI that have a Potentially Avoidable Complication (during the Index Stay or in the 30-day Post-Discharge Period) | Measure should be modified to include an indicator of POA status. |
| #0705 Endorsed | Proportion of Patients Hospitalized with Stroke that have a Potentially Avoidable Complication (during the Index Stay or in the 30-day Post-Discharge Period) | Measure should be modified to include an indicator of POA status. |

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| #0708 Endorsed | Proportion of Patients Hospitalized with Pneumonia that have a Potentially Avoidable Complication (during the Index Stay or in the 30-day Post-Discharge Period) | Measure should be modified to include an indicator of POA status. |
| #0709 Endorsed | Proportion of Patients with a Chronic Condition that have a Potentially Avoidable Complication During a Calendar Year. | Measure should be modified to include an indicator of POA status. |
| #1381 Endorsed | Asthma Emergency Department Visits | |
| #1768 Endorsed | Plan All-Cause Readmissions | Measure does not indicate planned vs. unplanned readmissions. Measure should be used with balancing measures of mortality, average of stay, ED visits, observation days, post-discharge follow-up, and patient experience. |
| #1789 Endorsed | Hospital-Wide All-Cause Unplanned Readmission Measure (HWR) | Measure should be used with balancing measures of mortality, length of stay, ED visits, observation days, post-discharge follow-up, and patient experience. |
| | | |
| Avoidable Admissions/ Readmissions Priority Gap Areas | • Shared accountability and attribution across the continuum<br>• Community role, patient's ability to connect to available resources<br>• All populations and causes of admissions/readmissions<br>• Modify PQI measures to address accountability for ACOs. Modify population to include those with the disease (if applicable). | |

*System and Infrastructure Support*

MAP reviewed measures that address the role of systems and infrastructure in care coordination and selected one measure for the family, Medical Home System Survey (NQF #0494). This measure is provider-reported at the practice level and should be coupled with a patient-reported measure. MAP stressed the need for further measure development in this area. As existing measures reference the current infrastructure, future measure development should address new technologies and models of care to drive improvement. Continued development of interoperable health records is needed. MAP emphasized that it is not enough to measure EHR capacity; rather, measures must show both the successful sending and receiving of information.

Additionally, MAP noted the need for better measures of care coordination across the system where current measures are outdated and/or not inclusive of all patient populations. For example, the measure Medical Home for Children and Adolescents (NQF #0724) addresses only the pediatric population within medical homes, but does not include adults or ACOs. Complex, chronically ill patients should be included in the populations for medical home measures, as these patients stand to benefit the most from care coordination provided by a medical home. Finally, measures should move beyond the physician-led medical home to the clinician-led medical home, recognizing the role of other disciplines within this model.

Table 13. System and Infrastructure Support Measures and Gaps for the Care Coordination Family of Measures

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| #0494 Endorsed | Medical Home System Survey | Survey should be reported with a balancing patient-reported survey. |
| | | |
| System and Infrastructure Support Priority Gap Areas | • Move beyond EHR capacity to measures of interoperability of EHRs, enhanced communication<br>• Measures of "systemness," including but not limited to ACOs, PCMHs | |

*Care Transitions*

MAP defined a successful transition as one that was timely, prevented avoidable readmissions or ED visits, and was aligned with patient and caregiver preferences. While many currently available measures focus on the hospital setting, MAP attempted to include measures that address transitions across the continuum when available.

Care transition measures included in the family attempted to address two major questions related to successful transitions: 1) Did the patient get to the next needed site of care? 2) Was the necessary information about the patient available to the next site of care in a timely manner? While few available measures address the first question, a number of measures were included in the family as a starting point. Stressing the importance of continuing care in an outpatient setting, MAP included three measures addressing transitions to the next site of care: two measures assessing follow-up visits (NQF #0576 and #0403) and one assessing if the patient began home health care in a timely manner (NQF #0526).

