CPR Employer-Purchaser Guide to Quality Measure Selection

A Resource for Promoting Improvements in the Quality of Health Care

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Disclaimer: Incorporating quality measures into agreements between purchasers and other parties will likely require specific negotiations. CPR and Discern Health are not providing legal advice or direction on how to address these specific negotiations. This Guide is for information purposes only. Before any decisions are made as to whether to use the recommendations in this Guide in whole or in part and to understand the legal implications of doing so, purchasers should consult with a qualified legal professional for specific advice.

Introduction

Purpose of the Guide

Employers and other health care purchasers frequently question whether the quality measures being used in health care delivery and payment reform programs are the measures that matter most when it comes to achieving higher quality care and better value for the health care dollar and helping consumers make informed decisions.

The purpose of the CPR Employer-Purchaser Guide to Quality Measure Selection is to define a set of the best available measures relevant to purchasers' interests in evaluating the performance of health care providers and informing consumer decision-making. In addition, the guide illustrates how all or some of the measures can be used for a variety of purposes.

What the Guide Contains

The guide begins with background on the role of purchasers in efforts to improve the quality of health care, and the need for measures to help gauge performance of the health care system in priority areas.

At the heart of the guide is a list of 30 quality measures that evaluate the performance of health care providers in 12 priority clinical areas as well as four cross-cutting aspects, such as patient experience and preventive services. The priority clinical areas represent where there is the highest spending and the largest variation in quality and cost for the commercially insured, working age population and their dependents.

The priority measure set, when used as a whole, can provide a more complete view of health care quality and value than if the measures are used separately. However, purchasers may choose to focus on a portion of measures from the set to meet their needs. This guide contains instructions that will help purchasers select measures that are most fitting for the intended use. The guide also describes challenges in using certain measures, such as availability of data to calculate performance results according to measure specifications.

Further, the guide describes gaps in the measures available for the priority clinical areas and concludes with a path forward, including a call to action for purchasers to promote use of these measures and to help fill the gaps. The appendices contain additional information on how we developed the list of measures and details about each one.

How to Use the Guide

Employers and other health care purchasers can use this guide in a variety of ways. First, they can use it to orient themselves to the clinical areas that need the greatest attention. Second, they can use it to determine whether their existing or prospective health plan partners are using the quality measures that matter in their health care delivery and payment reform programs (including potentially tying payment to performance on the measures and/or as using them to evaluate the impact of their programs). Third, the priority measure set can serve as a benchmark for assessing the quality measures in use in educational tools for consumers, such as websites conveying information about the quality and costs of different health care choices. Fourth, purchasers can use the priority measure set to negotiate the terms of evaluation for a direct contract with health care providers under which they are paying for a particular set of services with an alternative payment model, such as bundled payment or shared savings.

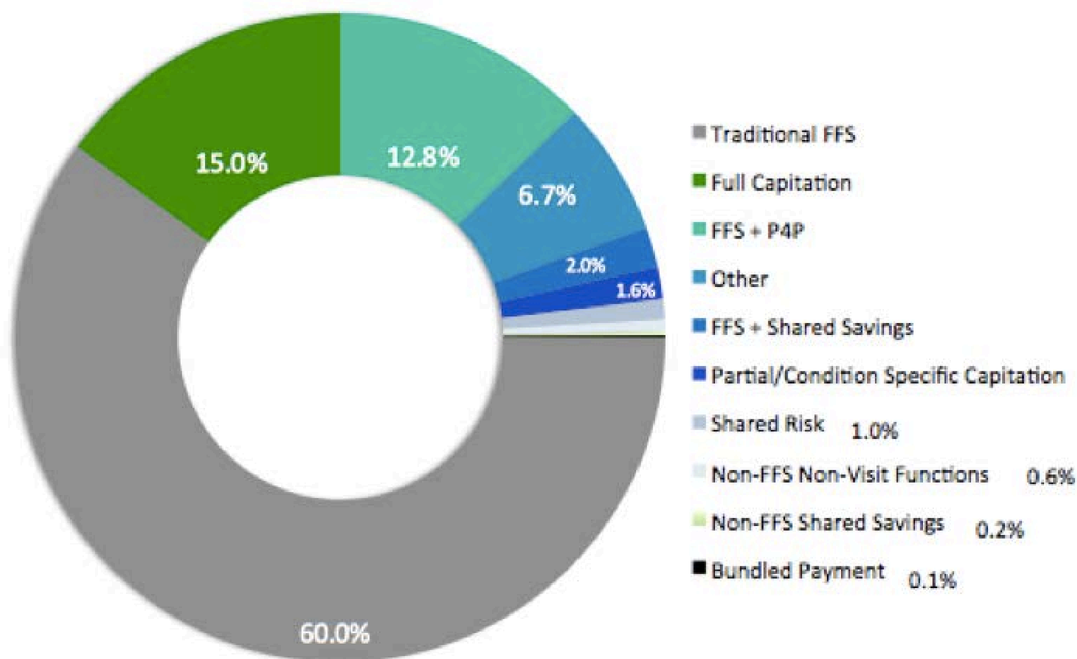
Background on the Employer-Purchaser Role in Quality Measurement

Value-Oriented Purchasing Environment

The pressure is increasing to deliver higher quality care at lower cost – a combination that would mean better value for health care purchasers and consumers. Value, as defined by the three-part aim of the National Quality Strategy (NQS),[1] means better care for individuals, better health for populations, and care that is more affordable. Emerging value-oriented payment and delivery models require new types of measures to encourage and reward improvement in patient-centeredness, care coordination, population health management, and cost of care.

Catalyst for Payment Reform (CPR) has a goal that 20 percent of payments will flow through methods *proven* to improve value by 2020.[2] In its 2014 National Scorecard on Payment Reform, CPR found a flurry of activity among commercial health plans to implement value-oriented payment methods. Specifically, 40 percent of payments to physicians and hospitals were value-oriented, up from 11 percent in 2013. Figure 1 shows a breakout of the 40 percent by specific types of payment models. However, given that some of these methods are relatively new, we have only early results and not yet sufficiently strong evidence that these changes will lead to better health care quality or more affordable care.

Figure 1: National Trend Toward Value-Oriented Payment[3]



[1] Berwick DM, Nolan TW, Whittingtom J (2008) The triple aim: care, health and cost. Health Affairs. 27:759-769.
[2] http://www.catalyzepaymentreform.org/.
[3] Catalyst for Payment Reform, 2014 Scorecard. http://www.catalyzepaymentreform.org/how-we-catalyze/national-scorecard.

In January 2015, Department of Health and Human Services (HHS) Secretary Burwell announced the goal of moving 30 percent of Medicare payments to alternative payment models such as bundled payment and shared savings by 2016. Moreover, her goal for 2018 is that 50 percent of Medicare payments will be made through alternative payment models. In addition, Secretary Burwell articulated a goal of tying 85 percent of all Medicare payments to quality by 2016 and 90 percent by 2018. She also announced the formation of a Health Care Payment Learning and Action Network (HCPLAN) to engage private sector stakeholders in the movement to value and to accelerate the transition to alternative payment models.[4] These federal government efforts have opened the door for private sector stakeholders and HHS to build on the momentum of each other's initiatives.

Annual increases in health care costs have posed great challenges for those that purchase health care on behalf of employees and Medicaid recipients. Employers also shoulder the burden of poor employee health in the forms of reduced productivity and lost days from work. By getting involved in shaping the health care system and basing health care purchasing decisions on quality, purchasers can play a substantial role in improving the value of services.

To this point, purchasers' roles in promoting higher value health care have been limited. While purchasers usually have seats at the table where measure selection decisions are made, it is difficult for them to counter the interests of providers and plans because they often lack the expertise and bandwidth they need to participate at the same level. Furthermore, despite the growing number of value-based purchasing programs, purchasers should be aware that many of these programs lack meaningful quality measures, and the measures primarily focus on processes, rather than outcomes. This guide is intended to strengthen the purchaser voice in discussions about measures by arming them with information about which measures matter most today.

Need for Measures

Measuring the clinical quality of health care, patient experience, population health, and cost is essential for identifying the greatest opportunities for improvement and gauging the success of improvement efforts. Purchasers need information from measures to make value-oriented choices, to hold providers accountable for their performance through financial incentives, and to determine if innovations in health care delivery and payment are working. In addition, moving from system-level to individual provider-level reporting, where feasible, will aid in transparency and help drive change.

Health care performance measurement serves multiple purposes, including:

- Highlighting opportunities for **improvement** and tracking progress over time;
- Supporting value-based **payment** models that reward health care providers that deliver high quality care and/or reduce costs;
- **Informing decisions** made by consumers and purchasers about which providers deliver the highest value and where to seek care, promoting provider competition on value; and
- Policy maker **design, monitoring, and evaluation** of payment and delivery reform programs to maximize the intended effects and minimize potential unintended effects, such as limitations on access to care.

[4] Better, Smarter, Healthier: In Historic Announcement, HHS Sets Clear Goals and Timeline for Shifting Medicare Reimbursements from Volume to Value. Department of Health and Human Services 2015. HHS Press Office announcement 1/26/2015. http://www.hhs.gov/news/press/2015pres/01/20150126a.html.

The myriad purposes and uses of measures may require different types of measures at different times, and various stakeholders have different perspectives on measurement. For example, much of the progress that has been made in quality measurement addresses the needs of the Medicare program. However, Medicare's needs are not the same as employer's needs. Clinical issues such as pregnancy and delivery, childhood immunizations, asthma, and obesity are not relevant in the over 65 population. As a result, measurement is lacking in these clinical areas.

In addition, purchasers and consumers want information about overall health outcomes to guide their decision-making and to hold providers accountable, while clinicians may also want actionable information from process of care measures to track their adherence to professional standards and their progress on improvement activities. Although this guide is primarily focused on addressing employers' and other health care purchasers' needs, the patient experience and safety measures included are also particularly relevant to consumers.[5] Table 1 describes specific uses and benefits of quality measures.

