NQF

NATIONAL QUALITY FORUM

National Voluntary Consensus Standards for Ambulatory Care

Part 2

A
CONSENSUS
REPORT

Foreword

Most healthcare in this country is delivered in the outpatient, or ambulatory, setting. In fact, more than 1 billion patient encounters occur each year in this setting in the United States. But, this setting varies greatly, comprising such disparate venues as hospital emergency departments, physician offices, and ambulatory surgical centers. A wide range of illnesses and conditions are treated and numerous services are offered under this broad rubric. Accordingly, there is great demand for performance measures to evaluate the quality of ambulatory care in all of its permutations.

Given the complexity, breadth, and far-reaching nature of ambulatory care, the National Quality Forum (NQF) has pursued a multistage, multiyear project to seek consensus on standardized measures of outpatient care performance measures and reporting. This work initially led to the publication of *National Voluntary Consensus Standards for Ambulatory Care—Part 1,* which presents 101 national voluntary consensus standards in 10 priority areas.

This report builds upon NQF's earlier work in the ambulatory arena by addressing other aspects of care, including patient experience with care and special settings of care. It also includes measures to address healthcare disparities and recommendations for measure implementation. These measures have been carefully reviewed and endorsed by a diverse group of stakeholders pursuant to NQF's formal Consensus Development Process, giving them the special legal status of voluntary consensus standards.

We thank the Robert Wood Johnson Foundation for its generous and comprehensive support of this project. We also thank the multiple Steering Committees and their Technical Advisory Panels for their stewardship of this complex project and NQF Members for their active participation in it.

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President and Chief Executive Officer

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NATIONAL QUALITY FORUM

National Voluntary Consensus Standards for Ambulatory Care—Part 2

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National Voluntary Consensus Standards for Ambulatory Care—Part 2

Executive Summary

Ambulatory care settings such as physician offices, freestanding ambulatory surgical centers (ASCs), and hospital emergency departments play a critical role in the U.S. healthcare system. With more than a billion visits to physician offices and hospital outpatient and emergency departments taking place each year, ambulatory (outpatient) care embraces a wide range of health conditions, services, and settings, and is the primary site in the United States where patients receive care. The demand for performance measures to evaluate all aspects of ambulatory care, including various settings of care, is growing rapidly.

The National Quality Forum's (NQF's) "Ambulatory Care" project is a multistage endeavor that seeks consensus on standardized measures of outpatient care performance measures and reporting. *National Voluntary Consensus Standards for Ambulatory Care—Part 1* presented 101 consensus standards in the following 10 priority areas: asthma/respiratory illness; bone and joint conditions; diabetes; heart disease; hypertension; medication management; mental health and substance use disorders; obesity; prenatal care; and prevention, immunization, and screening. Part 1 also presented research recommendations for each of these areas as well as a definition and framework for measuring care coordination.

This second volume presents additional work addressing other aspects of ambulatory care, including patient experience with care and special settings of care (ASCs). It also includes measures to address healthcare disparities and recommendations for measure

implementation. The purpose of all the consensus standards and recommendations presented is to improve the quality of ambulatory care through accountability and public reporting and by standardizing quality measurement that describes performance in ambulatory care settings. The performance measures presented are suitable for accountability; are derived from all data sources; are fully developed and precisely specified; and are fully open source.

Patient Experience with Care

Following the introductory chapter, in chapter 2, this report presents seven instruments to evaluate patient experience with ambulatory care at various levels of analysis (clinician, group, health plan):

- Consumer Assessment of Healthcare Providers and Systems (CAHPS®) Clinician & Group Survey - adult, pediatric, specialist versions;
- CAHPS Health Plan Survey v. 4.0 Adult Questionnaire;
- National Committee for Quality Assurance (NCQA) Supplemental Questions to CAHPS 4.0 Health Plan Survey (CAHPS 4.0H);
- CAHPS Child Survey v. 3.0 Children with Chronic Conditions Supplement;
- Experience of Care and Health Outcomes (ECHO) Survey (behavioral health, managed care versions);
- Promoting Healthy Development Survey (PHDS); and
- Young Adult Health Care Survey (YAHCS).