MAP took a broader view and included measures that address timeliness from both inter- and intra-facility perspectives and focused on the hospital setting because of measures currently available. One measure, Median Time to Transfer to Another Facility for Acute Coronary Intervention (NQF #0290), was included to assess timely transitions from one facility to the next, stressing the high-impact and time-sensitive nature of treatment for AMI. MAP also included five additional measures addressing AMI: one measure involving time to ECG (NQF #0289) and four involving time to treatment with PCI or fibrinolysis (NQF #0164, #0287, #0288, #0163). One measure involving the timely availability of CT results for stroke patients (NQF #0661) was also added to the family.

Unsuccessful care transitions can result in avoidable readmissions and ED visits, endangering patients and driving up the cost of care. While these issues can be failures of the system, MAP included the 30-Day Post-Hospital Discharge Care Transition Composite Measures for AMI, heart failure, and pneumonia measures (NQF #0698, #0699, #0707) in the care coordination family. These complex, risk-adjusted composites evaluate readmissions, ED visits, and evaluation and management (E&M) coded follow-up visits. A caveat to these measures is that the E&M visit requirement does not allow for innovative care transition programs such as home visits by nurses. As it is important for a patient to receive follow-up care in a timely fashion, the measure could

be modified to a 7-day window for E&M visits. Some MAP members urged better understanding of how these measures perform before they are considered for performance-based payment programs, to ensure that hospitals are not unfairly penalized for events outside of their control. Additionally, PICU Unplanned Readmission Rate (NQF #0335) was included to address readmission to the ICU from a lower level of care or following discharge.

Recognizing that patient and family/caregiver engagement is key to successful care transitions, MAP included the 3-Item Care Transition Measure (CTM-3) (NQF #0228) in the family. This patient-reported measure assesses inclusion of patient preferences in the care plan, understanding of self-care, and medication management. Although HCAHPS currently includes the items from CTM-3, this measure was also included in the family separately as it can be applied to facilities other than hospitals. MAP also discussed that the CTM-3 survey could be modified to allow for evaluation before discharge to proactively address potential issues with care transitions.

A number of measure gaps were identified for the care transitions subtopic. Currently, many measures use time as the primary outcome to determine if a transition was successful. MAP recommended that transition measures look beyond just timeliness to assess the quality of the transition. There is also a need for measures of patient transition to next provider/site of care across all settings including transitions that are not hospital-related, such as transitions from primary care to specialty care, clinician to community pharmacist, and nursing home to home health care.

Table 14. Care Transitions Measures and Gaps for the Care Coordination Family of Measures

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| #0163 Endorsed | Primary PCI Received within 90 Minutes of Hospital Arrival | |
| #0164 Endorsed | AMI-7a- Fibrinolytic Therapy Received within 30 minutes of Hospital Arrival | |
| #0228 Endorsed | 3-Item Care Transition Measure (CTM-3) | Measure should be tested for administration prior to discharge. |
| #0287 Endorsed | Median to Fibrinolysis | |
| #0288 Endorsed | OP-2: AMI Emergency Department Acute Myocardial Infarction (AMI) Patients with ST-segment Elevation or LBBB on the ECG Closest to Arrival time Receiving Fibrinolytic Therapy During the Stay and Having a Time from ED Arrival to Fibrinolysis of 30 minutes or Less. | |
| #0289 Endorsed | Median Time to ECG | |
| #0290 Endorsed | Median Time to Transfer to Another Facility for Acute Coronary Intervention | |
| #0335 Endorsed | PICU Unplanned Readmission Rate | |
| #0403 Endorsed | HIV/AIDS: Medical Visit | |
| #0526 Endorsed | Timely Initiation of Care | |
| #0576 Endorsed | Follow-Up After Hospitalization for Mental Illness | |
| #0661 Endorsed | OP-23: ED-Head CT Scan Results for Acute Ischemic Stroke or Hemorrhagic Stroke who Received Head CT Scan Interpretation Within 45 minutes of Arrival | |