Table 1. Uses and Benefits of Quality Measures

Uses	Benefits
• Improvement in quality of care delivery	• Produces better value through higher quality and lower cost of care
• Value-oriented financial incentives for health care providers	• Rewards providers for lower cost and better outcomes
• Cost and quality transparency	• Provides reputational incentives for providers; supports better decisions by consumers and purchasers
• Value-based insurance design	• Aligns consumer out-of-pocket costs with clinical value
• Payment reform design and implementation	• Builds more effective programs that use the best available quality measures
• Payment reform program monitoring and evaluation	• Creates a learning system that can correct for unintended consequences; assesses impact of payment reform programs on value

The National Quality Strategy: A Framework for Measure Prioritization and Alignment

The three-part aim of the National Quality Strategy (NQS) and its six priorities provide a widely recognized framework for the measures needed in the value-based purchasing environment (see Figure 2).[6] The aims of the NQS emphasize that health outcomes, care processes, and cost savings are equally valuable and interdependent; the priorities call out the topics of measurement that are of greatest importance to patients, purchasers, payers, and policymakers.

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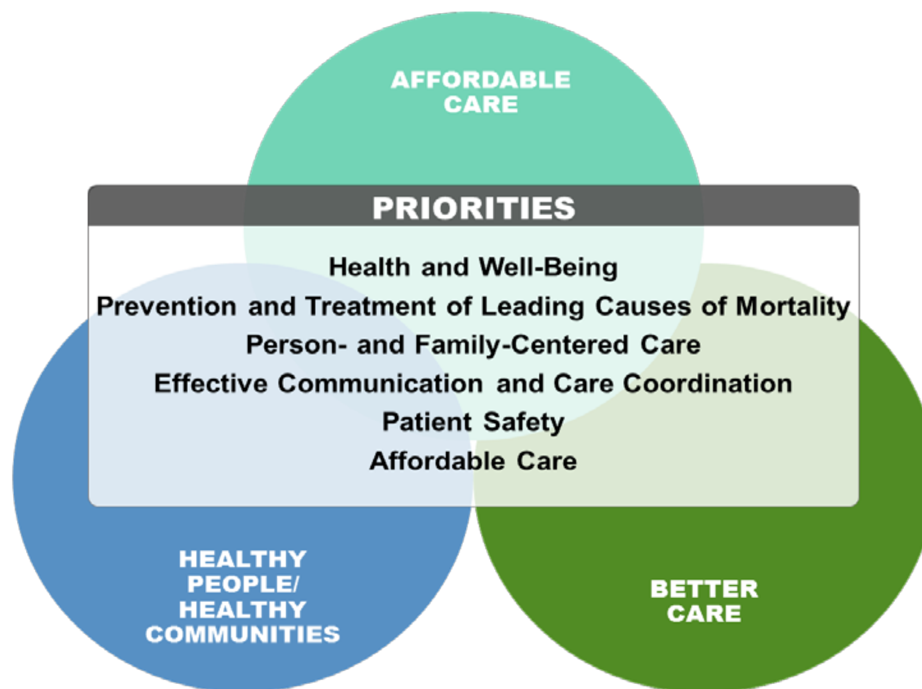
[5] Hibbard J, Sofaer S (2010) Best Practices in Public Reporting No 1: How to Effectively Present Health Care Performance Data to Consumers. AHRQ report. http://archive.ahrq.gov/professionals/quality-patient-safety/quality-resources/tools/pubrptguide1/pubrptguide1.pdf.

[6] Stiefel M, Nolan K (2012) A guide to measuring the triple aim: Population Health, Experience of Care, and Per Capita Cost. Institute for Healthcare Improvement white paper. Cambridge, MA. www.ihi.org.

Figure 2. National Quality Strategy Aims and Priorities



Alignment of measures with the NQS across programs is essential. It can strengthen the quality signal, highlighting what is most important for stakeholders to understand about quality, and decrease data collection burden on providers. In addition, when all stakeholders focus on mutual objectives, success in achieving those objectives may be more likely and happen more quickly.

The number of public and private sector quality-based payment and public reporting programs that use measures has grown rapidly, causing a dramatic increase in the volume and diversity of reporting requirements. In many cases, this has resulted in confusion and frustration on the part of consumers, purchasers and providers alike and has increased the overall cost of measurement. To correct this, policymakers and program implementers are focusing more on measure alignment from multiple perspectives: with the NQS; between public and private sector programs; across populations, settings, providers, and levels of analysis; and at the level of detailed measure specifications.

While measures should be aligned to the extent possible between public and private sector programs, measures must also be "fit for purpose;" that is, measures should be selected to meet the need. For example, measures that are ideal for physician-level measurement may not be suitable for health plan-level or hospital-level measurement. However, where different measures are needed for specific programmatic purposes, program implementers should ensure that the measures are meaningfully related across programs. In addition, program implementers should adhere to the specifications of standardized measures whenever possible, and avoid customization absent a compelling reason. The criteria we used to select measures for the Employer-Purchaser Measure Set address both the need for alignment and fit for purpose.

Other groups have been calling for greater alignment and prioritization of a "core" set of measures too, from the Institute of Medicine (2015 Vital Signs 2.0 report)[7] to America's Health Insurance Plans Core Measures Collaborative. However, these groups do not focus on the measures from the perspective of employers and other health care purchasers – those who pay for care. Other efforts have focused either at the population level, or only on measures that are currently available and relatively easy to collect, such as those that use largely claims data. Our focus is on measures that gauge performance for conditions where there is the greatest spending for the population under the age of 65, and the most uneven quality and variation in payment amounts.

The Employer-Purchaser Priority Measure Set

Overview of the Priority Measure Set

To answer the question of which quality measures matter most, this guide outlines a set of the best available measures that purchasers can use to assess provider performance (see Table 2). The set consists of 30 measures that address high-priority clinical areas and cross-cutting topics.

Following the spirit and guidance of the Strategic Framework Board, which conceived of the National Quality Forum's role, CPR's goal here is to create parsimony in measurement in ways that meet the needs of employers and other health care purchasers; we did not create any new measures, but identified available measures that might be the most useful to purchasers at this time.[8] Understandably, purchasers are particularly concerned about the areas where they spend the most and want to identify the best quality measures for improvement and transparency purposes in these areas.

We focused on 12 clinical areas identified by the Health Care Incentives Improvement Institute (HCI[3]). These 12 clinical areas are where the most spending occurs in the commercially-insured population – representing roughly 30 percent of employer's total costs of care – and where there is also the greatest variation in quality, safety, and cost. We list these clinical areas in order of expenditures, starting with the greatest. We then added important cross-cutting topics.[9,10] A cross-cutting measure may apply to several or all clinical conditions. For example, survey measures of patient experience (a measure of patient-centered care) are applicable to persons with almost any condition, receiving care from almost any provider. As another example, assessment of body-mass index (an obesity prevention measure related to healthy lifestyle) is an important factor in many, but not all, conditions. Use of cross-cutting measures can promote efficiency in measurement by reducing the need for multiple condition-specific measures.

We selected the 30 measures using a multi-step process that included:

- Scanning available measures for each of the 12 priority clinical areas and cross-cutting topics, with an emphasis on those endorsed by the National Quality Forum (NQF).[11] Receipt of NQF

[7] Vital Signs: Core Metrics for Health and Health Care Progress (2015). Institute of Medicine Report released 4/28/2015. http://iom.nationalacademies.org/Reports/2015/Vital-Signs-Core-Metrics.aspx.
[8] McGlynn EA (2003). Selecting Common Measures of Quality and System Performance. Medical Care. 41:I-39-I-47.
[9] Vital Signs 2.0 Ibid.
[10] McClellan M, Penso J, Valuck T, Dugan D, Dubois RW, Wistrich K (2014). Accountable Care Measures for High Cost Specialty Care and Innovative Treatment. NPC white paper. http://www.npcnow.org/publication/aco-quality-measures2014.
[11] www.qualityforum.org.

endorsement is the result of a thorough assessment of each measure against detailed evaluation criteria to determine best in class measures.

- A primary evaluation of candidate measures against criteria critical to purchasers, such as age of the population addressed (under age 65), level of analysis (provider), setting (ambulatory and acute), and measure type (outcomes preferred).

- A secondary evaluation of candidate measures against descriptive criteria, including data sources (e.g., claims, clinical, patient-reported), coverage of NQS Priorities (e.g., patient-centered care, population health, patient safety), differentiation in provider performance (known variability or gap in quality), alignment across programs (public and private), and sensitivity to disparities in care.

Because we aimed to create a set of measures that is balanced, yet pushes toward health outcomes and innovation, we did not include some process measures that are routinely used in programs or we included them as part of composite measures. For example, we did not include some common diabetes process measures, such as foot and eye exams, whereas we did include the intermediate outcome measure for blood sugar, HbA1c control, as part of the Optimal Diabetes Care composite measure. The absence of common, independent process measures from the set does not denigrate their utility in appropriate programs or circumstances, but the priority set raises the bar for provider performance by emphasizing available composite and outcome measures where possible. In addition, for many composite measures, performance data can be reported for each of the subcomponents of the composite.

Appendix A contains further detail about the process and criteria we used to select a well-balanced set of measures. Appendix B contains a more detailed version of the measure set table, including a full assessment of each measure against the primary and secondary selection criteria.