Special Settings of Care: Ambulatory Surgical Centers

In chapter 3, this report presents five facility-level patient safety measures appropriate to evaluate performance in ASCs:

- patient burn;
- prophylactic intravenous antibiotic timing;
- hospital transfer/admission;
- patient fall; and
- wrong site, wrong side, wrong patient, wrong procedure, wrong implant.

Additionally, the report presents four clinician-level measures that may be applied to procedures performed in ASCs:

- selection of prophylactic antibiotic, first- or second-generation cephalosporin;
- timing of prophylactic antibiotics, ordering physician;
- timing of prophylactic antibiotics, administering physician; and
- discontinuation of prophylactic antibiotics, non-cardiac procedures.

Addressing Healthcare Disparities

All Americans should receive quality healthcare, regardless of race, ethnicity, age, socioeconomic status, insurance status, or gender. Unfortunately, significant healthcare disparities based on these characteristics persist and in some cases are getting worse. Addressing issues of quality within vulnerable patient populations is the overarching and highest priority within each of the 23 NQF-endorsed™ national priority areas for healthcare quality improvement.

Because patients in the United States receive most of their healthcare in ambulatory settings, uncovering healthcare disparities in ambulatory care settings could drive quality improvement to close the gap. Accordingly, the Robert Wood Johnson Foundation designated disparities as one of two additional priority areas for NQF's "Ambulatory Care" project and asked NQF to examine the measures considered in this project through the lens of healthcare disparities.

The measures and recommendations presented in this report in chapter 4 for healthcare disparities can be applied nationally and locally to identify disparities-sensitive underperformance of the healthcare system so that targeted strategies can be developed to reduce disparities quickly. They represent a step toward integrating the reduction of healthcare disparities into the larger quality measurement and pubic reporting agenda.

National Voluntary Consensus Standards for Ambulatory Care: Measuring Healthcare Disparities (National Approach)

PRIORITY AREA	MEASURE TITLE
Asthma	Use of appropriate medications for people with asthma
Asthma	Asthma: pharmacologic therapy
Diabetes	HbA1c test for pediatric patients
Diabetes	Percentage of patients with at least one LDL-C test
Diabetes	Percentage of patients who received a dilated eye exam or seven standard field stereoscopic photos with interpretation by an ophthalmologist or optometrist or imaging validated to match diagnosis from these photos during the reporting year, or during the prior year, if patient is at low risk for retinopathy
Diabetes	Percentage of eligible patients receiving at least one foot exam
Diabetes	Percentage of patients with one or more A1c test(s)
Diabetes	Percentage of patients with most recent A1c level >9.0% (poor control)
Diabetes	Percentage of patients with most recent blood pressure <140/80 mm Hg
Diabetes	Percentage of patients with at least one test for microalbumin during the measurement year; or who had evidence of medical attention for existing nephropathy (diagnosis of nephropathy or documentation of microalbuminuria or albuminuria)
Heart disease	Coronary artery disease (CAD): angiotensin-converting enzyme inhibitor (ACE inhibitor)/angiotensin receptor blocker (ARB) therapy
Heart disease	CAD: beta blocker therapy—prior myocardial infarction
Heart disease	CAD: beta blocker treatment after a heart attack
Ischemic vascular disease (IVD): complete lipid profile and LDL control <100	IVD: patients with a full lipid profile completed during the 12-month measurement period with date of each component of the profile documented; LDL-C<100

(more)

National Voluntary Consensus Standards for Ambulatory Care: Measuring Healthcare Disparities (National Approach) (continued)