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| #0698 Endorsed | 30-Day Post-Hospital AMI Discharge Care Transition Composite Measure | Measure could be modified to have a narrow window for follow-up evaluation and management visit. |
| #0699 Endorsed | 30-Day Post-Hospital HF Discharge Care Transition Composite Measure | Measure could be modified to have a narrow window for follow-up evaluation and management visit. |
| #0707 Endorsed* | 30-day Post Hospital Pneumonia Discharge Transition Composite Measure | Measure could be modified to have a narrow window for follow-up evaluation and management visit. |
| | | |
| Care Transitions Priority Gap Areas | • Transition measures that look beyond just timeliness to assess true quality<br>• Measures of patient transition to next provider/site of care across all settings<br>  ○ Includes non- hospital transitions (examples: primary to specialist, clinician to community pharmacist, nursing home to home health)<br>• Measures of intra-facility transitions | |

*Communication*

Communication involves all healthcare team members working within the same shared plan of care, readily available consultation notes and progress reports, shared decision-making with the patient and family, use of various communication methodologies, and maintenance of privacy with access to information[iii].Recognizing the central role of the patient as a member of the care team, MAP evaluated measures that consider provider-to-patient communication, as well as provider-to-provider communication, for inclusion in the measure family.

To address patient communication, MAP included three measures in the care coordination family: Transition Record with Specified Elements Received by Discharged Patients (Inpatient Discharges to Home/Self Care or Any Other Site of Care) (NQF #0647), Timely Transmission of Transition Record (Inpatient Discharges to Home/Self Care or Any Other Site of Care) (NQF #0648), and Transition Record with Specified Elements Received by Discharged Patients (Emergency Department Discharges to Ambulatory Care [Home/Self Care]) (NQF #0649). These measures help ensure that patients receive necessary information when discharged, facilitating self-care and coordination with subsequent providers. MAP recommends that these measures be expanded to address patient understanding of the information received.

MAP included five measures addressing provider communication when transferring patients from the ED to another acute care facility: Administrative Communication (NQF #0291), Patient Information (NQF #0294), Physician Information (NQF #0295), Nursing Information (NQF #0296), and Procedures and Tests (NQF #0297). MAP suggests that these measures could be combined into one composite measure to demonstrate the rapid transfer of information.

Communication with the next site of care is a crucial element of care coordination; however, it is often difficult to know if the necessary patient information was available in a timely manner. There is a need to move beyond current checkbox measures of communication to measure the sending and receiving of information with

provider-defined elements of what is the "right" information. Measures are also needed to address communication outside the inpatient setting. Additionally, communication measures need to address simultaneous information sharing, as patients frequently see multiple providers at the same time. Health Information Exchanges and EHRs are intended to improve communication of relevant patient information from one setting to the next, and MAP recommends the development of measures that assess if these technologies and care models are facilitating the successful bi-directional transfer of information.

Measures of person-centered communication are needed to assess if the right information was given at the right time and aligned with patient preferences. These measures should include all patients, including those with multiple chronic conditions, frailty, disability, or other medical complexities. Additionally, these measures should be culturally sensitive to prevent communication barriers caused by ethnicity, language, or religion. Patient-centered measures of communication should address if the information was understood, not just received. MAP also recommends development of measures that assess the role of personal health records and how they can facilitate communication.

Table 15. Communication Measures and Gaps for the Care Coordination Family of Measures

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| #0291 Endorsed | Administrative Communication | Measure should be combined into a composite with #0294, #0295, #0296, and #0297. |
| #0294 Endorsed | Patient Information | Measure should be combined into a composite with #0291, #0295, #0296, and #0297. |
| #0295 Endorsed | Physician Information | Measure should be combined into a composite with #0291, #0294, #0296, and #0297. |
| #0296 Endorsed | Nursing Information | Measure should be combined into a composite with #0291, #0294, #0295, and #0297. |
| #0297 Endorsed | Procedures and Tests | Measure should be combined into a composite with #0291, #0294, #0295, and #0296. |
| #0310 Endorsed | LBP: Shared Decision Making | |
| #0647 Endorsed | Transition Record with Specified Elements Received by Discharged Patients (Inpatient Discharges to Home/Self Care or Any Other Site of Care) (Inpatient Discharges to Home/Self Care or Any Other Site of Care) | |
| #0648 Endorsed | Timely Transmission of Transition Record (Inpatient Discharges to Home/Self Care or Any Other Site of Care) | |
| #0649 Endorsed | Transition Record with Specified Elements Received by Discharged Patients (Emergency Department Discharges to Ambulatory Care [Home/Self Care]) | |
| | | |
| Communication Priority Gap Areas | • Communication measures should address both simultaneous and subsequent information sharing across all settings<br>• Move beyond current checkbox measures of communication to address both the sending and receiving of adequate information<br>• Need measures of person-centered communication<br>  ○ Right information was given at the right time and aligned with patient preferences | |