Table 2. Employer-Purchaser Priority Measure Set

Clinical Area or Cross-Cutting Topic	Measure Title	Measure Description	NQF Number
Pregnancy	Elective Delivery	This measure assesses patients with elective vaginal deliveries or elective cesarean sections at >= 37 and < 39 weeks of gestation completed.	0469
	Cesarean Section	This measure assesses the number of nulliparous women with a term, singleton baby in a vertex position delivered by cesarean section.	0471
	Healthy Term Newborn	Percent of term singleton livebirths (excluding those with diagnoses originating in the fetal period) who DO NOT have significant complications during birth or nursery care.	0716
Hypertension	Controlling High Blood Pressure	The percentage of patients 18 to 85 years of age who had a diagnosis of hypertension (HTN) and whose blood pressure (BP) was adequately controlled (<140/90) during the measurement year.	0018

Clinical Area or Cross-Cutting Topic	Measure Title	Measure Description	NQF Number
Low Back Pain	Use of Imaging Studies for Low Back Pain	The percentage of members with a primary diagnosis of low back pain who did not have an imaging study (plain x-ray, MRI, CT scan) within 28 days of the diagnosis.	0052
	Average Change in Functional Status following Lumbar Spine Fusion Surgery	For patients age 18 and older undergoing lumbar spine fusion surgery, the average change from pre-operative functional status to one year (nine to fifteen months) post-operative functional status using the Oswestry Disability Index (ODI version 2.1a) patient-reported outcome tool.	2643
Diabetes	Optimal Diabetes Care (Composite Measure)	The percentage of adult diabetes patients (18-75) who have optimally managed modifiable risk factors (A1c< 8.0, blood pressure <140/90, statin use unless contraindicated, tobacco non-use and daily aspirin or anti-platelet use for patients with diagnosis of ischemic vascular disease) with the intent of preventing or reducing future complications associated with poorly managed diabetes.	0729
Depression	Antidepressant Medication Management	The percentage of members 18 years of age and older with a diagnosis of major depression and were newly treated with antidepressant medication, and who remained on an antidepressant medication treatment. Two rates are reported.	0105
	Screening for Clinical Depression and Follow-Up Plan	Percentage of patients aged 12 years and older screened for clinical depression during the measurement period using an age appropriate standardized depression screening tool AND if positive, a follow-up plan is documented on the date of the positive screen.	0418
	Depression Response at 6 months-Progress Towards Remission	Adult patients age 18 and older with major depression or dysthymia and an initial PHQ-9 score > 9 who demonstrate a response to treatment at six months defined as a PHQ-9 score that is reduced by 50% or greater from the initial PHQ-9 score. This measure applies to both patients with newly diagnosed and existing depression identified during the defined measurement period whose current PHQ-9 score indicates a need for treatment.	1884
Osteoarthritis	Hospital-Level Risk-Standardized Complication Rate Following Elective Primary Total Hip Arthroplasty and/or Total Knee Arthroplasty	This measure estimates a hospital-level risk-standardized complication rate (RSCR) associated with elective primary THA and TKA in patients 65 years and older. The measure uses claims data to identify complications occurring from the date of index admission to 90 days post date of the index admission. Note: This measure may also be applied to patients under 65 years of age.	1550

Clinical Area or Cross-Cutting Topic	Measure Title	Measure Description	NQF Number
Breast Cancer	Breast Cancer Screening	The percentage of women 50-74 years of age who had a mammogram to screen for breast cancer.	2372
	Oncology: Cancer Stage Documented	Percentage of patients, regardless of age, with a diagnosis of cancer who are seen in the ambulatory setting who have a baseline AJCC cancer stage or documentation that the cancer is metastatic in the medical record at least once during the 12 month reporting period.	0386
Arrhythmia	Atrial Fibrillation and Atrial Flutter: Chronic Anticoagulation Therapy	Percentage of patients aged 18 years and older with a diagnosis of non-valvular atrial fibrillation (AF) or atrial flutter whose assessment of the specified thromboembolic risk factors indicate one or more high risk factors or more than one moderate risk factor, as determined by CHADS2 risk stratification, who are prescribed warfarin OR another oral anticoagulant drug that is FDA approved for the prevention of thromboembolism.	1525
Asthma	Asthma: Pharmacologic Therapy for Persistent Asthma	Percentage of patients aged 5 through 64 years with a diagnosis of persistent asthma who were prescribed long-term control medication. Three rates are reported for this measure: 1. Patients prescribed inhaled corticosteroids (ICS) as their long term control medication. 2. Patients prescribed other alternative long term control medications (non-ICS). 3. Total patients prescribed long-term control medication.	0047
Coronary Artery Disease	Statin Therapy for Patients with Cardiovascular Disease	The percentage of males 21–75 years of age and females 40–75 years of age during the measurement year who were identified as having clinical atherosclerotic cardiovascular disease (ASCVD) and were dispensed at least moderate-intensity statin therapy that they remained on for at least 80 percent of the treatment period. Two rates are reported. Note: Due to changes in the evidence-based guidelines for managing hypercholesterolemia, measurement is evolving in this area. This is a new NCQA measure that is not yet NQF endorsed. If a different measure receives NQF endorsement, that measure should replace this one.	N/A
	Optimal Vascular Care	Percentage of adult patients ages 18 to 75 who have ischemic vascular disease with optimally managed modifiable risk factors (blood pressure, tobacco-free status, daily aspirin use).	0076

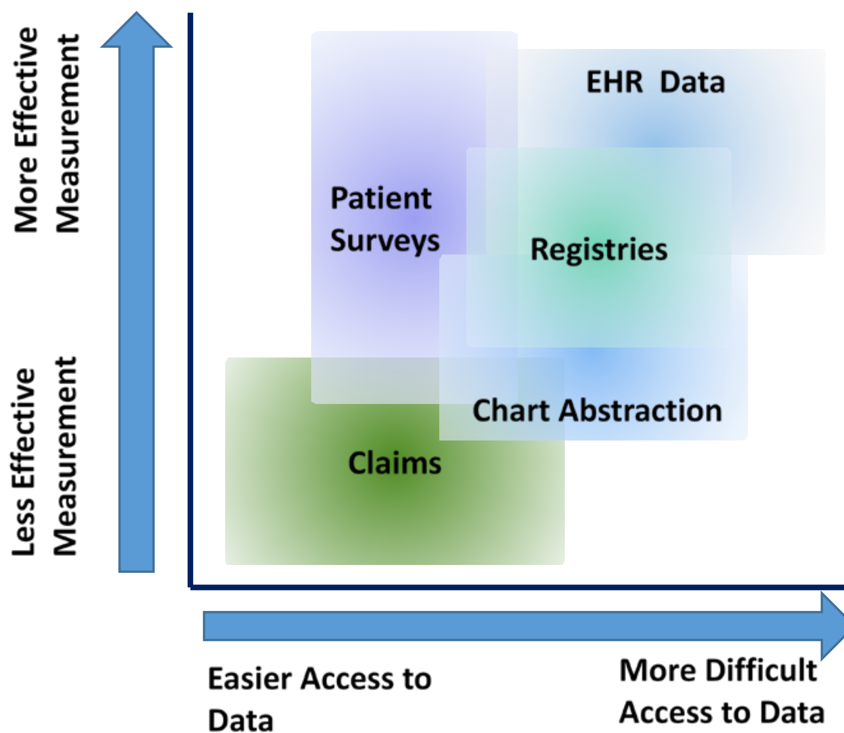
Clinical Area or Cross-Cutting Topic	Measure Title	Measure Description	NQF Number
Gastrointestinal Endoscopy	Endoscopy/Polyp Surveillance: Colonoscopy Interval for Patients with a History of Adenomatous Polyps-Avoidance of Inappropriate Use	Percentage of patients aged 18 years and older receiving a surveillance colonoscopy, with a history of a prior colonic polyp(s) in previous colonoscopy findings, who had an interval of 3 or more years since their last colonoscopy.	0659
	Colorectal Cancer Screening	The percentage of patients 50–75 years of age who had appropriate screening for colorectal cancer.	0034
Upper Respiratory Infection	Appropriate Treatment for Children with Upper Respiratory Infection	Percentage of children 3 months to 18 years of age with a diagnosis of upper respiratory infection (URI) who were not dispensed an antibiotic medication.	0069
Cross-Cutting: Person Centeredness	CAHPS Clinician and Group Surveys (CG-CAHPS)-Adult, Child	CG-CAHPS is a standardized survey instrument that asks patients to report on their experiences with primary or specialty care received from providers and their staff in ambulatory care settings over the preceding 12 months. The survey includes standardized questionnaires for adults and children.	0005
	HCAHPS	HCAHPS is a 32-item survey instrument for recently discharged (between two days and six weeks) hospital patients ages 18 and older who had an inpatient stay over one or more nights. The survey produces 11 publicly reported measures.	0166
Cross-Cutting: Population Health	Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up	Percentage of patients aged 18 years and older with a documented BMI during the current encounter or during the previous six months AND when the BMI is outside of normal parameters, a follow-up plan is documented during the encounter or during the previous six months of the encounter.	0421
	Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents	Percentage of patients 3-17 years of age who had an outpatient visit with a primary care physician (PCP) or an OB/GYN and who had evidence of the following during the measurement year: - Body mass index (BMI) percentile documentation - Counseling for nutrition - Counseling for physical activity	0024
	Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention	Percentage of patients aged 18 years and older who were screened for tobacco use at least once during the two-year measurement period AND who received cessation counseling intervention if identified as a tobacco user.	0028

Clinical Area or Cross-Cutting Topic	Measure Title	Measure Description	NQF Number
	Childhood Immunization Status	Percentage of children 2 years of age who had four diphtheria, tetanus and acellular pertussis (DtaP); three polio (IPV); one measles, mumps and rubella (MMR); three H influenza type B (HiB); three hepatitis B (HepB); one chicken pox (VZV); four pneumococcal conjugate (PCV); one hepatitis A (HepA); two or three rotavirus (RV); and two influenza (flu) vaccines by their second birthday. The measure calculates a rate for each vaccine and nine separate combination rates.	0038
	Hospital-Wide All-Cause Unplanned Readmission Measure	The measure estimates a hospital-level risk-standardized readmission rate (RSRR) of unplanned, all-cause readmission after admission for any eligible condition within 30 days of hospital discharge.	1789
Cross-Cutting: Care Coordination	Documentation of Current Medications in the Medical Record	Percentage of visits for patients aged 18 years and older for which the eligible professional attests to documenting a list of current medications using all immediate resources available on the date of the encounter. This list must include ALL known prescriptions, over-the-counters, herbals, and vitamin/mineral/dietary (nutritional) supplements AND must contain the medications' name, dosage, frequency and route of administration.	0419
	Proportion of Patients with a Chronic Condition Who Have a Potentially Avoidable Complication During a Calendar Year	Percent of adult population aged 18 – 65 years who were identified as having at least one of the following six chronic conditions: Diabetes Mellitus (DM), Congestive Heart Failure (CHF), Coronary Artery Disease (CAD), Hypertension (HTN), Chronic Obstructive Pulmonary Disease (COPD) or Asthma, were followed for one-year, and had one or more potentially avoidable complications (PACs).	0709
Cross-Cutting: Patient Safety	Patient Safety for Selected Indicators (Composite Measure)	A composite measure of potentially preventable adverse events for selected indicators (pressure ulcers, iatrogenic pneumothorax, CLABSI, post-op hip fracture rate, post-op hemorrhage/hematoma, physiologic/metabolic derangement, post-op respiratory failure, peri-op pulmonary embolism/deep vein thrombosis, post-op sepsis, post-op wound dehiscence rate, accidental puncture/laceration).	0531

Measure Set Implementation and Feasibility Considerations

The ability to generate results for quality measures and the accuracy of that information depends on the availability and quality of the underlying data sources. Even the most innovative measures are useless unless the data can be collected efficiently and the results are reliable. For example, data source issues become more complex for composite measures. Whether a measure is feasible primarily depends on whether the infrastructure for collecting the required data is readily available. Figure 3 and the following bullet points outline the variety of feasibility issues that accompany specific data sources.