PRIORITY AREA	MEASURE TITLE
Heart disease	Heart failure–left ventricular function (LVF) assessment
Heart disease	Heart failure: ACE inhibitor/ARB therapy
Hypertension	Controlling high blood pressure
Medication management	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
Mental health and substance use	Antidepressant medication management
Mental health and substance use	Initiation and engagement of alcohol and other drug dependence treatment
Prenatal care	Prenatal screening for HIV
Prenatal care	Prenatal anti-D immune globulin
Prenatal care	Prenatal blood group and type
Prenatal care	Prenatal D antibody testing
Immunization	Childhood immunization status
Immunization	Flu shots for adults ages 50 to 64
Immunization	Flu shot for older adults
Immunization	Pneumonia vaccination status for older adults
Screening	Breast cancer screening
Screening	Cervical cancer screening
Screening	Colorectal cancer screening
Prevention	Smoking cessation–medical assistance a. Advising smokers to quit b. Discussing smoking cessation medications c. Discussing smoking cessation strategies
Prevention	Measure pair a. Tobacco use assessment b. Tobacco cessation intervention
Prevention	Measure pair a. Tobacco use prevention for infants, children, and adolescents b. Tobacco use cessation for infants, children, and adolescents
Patient experience with care	Ambulatory Consumer Assessment of Healthcare Providers and Systems (ACAHPS®)

National Voluntary Consensus Standards for Ambulatory Care: Measuring Healthcare Disparities (Local Approach)

AGENCY FOR HEALTHCARE RESEARCH AND QUALITY PREVENTION QUALITY INDICATORS	
PQI 1	Diabetes, short-term complications
PQI 2	Perforated appendicitis
PQI 3	Diabetes, long-term complications
PQI 5	Chronic obstructive pulmonary disease
PQI 7	Hypertension
PQI 8	Congestive heart failure
PQI 9	Low birth weight
PQI 10	Dehydration
PQI 11	Bacterial pneumonia
PQI 12	Urinary infections
PQI 13	Angina without procedure
PQI 14	Uncontrolled diabetes
PQI 15	Adult asthma
PQI 16	Lower extremity amputations among patients with diabetes

Implementation

Chapter 5 presents guidance in the form of a road map for implementing the ambulatory care consensus standards based on the recommendations of the Implementation Technical Advisory Panel (TAP). The TAP had identified the numerous challenges confronting clinician-level measurement; identified long-term goals; and provided recommendations for getting started.

The recommendations address a wide variety of issues, including data sources, auditing and data verification, implementation rules, and feedback. Progress along the road map was reviewed after 18 months during an NQF-sponsored conference, "Implementing Measures of Ambulatory Care," held in Washington, D.C., held in 2006.

Chapter 1: Introduction

Patients in the United States receive most of their healthcare in ambulatory (outpatient) settings, with more than a billion visits to physician offices and hospital outpatient and emergency departments each year.[1] Ambulatory care comprises a wide range of health conditions, services, and care settings and has been an especially active area of performance measurement. Although not all aspects of care in the ambulatory setting have benefited equally from measure development and use, a growing number of quality measures are available that can be used to specifically measure the performance of outpatient care providers and practitioners.

In 2005 the Robert Wood Johnson Foundation (RWJF) asked the National Quality Forum (NQF) to undertake a project with the goal of endorsing consensus standards for ambulatory care. In *National Voluntary Consensus Standards for Ambulatory Care – Part 1*,[2] NQF identified 101 measures in the priority areas[3] of asthma/respiratory illness; bone and joint conditions; diabetes; heart disease; hypertension, medication management; mental health and substance use disorders; obesity; prenatal care; and prevention, immunization, and screening. Also, in May 2007 NQF endorsed 20 performance measures in *National Voluntary Consensus Standards for Ambulatory Care: Specialty Clinicians Performance Measures* in the areas of bone and joint conditions (osteoporosis), eye care, emergency care, and geriatrics, and in the fall of 2007, NQF considered measures for end-stage renal disease.