| | |
|---|---|
| | ▪ Cultural sensitivity – ethnicity, language, religion<br>▪ Multiple chronic conditions, frailty, disability, medical complexity<br>o Address patient understanding of information, not just receiving information<br>o Role for personal health records<br>• Opportunity to leverage HIT, role of HIT/HIE in communication process<br>o Need to address overuse, misuse, inefficiencies created by poor communication |

*Care Planning*

The NQF-Endorsed Definition and Framework for Measuring Care Coordination calls for patients to have a proactive plan of care and follow-up—an established and current care plan that anticipates routine needs and actively tracks up-to-date progress toward patient goals. The care plan should be jointly created and managed by the patient/caregiver and provider and should assess the patient's current and longstanding needs with goals that reflect those needs[iv]. While there is still a greater need for measures – that are not in the "check the box" category – assessing the development of a care plan mutually agreed to by the patient and provider, MAP included a number of care planning measures in the family, stressing the importance of a plan that that includes patient preferences at the end of life, is developed through shared decision-making, and facilitates continuing care across sites.

The Definition and Framework for Measuring Care Coordination recognized that patients at the end of life are particularly vulnerable to fragmented care and poor care planning[v]. To help address this issue, MAP included six NQF-endorsed hospice measures (NQF #0211, #0212, #0213, #0214, #0215, #0216) to assess the outcome of successful care planning for patients at the end of life. MAP recommended that these measures be expanded beyond cancer care to include all chronically ill patients at the end of life. These measures could also be developed into a composite.

Recognizing that all patients need an advance care plan but frequently do not have one, MAP included two measures addressing creation of advance care plans. The first, Advance Care Plan (NQF #0326), measures the creation of a plan in the outpatient setting; the second, Patients Admitted to ICU who Have Care Preferences Documented (NQF #1626), revisits advance care planning within 48 hours of admission to the ICU. MAP recommends the expansion of measures assessing advance care planning beyond elderly or critically/terminally ill patients to ensure all patients have an advance care plan.

Recognizing the importance of a care plan that is mutually agreed to by the patient and provider, MAP stressed the importance of shared decision-making and included the one available measure addressing this area in the family: Low Back Pain: Shared Decision-Making (NQF #0310). MAP noted shared decision-making, including and beyond care planning, as a significant gap area.

Emphasizing the importance of discharge planning, two measures addressing continuing care plans were included in the family: HBIPS-6 Post discharge continuing care plan created (NQF #0557) and HBIPS-7 Post discharge continuing care plan transmitted to next level of care provider upon discharge (NQF #0558). MAP noted these measures could include a timeframe for the creation and transmission of the care plan to ensure information is sent in a timely way. MAP also recommended further development of measures addressing a shared plan of care for all patients, including assessing continuity within the plan of care.