Figure 3: Range of Data Source Options for Measures



- *Claims*- Administrative claims that are generated by providers as part of the billing process remain the primary data source for many measures currently in use because providers and health plans have developed the infrastructure to collect, clean, and share claims. However, claims data are limited in scope to subjects that support clinical billing, such as diagnoses, services rendered, and admission and discharge dates.
- *Manual Chart Abstraction*- Clinical data is a more desirable source for measures than claims data. Hybrid measures of clinical and claims information paint a more accurate picture of quality than claims data alone. Currently, the availability of clinical data typically depends on manual chart abstraction, though increasingly, clinical information can be pulled directly from electronic health records (EHRs) or clinical data registries.

- *Clinical Data Registries*- Many electronic health IT systems can upload clinical data into large registries, which record data about health status or care over a period of time for specific conditions, diseases or topics for a defined population. These registries collect information from a large number of providers and store it and make it available for research or measurement purposes. Some registries also accept manually-entered data. Certain registries have been set up specifically for quality improvement or measurement purposes. Gaining access to the outcomes data from these registries will be important, and purchasers can play a role in facilitating the availability of that data.
- *Electronic Health Records*- Innovations in information technology and the construction of the electronic data platform—including EHRs, personal health records (PHRs), health information exchanges (HIEs), clinical data registries, patient portals, and mobile devices—are allowing for faster transmission of more meaningful clinical information to support measurement and decision-making. While this does not reflect the reality of the current capabilities of health information technology, as data from these sources becomes more fully interconnected and interoperable, the potential for measurement based on multiple sources and available in real time at the point of care will be realized.
- *Patient Surveys*- To capture patient-reported information, the primary source today is the Consumer Assessment of Healthcare Providers and Systems (CAHPS) family of surveys. Achieving the goal of efficiently and routinely measuring patient experience, health status, and patient-reported outcomes will require enhancing existing data sources to show more differentiation and to support these desirable types of measures.

Given the range in feasibility of collecting data from various sources and the range in the complexity of measures, purchasers should expect that the ability of providers to report on specific measures will vary in the near term. It is also likely that provider frustrations with inadequate reporting infrastructure will continue to grow. But purchaser frustrations over lack of accountability and improvement are also real. Purchasers should use market forces to encourage development of the necessary means to report the most important and informative health care quality measures, even when development of the data collection infrastructure must evolve over a period of years. In addition, purchasers should encourage shorter turn-around time between data collection and public reporting to produce more timely results.

In light of these dynamics, it is important for purchasers and providers to work together to get to the measures that matter. One option for collaboration would be through joint purchaser and provider pilot projects to test implementation of the measures that are more difficult to report. Active involvement of private sector stakeholders in CMS' Health Care Payment Learning and Action Network may also help to accelerate the transition to the use of meaningful measures in health care delivery and payment reform programs.

Table 3 below breaks out the 30 measures in the set into two categories of feasibility based on the data sources required for each measure. Measures in Category 1 are claims-based and relatively easy to collect; those in Category 2 use non-claims sources such as clinical information or patient-reported data and may be more difficult to collect, though all are in use in at least one program and many are in use in multiple programs. Information about how each measure in the set aligns with selected measurement programs can be found in Appendix B, Table 7, column 11.

Table 3: Categories of Measure Implementation Feasibility*

Category 1	Category 2
• Healthy Term Newborn • Use of Imaging Studies for Low Back Pain • Antidepressant Medication Management • Complication Rate for Hip or Knee Arthroplasty • Breast Cancer Screening • Statin Therapy for Patients with Cardiovascular Disease • Colorectal Cancer Screening • Appropriate Treatment for Children with Upper Respiratory Infection • Childhood Immunization Status • Hospital-Wide All-Cause Unplanned Readmissions • Patients with a Chronic Condition Who Have a Potentially Avoidable Complications • Patient Safety for Selected Indicators	• Elective Delivery • Cesarean Section • Controlling High Blood Pressure • Average Change in Functional Status following Lumbar Spine Fusion Surgery • Optimal Diabetes Care • Screening for Clinical Depression and Follow-Up Plan • Depression Response at 6 months • Cancer Stage Documented • Chronic Anticoagulation Therapy • Pharmacologic Therapy for Persistent Asthma • Optimal Vascular Care • Avoidance of Inappropriate Colonoscopy • CAHPS Clinician and Group Surveys • HCAHPS Surveys • Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents • BMI Screening and Follow-Up • Tobacco Use: Screening and Cessation Intervention • Documentation of Current Medications in the Medical Record

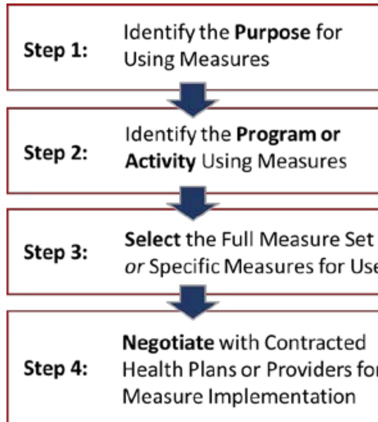
* Some of the full measure names listed in Table 3 have been abbreviated in the table due to space constraints.

How to Use the Measure Set

As described above, the purpose of the CPR Employer-Purchaser Guide to Quality Measure Selection is to define a set of the best available measures relevant to purchasers' interests in evaluating the performance of health care providers and informing consumer decision-making, and to provide a framework for illustrating how some or all of the measures can be used for a variety of purposes. The flow diagram in Figure 4 and the examples that follow in Figures 5 and 6 illustrate how to apply the measures to meet your needs.

Figure 4 presents the four steps that purchasers may follow to select measures for use and negotiate their implementation. After identifying the purpose and program or activity for using measures (see Table 1 above), the next step is to consider whether all or some of the measures in the priority set are applicable. After selecting measures, purchasers may use them to inform negotiations with their contracted or prospective health plans or, in the case of direct contracting, with providers.

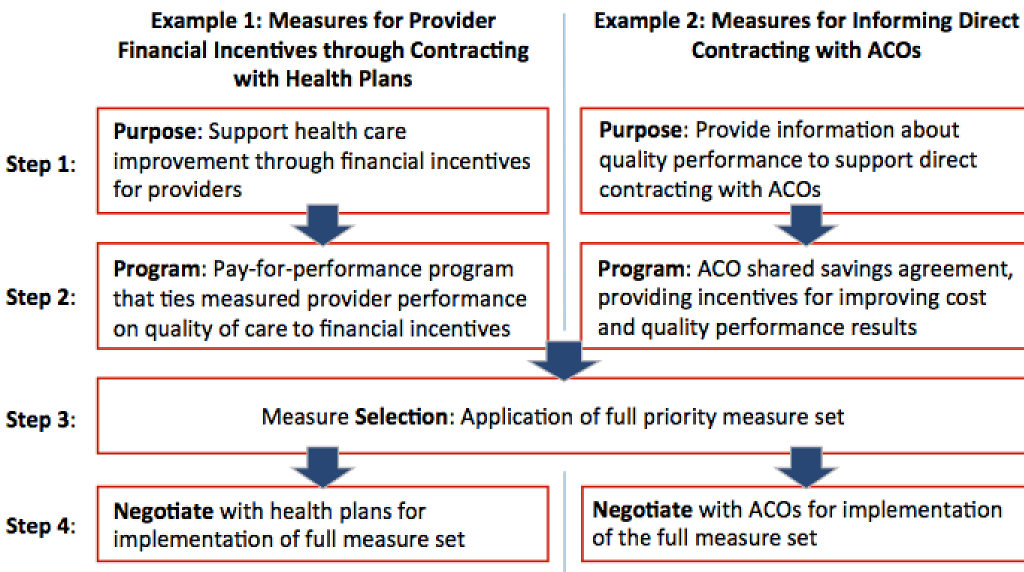
Figure 4: Steps for Selecting Measures and Negotiating Implementation



For some purposes and programs, all 30 measures in the priority set are appropriate. Using the entire set provides as good a view as we can get from current quality measures of inpatient and ambulatory health care for a wide range of important clinical and cross-cutting areas. The full measure set is most appropriate for health plans, integrated delivery networks, and other system-level providers such as accountable care organizations.