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[1] National Center for Health Statistics, *Health, United States, 2004 with Chartbook on Trends in the Health of Americans,* Hyattsville, MD; 2004.

[2] National Quality Forum (NQF), *National Voluntary Consensus Standards for Ambulatory Care – Part 1: A Consensus Report,* Washington, DC: NQF; 2008.

[3] These areas are consistent with those discussed in NQF's *National Priorities for Healthcare Quality Measurement and Reporting: A Consensus Report,* Washington, DC: NQF; 2004.

RWJF also has asked NQF to review performance measures in the areas of patient experience with care; special settings of care, such as ambulatory surgical centers; and healthcare disparities in ambulatory care. This second volume of *National Voluntary Consensus Standards for Ambulatory Care* presents seven NQF-endorsed™ patient experience with care survey instruments, nine measures for ambulatory surgical centers, recommendations for using NQF-endorsed consensus standards to address the urgent concern of healthcare disparities, and general guidance for implementation of the endorsed ambulatory care measures.

Relationship to Other NQF-Endorsed Consensus Standards

This report does not represent the entire scope of NQF work relevant to the quality of outpatient care. NQF has completed or is currently engaged in separate projects relevant to various healthcare settings, patient safety issues, and patient conditions. *A National Framework for Healthcare Quality Measurement and Reporting*[4] provided a standardized framework for identifying voluntary consensus standards and articulated guiding principles and priorities for healthcare quality improvement. *National Priorities for Healthcare Quality Measurement and Reporting* identified healthcare priorities applicable to ambulatory care, including those involving healthcare disparities; care coordination and communication; patient safety (including medication management); and healthcare conditions (asthma, depression, hypertension, ischemic heart disease, obesity, tobacco dependence and pregnancy, and childbirth and newborn care).

Serious Reportable Events in Healthcare – 2006 Update[5] identified 28 serious adverse events (e.g., surgery performed on the wrong patient, infant discharged to the wrong person) that should be reported by all healthcare facilities. Similarly, *Safe Practices for Better Healthcare – 2006 Update*[6] described

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[4] NQF, *A National Framework for Healthcare Quality Measurement and Reporting: A Consensus Report,* Washington, DC: NQF; 2002.

[5] NQF, *Serious Reportable Events in Healthcare – 2006 Update: A Consensus Report,* Washington, DC: NQF; 2007.

30 healthcare practices that should be universally used to reduce the risk of harm resulting from processes, systems, or environments of care. Many of these events and practices bear specific relevance to the ambulatory setting.

Regarding healthcare disparities, *Improving Healthcare Quality for Minority Patients*[7] explored how measurement and reporting strategies can be used to improve healthcare quality for minority patients. The workgroup for this project—a group of experts from minority, consumer, advocacy, and community-based groups; academic, clinical, and research institutions; and policymaking and government agencies—concluded that better measurement and reporting are essential to improve healthcare quality for minority patients.

Improving Use of Prescription Medications: A National Action Plan[8] addressed the need for a coordinated national action plan to improve consumer use of prescription medications, given the significant impact of prescription medication adherence on patient safety, equity, effectiveness, efficiency, and other domains of quality. It particularly focused on populations at high risk for unintentional non-adherence, such as persons with limited health literacy, including those with limited English proficiency (LEP). Three major recommendations involving data and measurement, practices for healthcare providers, and stakeholder engagement were offered to create a national action plan for improving consumer use of prescription medications.

NQF will soon embark on an effort to build consensus on a cultural competency framework for measurement and reporting. Despite research efforts to build an evidence base that supports cultural and linguistic competency resulting in improved health outcomes and decreased system costs, there is a noticeable absence of a broadly defined framework, logic model, or definition that would move the field beyond race or ethnic specific interventions.[9] A nationally endorsed *comprehensive* cultural competency framework can serve as a road map for the identification of a set of preferred practices and performance measures, and can help in identifying areas that require additional research or development. In addition, the framework would provide a structured perspective for evaluating the development, expansion, and modification of new and existing programs (and their assessments) for cultural competency.