Table 16. Care Planning Measures and Gaps for the Care Coordination Family of Measures

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| #0211 Endorsed | Proportion with More than One Emergency Room Visit in the Last Days of Life | Measure should be expanded beyond cancer patients to all chronically ill patients at end of life. Hospice measures could be paired or made into a composite. |
| #0212 Endorsed | Proportion with More than One Hospitalization in the Last 30 Days of Life | Measure should be expanded beyond cancer patients to all chronically ill patients at end of life. Hospice measures could be paired or made into a composite. |
| #0213 Endorsed | Proportion Admitted to the ICU in the Last 30 Days of Life | Measure should be expanded beyond cancer patients to all chronically ill patients at end of life. Hospice measures could be paired or made into a composite. |
| #0214 Endorsed | Proportion Dying from Cancer in an Acute Care Setting | Measure should be expanded beyond cancer patients to all chronically ill patients at end of life. Hospice measures could be paired or made into a composite. |
| #0215 Endorsed | Proportion Not Admitted to Hospice | Measure should be expanded beyond cancer patients to all chronically ill patients at end of life. Hospice measures could be paired or made into a composite. |
| #0216 Endorsed | Proportion Admitted to Hospice for Less than 3 Days | Measure should be expanded beyond cancer patients to all chronically ill patients at end of life. Hospice measures could be paired or made into a composite. |
| #0326 Endorsed | Advance Care Plan | Measure should be expanded to patients under 65 years old. |
| #0557 Endorsed | HBIPS-6 Post Discharge Continuing Care Plan Created | Measure could be expanded to address both the sending and receiving of information. Measure should be modified to include a time element to information transmission and could be composited with #0558. |
| #0558 Endorsed | HBIPS-7 Post Discharge Continuing Care Plan Transmitted to Next Level of Care Provider Upon Discharge | Measure could be expanded to address both the sending and receiving of information. Measure should be modified to include a time element to information transmission and could be composited with #0557. |
| #1626 Endorsed | Patients Admitted to ICU who Have Care Preferences Documented | Measure should be expanded beyond “vulnerable adults” to include all ICU patients. |
| | | |
| Care Planning Priority Gap Areas | • Shared-decision making and care planning; interactive care plan<br>  ○ All people should have care plan<br>  ▪ “Healthy” patients – prevention mindset to keep them well<br>  ○ Agreed to by the patient and provider and given to patient, includes advanced care planning<br>  ○ Shared among all providers seeing patients (integrated); multidisciplinary<br>  ○ Identified primary provider responsible for the care plan<br>• Advanced care planning/advanced directives for all patients created early in care process | |

*Patient Experience with Care Coordination*

Existing patient experience surveys were included in the care coordination family of measures as a way to gather patient-reported information relevant to care coordination. Patient surveys capture patient perceptions of the effectiveness of care coordination efforts and can indicate lack of patients' involvement in their care. MAP included the suite of CAHPS surveys to broadly measure patients' perspectives across the various care settings. Additionally, the Young Adult Health Care Survey (YAHCS) (NQF #0010), the Inpatient Consumer Survey (ICS) (NQF #0726), the Family Evaluation of Hospice Care (FEHC) (NQF #0208), and the Consumer Assessments and Reports of End of Life (CARE) (NQF #1632) were included to address the unique needs of the adolescent, inpatient behavioral health, and hospice populations. However, MAP identified several limitations to using existing instruments to promote care coordination. Current survey measures reinforce silos in the system by failing to cross care settings, recognize the shared accountability of multi-disciplinary teams, or include the provider perspective.

MAP also discussed a number of data issues with the existing surveys. While it is important to gather patient-reported data, collecting and analyzing this data can be challenging to both the patient and provider. To maintain reliability and validity, often the entire instrument must be completed and scored. Additionally, the survey scores and results must be reported in a way that is meaningful to promote improvement in care coordination. Reporting only total scores provides insufficient detail to support quality improvement in this area. The ability to report scores on individual items or composites related to care coordination is necessary to provide the meaningful granularity, but not all items have been validated for individual reporting. The development of electronic versions of existing instruments may help facilitate the collection and use of patient-reported data.

MAP recommends the development of a comprehensive care coordination survey that looks across the episode of care and settings to address transitions and communication. Common questions would allow better insights into coordination and patient experiences across the continuum. The care coordination survey should include patients of all ages and their caregivers as well as recognize the accountability of the multi-disciplinary team.