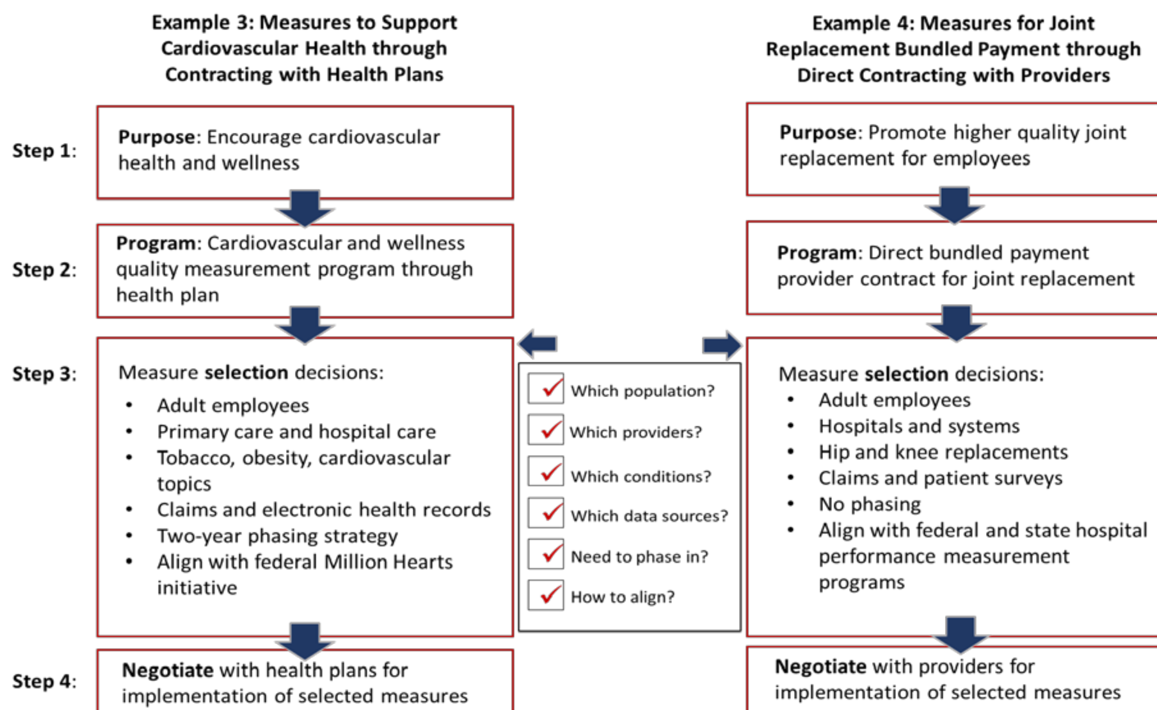
Figure 5 presents two examples of how the steps identified in Figure 4 could be accomplished to select the full measure set and negotiate its implementation. These examples are not meant to limit thinking about the many other ways that the full measure set could be used.

Figure 5: Examples of Applying the Full Measure Set



The full priority measure set may not be appropriate for all purposes and programs. For example, purchasers that are experiencing high costs or low quality for specific conditions may want to use individual or small groups of measures to focus on those conditions. Figure 6 presents two examples of how the steps could be accomplished to select and negotiate implementation of specific measures.

Figure 6: Examples of Applying Specific Measures from the Set



As noted in Step 3 of Figure 6, purchasers need to consider important questions about the relevant population, providers, conditions, data sources, phasing, and alignment to select the right measures for the intended purpose and program. The information that addresses the answers to these questions for the 30 measures is in the columns of Table 7, the Detailed Measure Set, in Appendix B.

- *Which population should we measure?* Age range options (Table 7, columns 4-5) include adults, dependents, or both.

- *Which provider types should we measure?* Care setting options (Table 7, column 7) include hospitals, ambulatory care, or both.

- *Which conditions are most critical to measure?* Consider clinical and cross-cutting areas (Table 7, column 1).

- *Which data sources are available?* Identifying level of analysis (Table 7, column 6) (most of the measures in the set apply at the provider level) and data source (Table 7, column 10) is essential for calculating measures.

- *Will a phasing strategy be required for implementation?* The "Measure Set Implementation and Feasibility Considerations" section above will be helpful in determining which measures may be more or less feasible for contracted health plans and providers. A plan or provider may request a phase-in period for one or more measures to allow time to gather the necessary data.

- *Do the measures align with the National Quality Strategy and other measurement programs?* Ensuring alignment with NQS priorities (Table 7, column 9) and other programs (Table 7, column

11) will strengthen the effect of measurement and decrease the data collection burden on the part of providers.

After choosing the full measure set or specific measures based on the stepwise process and the answers to the questions above, purchasers can use the measures in negotiations with health plans or providers to implement the measures.[12]

Priority Measure Gaps

Strides have been made in developing the quality measures needed for various purposes. While many measures are now available, they are not necessarily the ones needed to support higher value in health care. This is due in large part to the challenges of limited data sources and misalignment we discuss above. In addition, measure development has historically been the purview of professionals whose approach has been to develop process measures from their professional society clinical guidelines. Further, the outcome measures that are preferred for provider accountability require complex risk adjustment to enable fair comparisons among providers.

Several of the 12 high-priority clinical areas identified as the basis for selecting the 30 measures in the set had at least one measure available that assesses important quality outcomes. Further examination suggested that there were sufficient outcome measures in the following five clinical areas: hypertension, diabetes, depression, coronary artery disease, and upper respiratory infection. However, some clinical areas are not adequately covered by the available measures, particularly outcome measures. Table 4 below presents the clinical areas and associated priority quality measure gaps that we identified.

Table 4: Clinical Areas and Identified Priority Measure Gaps

Clinical Areas	Priority Gap Areas
Pregnancy	Safety outcomes for mothers
Low Back Pain	Avoidance of surgical procedures, functional outcomes (beyond functional assessment)
Osteoarthritis	Appropriate referral for surgery, functional outcomes following hip or knee replacement surgery
Breast Cancer	Shared decision making, and outcomes, such as diagnostic errors, mortality, and survival
Arrhythmia	Embolic events, bleeding from anticoagulation
Asthma	Avoidable admissions at the provider level
Gastrointestinal Endoscopy	Upper GI procedure appropriateness and outcomes
Cross-Cutting	General 30-day post-hospitalization mortality measure, medication adherence (beyond fill rates and days covered) and medication errors, all-cause harm

[12] A complementary resource to this guide and these steps is the “How to Build a Measure Set,” prepared by Buying Value. Buying Value’s resource provides tools to assist state agencies, private purchasers, and other stakeholders in creating health care quality measure sets. http://www.buyingvalue.org/resources/toolkit/.

Appendix C captures the results of searches for measures to fill gaps in the priority measure set. However, we determined that the measures identified through the search were either too immature or infeasible to be included in the set. As such, measure development will be necessary to fill these remaining gaps. Interested stakeholders, including employers and other health care purchasers, can take steps to accelerate development.

Summary

Next Steps

This guide provides tools for employers and purchasers who want to engage in strategies to improve the quality and affordability of health care. It helps to strengthen employers' and purchasers' voices in the quality space by arming them with information about which measures matter most for addressing high-priority clinical areas and cross-cutting topics. Employers and purchasers may use the measure set and accompanying information to select and use measures in ways that correspond with their quality goals. The section called "How to Use the Measure Set" provides a few examples of the many possible ways that employers and purchasers may use the guide and measure set to select some or all of the measures that are the best fit for specific purposes.

Using Measures for Accountability

The health care system is pushing toward achievement of higher value through the provision of better health for populations, better health care for individual patients, and care that is more affordable. The use of quality measures is critical to bringing about these improvements in care. It is crucial that employers and purchasers engage with providers in quality measurement. Engaging in multi-stakeholder projects to pilot innovative measures is an action step that purchasers should consider. Employers and purchasers can play a substantial role in improving the value of health care services by encouraging the use of measures to hold providers accountable for the cost and quality of the care they deliver, basing health care purchasing decisions on quality performance, and accelerating the transition to payment models designed to drive improvements in quality, in turn stimulating a market imperative for improvement.

Addressing Measure Gaps

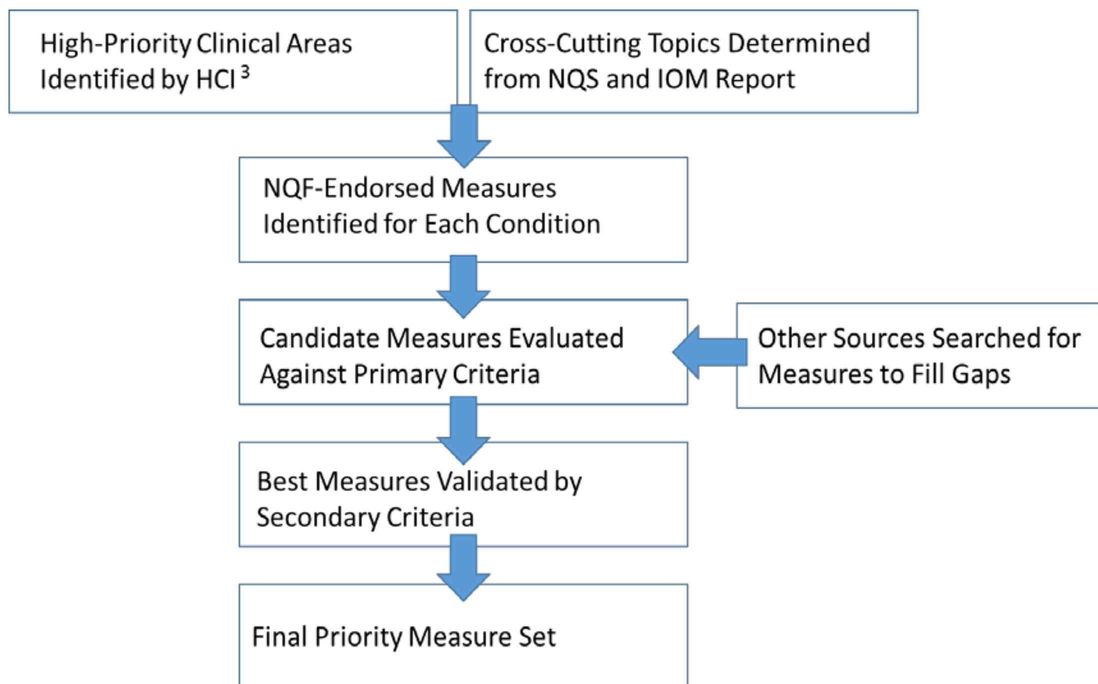
As noted above, gaps exist in the measures available for the 12 high-priority clinical areas. While it is important for employers and purchasers to promote use of the best available measures, it is equally important to address unmet improvement opportunities by helping to fill measure gaps. Employers and other purchasers can facilitate development through collaboration with measure development organizations, such as medical professional societies, the National Committee for Quality Assurance (NCQA) and the Pharmacy Quality Alliance (PQA). NQF is also launching a Measure Incubator initiative to stimulate development of priority measures where today there are gaps. CMS is required under the Medicare Access and CHIP Reauthorization Act of 2015 to issue a plan for measure development in May 2016, which will present an opportunity for purchasers and other stakeholders to comment on priorities for measure development and funding. Together we can build the measures we need for achieving the value we seek from health care spending.