The full constellation of ambulatory care consensus standards, including those contained in this report, provides a growing number of NQF-endorsed voluntary consensus standards that directly and indirectly reflect the importance of measuring and improving the quality of care. Organizations that adopt these consensus standards will promote the

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[6] NQF, *Safe Practices for Better Healthcare – 2006 Update: A Consensus Report,* Washington, DC: NQF; 2007.

[7] NQF, *Improving Healthcare Quality of Minority Patients,* Washington, DC: NQF; 2002.

[8] NQF, *Improving Use of Prescription Medications: A National Action Plan,* Washington, DC: NQF; 2005.

[9] Goode TD, Dunne MC, Bronheim SM, *The Evidence Base for Cultural and Linguistic Competency in Health Care,* The Commonwealth Fund; October 2006.

development of safer and higher-quality care for patients throughout the nation.

Acknowledgment

This work was conducted under a grant from the Robert Wood Johnson Foundation.

Chapter 2: National Voluntary Consensus Standards for Ambulatory Care—Patient Experience with Care

Introduction

The patient's experience with care is a critical priority area of healthcare quality. Evidence indicates that patients (and, in some instances, parents or other proxies) can validly report on experience with care and on many of the clinical events that take place in an encounter. Survey instruments capture patients' perspectives of multiple levels of the healthcare system—including the clinician, health plan, and community levels—from diverse patient populations, including adults, children, and adolescents.

This chapter presents seven national voluntary consensus standards for assessing patient experience with ambulatory care. These consensus standards add to a growing set of consensus standards for ambulatory care. The National Quality Forum (NQF) has endorsed clinician-level ambulatory care performance measures in the areas of asthma/respiratory illness; bone and joint conditions; diabetes; heart disease; hypertension; medication management; mental health and substance use; obesity; prenatal care; and prevention, immunization, and screening.[1] While clinician-level performance measures provide important information about the quality of ambulatory care, assessing patients' experience with ambulatory care is a critical performance measure eagerly sought by many stakeholders.

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[1] NQF, *National Voluntary Consensus Standards for Ambulatory Care – Part 1: A Consensus Report,* Washington, DC: NQF; 2008.

Identifying the Consensus Standards

An NQF Steering Committee (appendix E) established the initial approach to evaluating potential consensus standards. This approach defined patient experience with care and identified a specific purpose and scope for the performance measures and the screening of candidate consensus standards through the application of standardized evaluation criteria (box A). *Ambulatory care* is defined as "all types of health services that do not require an overnight stay in a healthcare institution, such as an acute care hospital, nursing facility, or rehabilitation facility."

Purpose

The purpose of this set of ambulatory care consensus standards is to improve the quality of ambulatory care—via accountability and public reporting—by standardizing quality measurement in ambulatory care settings, including physician offices, clinics, emergency departments, and health centers.

Definition

For the purposes of this report, *patient experience with care* is defined as follows:

> *Patient experience with care* is a patient-centered survey measure that obtains information from patients about the process of obtaining care from a specific clinician (physician and other licensed independent practitioners), practice, care setting, or healthcare organization. Patient care experience measures are designed to go beyond, but not exclude, the assessment of patient satisfaction. Patient experience measures obtain information about specific and clinically relevant aspects of the care process, such as whether clinicians' explanations were clear and easy to understand, whether adequate time was provided, whether patients' questions were answered, and whether care was delivered and coordinated by the clinician, practice, or healthcare organization in a timely and efficient manner across people, functions, and sites over time.