**Table 17 – Patient Survey Measures and Gaps for the Care Coordination Family of Measures**

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| #0005 Endorsed | CAHPS Clinician/Group Surveys - (Adult Primary Care, Pediatric Care, and Specialist Care Surveys) | |
| #0006 Endorsed | CAHPS Health Plan Survey v 4.0 - Adult Questionnaire | |
| #0007 Endorsed | NCQA Supplemental Items for CAHPS® 4.0 Adult Questionnaire | |
| #0008 Endorsed | Experience of Care and Health Outcomes (ECHO) Survey (behavioral health, managed care versions) | |
| #0009 Endorsed | CAHPS Health Plan Survey v 3.0 Children with Chronic Conditions Supplement | Survey should be expanded to include the adult population. |
| #0010 Endorsed | Young Adult Health Care Survey (YAHCS) | Survey should be tested down to the clinician level. |
| #0166 Endorsed | HCAHPS | |
| #0208 Endorsed | Family Evaluation of Hospice Care | |
| #0258 Endorsed | CAHPS In-Center Hemodialysis Survey | |

| NQF # and Status | Measure | MAP Findings |
|---|---|---|
| #0517 Endorsed | CAHPS® Home Health Care Survey | |
| #0691 Endorsed | Consumer Assessment of Health Providers and Systems (CAHPS®) Nursing Home Survey: Discharged Resident Instrument | |
| #0692 Endorsed | Consumer Assessment of Health Providers and Systems (CAHPS®) Nursing Home Survey: Long-Stay Resident Instrument | |
| #0693 Endorsed | Consumer Assessment of Health Providers and Systems (CAHPS®) Nursing Home Survey: Family Member Instrument | |
| #0725 Endorsed | Validated Family-Centered Survey Questionnaire for Parents' and Patients' Experiences during Inpatient Pediatric Hospital Stay | |
| #0726 Endorsed | Inpatient Consumer Survey (ICS) Consumer Evaluation of Inpatient Behavioral Healthcare Services | |
| #1632 Endorsed | CARE - Consumer Assessments and Reports of End of Life | |
| #1741 Endorsed | Patient Experience with Surgical Care Based on the Consumer Assessment of Healthcare Providers and Systems (CAHPS)® Surgical Care Survey | |
| | | |
| Patient Surveys Priority Gap Areas | • Need to address patients who can't self-report/issues with surrogate reporting<br>• Existing surveys<br>  ○ Need surveys in electronic format<br>  ○ Test national-level surveys for reporting out at the organization and/or clinician level<br>  ○ Bring medical home CG-CAHPS for NQF endorsement<br>• Comprehensive care coordination survey that looks across episode and settings, particularly with the development of medical homes and ACOs<br>  ○ Include all ages<br>  ○ Recognize accountability of the multi-disciplinary team<br>• Survey/composite measure of provider perspective of care coordination<br>  ○ Timely and effective communication among providers | |

[i] National Quality Forum (NQF). NQF-Endorsed Definition and Framework for Measuring and Reporting Care Coordination, Washington, DC; NQF 2006. Available at www.qualityforum.org/projects/care_coordination.aspx. Last accessed August 2012.
[ii] Department of Health and Human Services (DHHS), *Partnership for Patients: Better Care, Lower Costs*, Washington, DC: DHHS, 2011. Available at www.healthcare.gov/center/programs/partnership. Last accessed August 2012.
[iii] NQF. Preferred Practices and Performance Measures for Measuring and Reporting Care Coordination. Washington, DC: NQF; 2010. Available at www.qualityforum.org/projects/care_coordination.aspx. Last accessed August 2012.
[iv] NQF. NQF-Endorsed Definition and Framework for Measuring and Reporting Care Coordination, Washington, DC; NQF 2006. Available at www.qualityforum.org/projects/care_coordination.aspx. Last accessed August 2012.
[v] NQF. NQF-Endorsed Definition and Framework for Measuring and Reporting Care Coordination, Washington, DC; NQF 2006. Available at www.qualityforum.org/projects/care_coordination.aspx. Last accessed August 2012.