Appendix A: Employer-Purchaser Measure Set Selection Methodology

Introduction

Figure 7 displays the methods we used to identify the 30 measures in the Employer-Purchaser Priority Measure Set. It outlines the steps in the process, including selection of clinical areas and cross-cutting topics, search for candidate measures, evaluation against primary and secondary selection criteria, and identification of gaps and measures to fill gaps. We describe each step in greater detail below.

Figure 7: Measure Selection Process



Methodology

Selection of Clinical Areas and Cross-Cutting Topics

In collaboration with CPR and in preparation for development of the measure set, the Health Care Incentives Improvement Institute (HCI^3) conducted a study using commercial claims data to determine which clinical areas, including conditions and procedures, were most costly and had the largest variation in quality and cost for the working age population and their dependents. Based on the results of their analysis, HCI^3 identified the highest priority clinical areas to pursue.

To identify important cross-cutting topics for measurement to add to the clinical areas, Discern Health referenced both the NQS Priorities and the Institute of Medicine's (IOM's) 2015 Vital Signs 2.0 report.[13] The IOM report contains a set of recommended key measures that should be considered for alignment across measurement initiatives. We focused on the priority topics of person-centeredness, population health, care coordination, and patient safety, as these were relatively under-represented in the measures we identified for the clinical areas.

[13] http://iom.nationalacademies.org/Reports/2015/Vital-Signs-Core-Metrics.aspx.

Search for Measures
After establishing the clinical areas and cross-cutting topics, Discern scanned available NQF-endorsed measures using NQF's Quality Positioning System (QPS),[14] a web-based measure search tool. We began the search with currently endorsed measures to ensure that the candidate measures were valid and reliable and addressed a known performance gap. We gathered all measures that directly applied to each clinical area and cross-cutting topic.

Evaluation Against Primary Selection Criteria
Discern evaluated the universe of measures using primary selection criteria (see Table 5). We assessed the primary criteria for each candidate measure using information embedded in the QPS description for the measure. We generally excluded measures that did not meet a selection criterion, with the exception of measure type, for which we considered process measures if an effective outcome measure was not yet available.

Table 5: Primary Selection Criteria

Primary Criteria Category	Selection Preference	Rationale
Age of population	Working-age population (18-64) and dependents (<18)	The focus of the measure set is employer-purchaser populations; therefore, the selected measures are applicable to those populations. This criterion only excludes measures that are solely for persons >65.
Level of analysis	Provider-level focus	Focusing on provider-level measures, as opposed to health plan or population-level, allows purchasers to measure performance for the providers that their constituents use.
Care setting	Ambulatory and inpatient	Including both inpatient and ambulatory care gives purchasers measures to evaluate acute and chronic care provided by hospitals and office-based clinicians.
Measure type	Outcome measures (including patient-reported outcomes)	Outcome measures address the ultimate results of care and many processes that apply to a given clinical area or cross-cutting topic, so are more meaningful and efficient than process measures.

[14] http://www.qualityforum.org/QPS/QPSTool.aspx

Evaluation Against Secondary Selection Criteria
After applying the primary search criteria, we examined each remaining candidate measure against a secondary set of criteria (see Table 6). The secondary criteria evaluation had two purposes: to identify evidence that would validate final selection of individual measures, and to evaluate the balance of the measure set as a whole. We included the 30 measures that passed the secondary criteria in the final priority measure set.

Table 6: Secondary Measure Selection Criteria

Secondary Criteria Category	Selection Preference	Rationale
Coverage of National Quality Strategy (NQS) aims and priorities and IOM core metrics	The measure set should have broad representation across NQS domains and IOM metrics, such as patient-centeredness, patient safety, and effectiveness.	A measure set that is balanced across NQS priorities and IOM metrics supports improvement in health and health care, as well as lower costs.
Data source	Measures should have data sources that are feasible with current technology, including claims, EHRs, and patient surveys.	Data sources are the basis for the assignment of each measure to the implementation categories.
Alignment across programs	Measures should be in wide use for public and private sector programs.	Alignment of measures decreases the reporting burden on providers and enables stakeholders to be more unified in their goals.
Known variability or gap in performance	Measures should address an aspect of care for which there is demonstrated underperformance or wide variability among providers.	Variability or performance gaps for a measure is important evidence for selecting measures that address quality improvement opportunities and differentiate providers based on performance.
Disparity sensitive	Measures should address an aspect of care for which vulnerable populations (including minority or low-income populations) are demonstrably underserved.	Evidence of disparity sensitivity helps to address issues of equity.

Identification of Measures to Fill Gaps
After completing the second round evaluation and identifying the final priority measure set, we identified important gaps, particularly in outcomes measures. For each gap, we performed a search for measures to fill the gap. We describe that process, and the results of the search, in Appendix C.

Appendix B: Detailed Employer-Purchaser Priority Measure Set

Table 7 provides detailed information on the measures included in the Employer-Purchaser Priority Measure Set in Table 2. Columns address the primary and secondary criteria we used to select the measures and evaluate the set overall, as described in Appendix A.

Table 7: Detailed Measure Set

Acronyms are defined at the bottom of the table.

Column 1: Measure Title	Column 2: Measure Steward	Col 3: NQF #	Column 4: Applies to Age 18-64?	Column 5: Applies to Age <18?	Column 6: Level of Analysis	Column 7: Care Setting	Column 8: Measure Type	Column 9: NQS Designations	Column 10: Data Source	Column 11: Alignment with Measurement Programs
Clinical area: Pregnancy *Measure title:* Elective Delivery	The Joint Commission	0469	Yes	Yes	Facility, Population: National	Hospital/Acute Care Facility	Process	Patient Safety	Administrative claims, Electronic Clinical Data, Paper Medical Records	IQR, MU2, CMMI core, eValu8, MONAHRQ Core
Clinical area: Pregnancy *Measure title:* Cesarean Section	The Joint Commission	0471	Yes	Yes	Facility, Population: National	Hospital/Acute Care Facility	Process	Patient Safety	Administrative claims, Paper Medical Records	IQR, MU2, CMMI Core, MN Community Measurement Program (Primary C-Section Rate), eValu8, MONAHRQ Core
Clinical area: Pregnancy *Measure title:* Healthy Term Newborn	California Maternal Quality Care Collaborative	0716	Yes	Yes	Clinician: Team, Facility, Integrated Delivery System, Population: Regional, State	Hospital/Acute Care Facility	Outcome	Patient Safety	Administrative claims	IQR, CMS LTCH MONAHRQ Core
Clinical area: Hypertension *Measure title:* Controlling High Blood Pressure	NCQA	0018	Yes	No	Health Plan, Integrated Delivery System	Ambulatory Care: Clinician Office/Clinic, Urgent Care	Outcome	Effectiveness	Administrative claims, Electronic Clinical Data, Paper Medical Records	CMMI Core, MSSP ACO, Bridges to Excellence, HEDIS 2016

Column 1: Measure Title	Column 2: Measure Steward	Col 3: NQF #	Column 4: Applies to Age 18-64?	Column 5: Applies to Age <18?	Column 6: Level of Analysis	Column 7: Care Setting	Column 8: Measure Type	Column 9: NQS Designations	Column 10: Data Source	Column 11: Alignment with Measurement Programs
Clinical area: Low Back Pain *Measure title:* Use of Imaging Studies for Low Back Pain	NCQA	0052	Yes	No	Health Plan, Integrated Delivery System	Ambulatory Care: Ambulatory Surgery Center (ASC), Clinician Office/Clinic, Outpatient Rehabilitation	Process	Lower Cost, Patient Safety	Administrative claims, Paper Medical Records	MU2, PQRS, eValu8 (imaging for low back first 6 weeks), HEDIS 2016
Clinical area: Low Back Pain *Measure title:* Average Change in Functional Status following Lumbar Spine Fusion Surgery	MN Community Measurement	2643	Yes	No	Clinician Group/Practice	Ambulatory Care: Clinician Office/Clinic	Patient-Reported Outcome	Patient Centered/ Engagement, Effectiveness	Electronic Clinical Data: Electronic Health Record, Paper Medical Records, Patient-Reported Data/Survey	MN Community Measurement
Clinical area: Diabetes *Measure title:* Optimal Diabetes Care (Composite Measure)	MN Community Measurement	0729	Yes	No	Clinician Group/Practice	Ambulatory Care: Clinician Office/Clinic	Outcome / Composite	Effectiveness	Electronic Clinical Data: Electronic Health Record, Registry, Paper Medical Records	MSSP, PQRS, MN Community Measurement Program, Bridges to Excellence (BP and A1c components), HEDIS 2016 (similar Comprehensive Diabetes Care measure components, but not composite)
Clinical area: Depression *Measure title:* Antidepressant Medication Management	CMS	0105	Yes	No	Health Plan, Integrated Delivery System	Ambulatory Care: Clinician Office/Clinic	Process	Care Coordination, Effectiveness	Administrative claims, Electronic Clinical Data: Pharmacy	HEDIS 2016

Column 1: Measure Title	Column 2: Measure Steward	Col 3: NQF #	Column 4: Applies to Age 18-64?	Column 5: Applies to Age <18?	Column 6: Level of Analysis	Column 7: Care Setting	Column 8: Measure Type	Column 9: NQS Designations	Column 10: Data Source	Column 11: Alignment with Measurement Programs
Clinical area: Depression *Measure title:* Screening for Clinical Depression and Follow-Up Plan	CMS	0418	Yes	Yes	Clinician: Group/Practice, Individual, Team; Population: Community, State, County, City, Regional, National,	Ambulatory Care: Clinician Office/Clinic, Hospital/Acute Care Facility, Post Acute/Long Term Care Facility: Inpatient Rehabilitation Facility, Long Term Acute Care Hospital, Nursing Home/Skilled Nursing Facility	Process	Population Health/ Prevention/ Wellness, Patient Centered/ Engagement	Administrative claims, Electronic Clinical Data: Electronic Health Record, Paper Medical Records; Patient-Reported Data/Survey	MSSP, MU2, PQRS, CMMI Core, Bridges to Excellence (PHQ-9 use)
Clinical area: Depression *Measure title:* Depression Response at 6 months-Progress Towards Remission	MN Community Measurement	1884	Yes	No	Clinician: Group/Practice	Ambulatory Care: Clinician Office/Clinic, Behavioral Health/Psychiatric: Outpatient	Patient-Reported Outcome	Patient Centered/ Engagement, Effectiveness	Electronic Clinical Data: Electronic Health Record, Registry, Paper Medical Records, Patient-Reported Data/Survey	MN Community Measurement Program, Bridges to Excellence (remission rate)
Clinical area: Osteoarthritis *Measure title*: Hospital-Level Risk-Standardized Complication Rate Following Elective Primary Total Hip Arthroplasty and/or Total Knee Arthroplasty	CMS	1550	No	No	Facility	Hospital/Acute Care Facility	Outcome	Patient Safety	Administrative claims	IQR
Clinical area: Breast Cancer *Measure title*: Breast Cancer Screening	NCQA	2372	Yes	No	Health Plan, Integrated Delivery System	Ambulatory Care: Clinician Office/Clinic	Process	Population Health/ Prevention/ Wellness	Administrative claims, Electronic Clinical Data	MN Community Measurement Program, HEDIS 2016

Column 1: Measure Title	Column 2: Measure Steward	Col 3: NQF #	Column 4: Applies to Age 18-64?	Column 5: Applies to Age <18?	Column 6: Level of Analysis	Column 7: Care Setting	Column 8: Measure Type	Column 9: NQS Designations	Column 10: Data Source	Column 11: Alignment with Measurement Programs
Clinical area: Breast Cancer *Measure title*: Oncology: Cancer Stage Documented	AMA-PCPI	0386	Yes	No	Clinician: Group/Practice Individual, Team	Ambulatory Care: Clinician Office/Clinic	Process	Effectiveness	Administrative claims, Electronic Clinical Data: Electronic Health Record, Registry, Paper Medical Records	PQRS
Clinical area: Arrhythmia *Measure title*: Atrial Fibrillation and Atrial Flutter: Chronic Anticoagulation Therapy	American College of Cardiology	1525	Yes	No	Clinician: Individual	Ambulatory Care: Clinician Office/Clinic	Process	Effectiveness	Electronic Clinical Data: Registry	PQRS
Clinical area: Asthma *Measure title*: Asthma: Pharmacologic Therapy for Persistent Asthma	AMA-PCPI	0047	Yes	Yes	Clinician: Group/Practice, Individual, Team	Ambulatory Care: Clinician Office/Clinic	Process	Effectiveness	Administrative claims, Electronic Clinical Data: Registry, Paper Medical Records	PQRS, CMMI Core, Bridges to Excellence (medication therapy)
Clinical area: Coronary Artery Disease *Measure title*: Statin Therapy for Patients with Cardiovascular Disease	NCQA	N/A	Yes	No	Health Plan, Integrated Delivery System	Clinician Office/Clinic	Process	Effectiveness	Administrative claims, Pharmacy	HEDIS 2016
Clinical area: Coronary Artery Disease *Measure title*: Optimal Vascular Care (Composite Measure)	MN Community Measurement	0076	Yes	No	Clinician: Group/Practice	Ambulatory Care: Clinician Office/Clinic	Outcome / Composite	Effectiveness	Electronic Clinical Data: Electronic Health Record, Registry, Paper Medical Records	MN Community Measurement Program, eValu8 (CAD intervention)

Column 1: Measure Title	Column 2: Measure Steward	Col 3: NQF #	Column 4: Applies to Age 18-64?	Column 5: Applies to Age <18?	Column 6: Level of Analysis	Column 7: Care Setting	Column 8: Measure Type	Column 9: NQS Designations	Column 10: Data Source	Column 11: Alignment with Measurement Programs
Clinical area: Gastrointestinal Endoscopy *Measure title*: Endoscopy/Polyp Surveillance: Colonoscopy Interval for Patients with a History of Adenomatous Polyps- Avoidance of Inappropriate Use	American Gastroenterological Association	0659	Yes	No	Clinician: Group/Practice, Individual, Team	Ambulatory Care: Ambulatory Surgery Center (ASC), Clinician Office/Clinic, Urgent Care, Hospital/Acute Care Facility	Process	Lower Cost, Patient Safety	Electronic Clinical Data: Electronic Health Record, Imaging/Diagnostic Study, Registry	PQRS, OQR
Clinical area: Gastrointestinal Endoscopy *Measure title*: Colorectal Cancer Screening	NCQA	0034	Yes	No	Health Plan, Integrated Delivery System	Ambulatory Care: Clinician Office/Clinic	Process	Population Health/ Prevention/ Wellness	Administrative claims, Electronic Clinical Data: Imaging/Diagnostic Study, Laboratory, Paper Medical Records	MU2, MSSP, PQRS, CMMI Core, MN Community Measurement Program, HEDIS 2016
Clinical area: Upper Respiratory Infection *Measure title*: Appropriate Treatment for Children with Upper Respiratory Infection	NCQA	0069	No	Yes	Health Plan, Integrated Delivery System	Ambulatory Care: Clinician Office/Clinic, Urgent Care	Process	Lower Cost, Patient Safety	Administrative claims, Electronic Clinical Data: Pharmacy	MU2, PQRS, MN Community Measurement Program, HEDIS 2016
Cross-Cutting topic: Person Centeredness *Measure title*: CAHPS Clinician and Group Surveys (CG-CAHPS)-Adult, Child	AHRQ	0005	Yes	Yes	Clinician: Group/Practice, Clinician: Individual	Ambulatory Care: Clinician Office/Clinic	Patient-Reported Outcome	Patient Centered/ Engagement. Care Coordination	Patient-Reported Data/Survey	PQRS, CMMI Core, MSSP

Column 1: Measure Title	Column 2: Measure Steward	Col 3: NQF #	Column 4: Applies to Age 18-64?	Column 5: Applies to Age <18?	Column 6: Level of Analysis	Column 7: Care Setting	Column 8: Measure Type	Column 9: NQS Designations	Column 10: Data Source	Column 11: Alignment with Measurement Programs
Cross-Cutting topic: Person Centeredness *Measure title*: HCAHPS	CMS	0166	Yes	No	Facility	Hospital/Acute Care Facility	Patient-Reported Outcome	Patient Centered/ Engagement, Care Coordination	Patient-Reported Data/Survey	IQR, CMMI Core
Cross-Cutting topic: Population Health *Measure title*: Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up	CMS	0421	Yes	No	Clinician: Group/Practice, Individual, Population: County or City, State, Regional, National	Ambulatory Care: Clinician Office/Clinic, Outpatient Rehabilitation, Behavioral Health/Psychiatric: Outpatient, Home Health	Process	Population Health/ Prevention/ Wellness, Patient Centered/ Engagement	Administrative claims, Electronic Clinical Data: Electronic Health Record, Registry, Paper Medical Records	MU2, MSSP, PQRS, CMMI core, eValu8, HEDIS 2016
Cross-Cutting topic: Population Health *Measure title*: Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents	NCQA	0024	No	Yes	Health Plan, Integrated Delivery System	Ambulatory Care: Clinician Office/Clinic	Process	Population Health/ Prevention/ Wellness, Patient Centered/ Engagement	Administrative claims, Electronic Clinical Data, Paper Medical Records	MU2, PQRS, CMMI Core, HEDIS 2016 (similar to Adult BMI)
Cross-Cutting topic: Population Health *Measure title*: Preventive Care and Screening: Tobacco Use: Screening and Cessation Intervention	AMA-PCPI	0028	Yes	No	Clinician: Group/Practice, Individual, Team	Ambulatory Care: Clinician Office/Clinic, Behavioral Health/Psychiatric: Outpatient, Other	Process	Population Health/ Prevention/ Wellness, Patient Centered/ Engagement	Administrative claims, Electronic Clinical Data: Electronic Health Record, Registry, Paper Medical Records	MU2, MSSP, PQRS, CMMI Core, eValu8 Bridges to Excellence (condition specific), HEDIS 2016 (similar medical assistance with smoking and tobacco use cessation, although it is a survey measure)

Column 1: Measure Title	Column 2: Measure Steward	Col 3: NQF #	Column 4: Applies to Age 18-64?	Column 5: Applies to Age <18?	Column 6: Level of Analysis	Column 7: Care Setting	Column 8: Measure Type	Column 9: NQS Designations	Column 10: Data Source	Column 11: Alignment with Measurement Programs
Cross-Cutting topic: Population Health *Measure title*: Childhood Immunization Status	NCQA	0038	No	Yes	Health Plan, Integrated Delivery System	Ambulatory Care: Clinician Office/Clinic	Process	Population Health/ Prevention/ Wellness	Administrative claims, Electronic Clinical Data: Registry, Electronic Health Record, Paper Medical Records	MU2, PQRS, CMMI Core, MN Community Measurement Program (Combo 3), HEDIS 2016
Cross-Cutting topic: Care Coordination *Measure title*: Hospital-Wide All-Cause Unplanned Readmission Measure	CMS	1789	Yes	No	Facility	Hospital/Acute Care Facility	Outcome	Care Coordination, Patient Safety	Administrative claims	IQR, CMMI core, MSSP, HEDIS 2016: (Plan All-Cause Readmissions),
Cross-Cutting topic: Care Coordination *Measure title*: Documentation of Current Medications in the Medical Record	CMS	0419	Yes	No	Clinician: Individual, Population: National	Ambulatory Care: Clinician Office/Clinic, Behavioral Health/Psychiatric: Outpatient, Dialysis Facility, Home Health, Other, Post Acute/Long Term Care Facility: Inpatient Rehabilitation Facility, Nursing Home/Skilled Nursing Facility	Process	Care Coordination	Administrative claims, Electronic Clinical Data: Registry, Electronic Health Record, Paper Medical Records	MU2, PQRS, CMMI Core, HEDIS 2016 (various medication reconciliation and related measures)
Cross-Cutting topic: Patient Safety *Measure title*: Proportion of Patients with a Chronic Condition Who Have a Potentially Avoidable Complication During a Calendar Year	Bridges to Excellence	0709	Yes	No	Clinician: Group/Practice, Health Plan, Population: County or City, Regional, State National	Ambulatory Care: Clinician Office/Clinic	Outcome	Patient Safety	Administrative claims, Electronic Clinical Data: Pharmacy	Bridges to Excellence/ Prometheus Payment

Column 1: Measure Title	Column 2: Measure Steward	Col 3: NQF #	Column 4: Applies to Age 18-64?	Column 5: Applies to Age <18?	Column 6: Level of Analysis	Column 7: Care Setting	Column 8: Measure Type	Column 9: NQS Designations	Column 10: Data Source	Column 11: Alignment with Measurement Programs
Cross-Cutting topic: Patient Safety *Measure title*: Patient Safety for Selected Indicators	AHRQ	0531	Yes	No	Facility	Hospital/Acute Care Facility	Outcome Composite	Patient Safety	Administrative Claims	IQR

Acronyms

AHRQ- Agency for Healthcare Research and Quality
AMA-PCPI- American Medical Association-convened Physician Consortium for Performance Improvement
CMMI Core- Center for Medicare & Medicaid Innovation core measure set
CMS- Centers for Medicare & Medicaid Services
HEDIS 2016- Healthcare Effectiveness Data and Information Set, administered by NCQA
IQR- CMS Inpatient Quality Reporting program
MN Community Measurement- Minnesota Community Measurement
MU2- Meaningful Use Stage 2 (Stage 3 not yet finalized)
MSSP- Medicare Shared Savings Program (ACO program)
NCQA- National Committee for Quality Assurance
OQR- CMS Outpatient Quality Reporting program
PQRS- CMS Physician Quality Reporting System

Appendix C: Search for Gap-Filling Measures and Concepts

We searched for measures, beyond NQF-endorsed measures, to identify measures that could potentially fill gaps in the Employer-Purchaser Priority Measure Set. We searched several sources, including QPS (filtering for measures that are no longer endorsed), the Agency for Healthcare Research and Quality (AHRQ) National Quality Measure Clearinghouse (NQMC), and other measurement programs or developers (see Measure Steward column). In Table 8, we listed potential measures or measure concepts currently in development.

Based on our review of the measures we found, they either did not meet feasibility requirements for the set or were not yet developed enough for inclusion. However, the measures listed inform the types of measures that would be desirable for further development and incorporation into the measure set.

We did not find desirable measures for some of the identified gap areas, specifically:

- Breast Cancer- Shared Decision-Making
- Breast Cancer- Survival
- Gastrointestinal Endoscopy- Upper GI appropriateness and outcomes
- Cross-cutting- Post-hospitalization mortality
- Cross-cutting- All-cause harm

Table 8: Potential Gap-filling Measures and Concepts

The Table has two sections:

- Section I: Measures that are fully developed and are available for use.
- Section II: Measure concepts that could lead to a fully developed measure, or measures that are still undergoing development.

Acronyms are defined at the bottom of the table.

Gap Area	Measure Title	Measure Description	Measure Steward	NQF Number	Measure Type
Section I: Available Measures					
Pregnancy - Safety Outcomes for Mothers	There is no single measure title as various process measures have been identified related to specific pregnancy-related safety issues, such as perinatal immune therapy, foreign object retention, etc.	Various process measures related to safety outcomes are available, but need development of a composite of process measures and outcome measures.	-	-	Process

Gap Area	Measure Title	Measure Description	Measure Steward	NQF Number	Measure Type
Low Back Pain- Avoidance of Surgical Procedures	Adult acute and subacute low back pain: percentage of patients with non-specific low back pain diagnosis who have had collaborative decision-making with regards to referral to a specialist.	This measure is used to assess the percentage of patients age 18 years and older with non-specific low back pain diagnosis who have had collaborative decision-making with regards to referral to a specialist.	ICSI	-	Process
Low Back Pain- Avoidance of Surgical Procedures	Assessment and management of chronic pain: percentage of patients diagnosed with chronic pain who have not met pain control or functional status goals who are referred to pain specialist or interdisciplinary pain team.	This measure is used to assess the percentage of patients age 18 years and older diagnosed with chronic pain who have not met pain control or functional status goals who are referred to pain specialist or interdisciplinary pain team.	ICSI	-	Process
Low Back Pain- Avoidance of Surgical Procedures	Adult acute and subacute low back pain: percentage of patients with radicular pain diagnosis who have had collaborative decision-making with regards to imaging, intervention and/or surgery.	This measure is used to assess the percentage of patients age 18 years and older with radicular pain diagnosis who have had collaborative decision-making with regards to imaging, intervention and/or surgery.	ICSI	-	Process
Low Back Pain- Functional Outcomes	Assessment and management of chronic pain: percentage of patients diagnosed with chronic pain with functional outcome goals documented in the medical record.	This measure is used to assess the percentage of patients age 18 years and older diagnosed with chronic pain with functional outcome goals documented in the medical record.	ICSI	-	Process
Osteoarthritis- Functional Outcomes for Hip or Knee Surgery	Total knee replacement: average post-operative functional status improvement at one year for patients undergoing total knee replacement as measured by the Oxford Knee Score tool.	This measure is used to assess the average post-operative functional status improvement at one year for patients ages 18 and older undergoing a primary or revision total knee replacement during the measurement period as measured by the Oxford Knee Score tool.	MN community measurement	-	Outcome
Breast Cancer- Palliative Care	ED visits in the last two weeks of life.	Percentage of cancer patients who visited the emergency department (ED) in the last two weeks of life.	Cancer Quality Council of Ontario	-	Outcome

Gap Area	Measure Title	Measure Description	Measure Steward	NQF Number	Measure Type
Breast Cancer-Palliative Care	Patient experience with pain management.	Percent of questionnaire respondents who responded positively that their care providers did everything they could to control their pain/discomfort by type of cancer.	Cancer Quality Council of Ontario	-	Patient-Reported Outcome
Arrhythmia-Embolic Events	Anticoagulation for acute pulmonary embolus patients.	Number of acute embolus patients who have orders for anticoagulation (heparin or low-molecular weight heparin) for pulmonary embolus while in the ED.	American College of Emergency Physicians	0503	Process
Asthma-Avoidable Admissions	Diagnosis and management of asthma: percentage of patients with an emergency department visit or inpatient admission for an asthma exacerbation who are discharged from the emergency department or inpatient setting with an asthma discharge plan.	This measure is used to assess the percentage of patients age five years and older with an emergency department visit or inpatient admission for an asthma exacerbation who are discharged from the emergency department or inpatient setting with an asthma discharge plan.	ICSI	-	Process
Asthma-Avoidable Admissions	Diagnosis and management of asthma: percentage of hospitalized patients with asthma who are discharged on an inhaled anti-inflammatory medication.	This measure is used to assess the percentage of hospitalized patients age five years and older with asthma-related hospitalization who are discharged on an inhaled anti-inflammatory medication.	ICSI	-	Process
Cross-cutting-Medication Adherence	Adherence to Chronic Medications.	The measure addresses adherence to three types of chronic medications: statins, levothyroxine, and angiotensin converting enzyme inhibitors (ACEIs)/angiotensin receptor blockers (ARBs). The measure is divided into three submeasures.	CMS	0542	Process
Cross-cutting-Medication Adherence	Primary Medication Non-Adherence.	The percentage of prescriptions for chronic medications e-prescribed by a prescriber and not obtained by the patient in the following 30 days. This rate measures the level of primary medication non-adherence across a population of patients.	PQA	-	Process
Cross-cutting-Medication Adherence	Annual monitoring for patients on persistent medications.	The percentage of members 18 years of age and older who received at least 180 treatment days of ambulatory medication therapy for a select therapeutic agent during the measurement year and at least one therapeutic monitoring event for the therapeutic agent in the measurement year. For each product line, report each of the four rates separately and as a total rate.	NCQA	0021	Process

Gap Area	Measure Title	Measure Description	Measure Steward	NQF Number	Measure Type
Section II: Measure Concepts and Measures in Development					
Low Back Pain-Functional Outcomes	Patient-Reported Health Status.	Multi-source evaluation of health status including: work status, need for continuous analgesic use, disability back and leg pain, and health-related quality of life. Data captures 3 and 6 mos, 1, 2 and 5 years after index event. Multiple tools and surveys used.	ICHOM	-	Outcome
Low Back Pain-Functional Outcomes	Disease Recurrence.	Evaluation of need for re-operation. Uses patient-reported data collected within 3 mos, 6 mos, 1, 2, or 5 years (patient-reported) OR clinical data acquired when it occurs.	ICHOM	-	Outcome
Osteoarthritis-Functional Outcomes for Hip or Knee surgery	Patient-Reported Health Status.	Multi-source evaluation of post-surgical health status including: all-cause 30 day mortality, all cause 30-day readmissions, and all re-operations. Requires administrative and clinical data.	ICHOM	-	Outcome
Osteoarthritis-Functional Outcomes for Hip or Knee Surgery	Patient-Reported Health Status.	Multi-source evaluation of individuals with hip or knee osteoarthritis. Status evaluation includes: hip or knee functional status, pain the hips, knees or lower back, quality of life, work status, and satisfaction with results. Requires use of multiple surveys and tools.	ICHOM	-	Outcome
Breast Cancer-Mortality	Breast Cancer Mortality recorded at population level (per 100,000) by CDC- see AHRQ National Quality report 2013.	-	-	-	Outcome
Arrhythmia-Bleeding from Anticoagulation	PQA measure concept under consideration for development in 2015: Hospital Admission or ED Visit for Adverse Events (e.g. bleeding events or stroke) associated with Anticoagulant Medications.	-	-	-	Outcome
Cross-cutting-Medication Adherence	PQA measure concept under consideration for development in 2015: Primary medication non-adherence [PMN] for health plans.	-	-	-	Outcome

Acronyms not previously defined in Appendix B

ICHOM- International Consortium for Health Outcomes Measurement
ICSI- Institute for Clinical Systems Improvement
PQA- Pharmacy Quality Alliance