Box 2.A – Criteria for Evaluation and Selection

Proposed consensus standards are evaluated for their suitability based on four sets of standardized criteria (i.e., importance, scientific acceptability, usability, and feasibility). Not all acceptable measures will be strong—or equally strong—among each of the four sets of criteria, or strong among each of their related criteria. Rather, a candidate consensus standard is assessed regarding the extent to which it meets any of the desired criteria within each set:

1. **Importance.** This set addresses the extent to which a measure reflects a variation in quality or low levels of overall performance and the extent to which it captures key aspects of the flow of care.
    a. The measure addresses one or more key leverage points for improving quality.
    b. Considerable variation in the quality of care exists.
    c. Performance in the area (e.g., setting, procedure, condition) is suboptimal, suggesting that barriers to improvement or best practice may exist.
2. **Scientific acceptability.** A measure is scientifically sound if it produces consistent and credible results when implemented.
    a. The measure is well defined and precisely specified. Measures must be specified sufficiently to be distinguishable from other measures, and they must be implemented consistently across institutions. Measure specifications should provide detail about cohort definition, as well as the denominator and numerator for rate-based measures and categories for range-based measures.
    b. The measure is reliable, producing the same results a high proportion of the time when assessed in the same population.
    c. The measure is valid, accurately representing the concept being evaluated.
    d. The measure is precise, adequately discriminating between real differences in provider performance.
    e. The measure is adaptable to patient preferences and a variety of contexts of settings. Adaptability depends on the extent to which the measure and its specifications account for the variety of patient choices, including refusal of treatment and clinical exceptions.
    f. An adequate and specified risk-adjustment strategy exists, where applicable.
    g. Patient outcomes or consistent evidence is available linking the structure and process measures to patient outcomes.
3. **Usability.** Usability reflects the extent to which intended audiences (e.g., consumers, purchasers) can understand the results of the measure and are likely to find them useful for decisionmaking.
    a. The measure can be used by the stakeholder to make decisions.
    b. The differences in performance levels are statistically meaningful.
    c. The differences in performance are practically and clinically meaningful.
    d. Risk stratification, risk-adjustment, and other forms of recommended analyses can be applied appropriately.
    e. Effective presentation and dissemination strategies exist (e.g., transparency, ability to draw conclusions, information available when needed to make decisions).

continued

Box A – Criteria for Evaluation and Selection (continued)

- f. Information produced by the measure can/will be used by at least one healthcare stakeholder audience (e.g., public/consumers, purchasers, clinicians and providers, policymakers, accreditors/regulators) to make a decision or take an action.
- g. Information about specific conditions for which the measure is appropriate has been given.
- h. Methods for aggregating the measure with other, related measures (e.g., to create a composite measure) are defined, if those related measures are determined to be more understandable and more useful in decisionmaking. Risks of such aggregation, including misrepresentation, have been evaluated.

4. **Feasibility.** Feasibility is generally based on the way in which data can be obtained within the normal flow of clinical care and the extent to which an implementation plan can be achieved.
   - a. The point of data collection is tied to care delivery, when feasible.
   - b. The timing and frequency of measure collection are specified.
   - c. The benefit of measurement is evaluated against the financial and administrative burden of implementation and maintenance of the measure set.
   - d. An auditing strategy is designed and can be implemented.
   - e. Confidentiality concerns are addressed.

Scope

The NQF-endorsed™ national voluntary consensus standards for patient experience with care encompass those that:

- are suitable for several levels of practice accountability, including clinician, group, health plan or community-level accountability as specified by the developer;
- include the performance of a multidisciplinary team of healthcare providers and staff;
- are derived from all data sources;
- are fully developed and precisely specified; and
- are open source.[2]

Specifications of the Patient Experience with Care Survey Instruments

To remain consistent with previous NQF-endorsed measures for patient experience with care, including *Standardizing a Measure of Patient Perspectives of Hospital Care,*[3] and consistent with other measures endorsed for ambulatory care, the specifications of

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[2] On January 29, 2003, the NQF Board of Directors adopted a policy that NQF will endorse only fully open source measures. Open source is defined by NQF as being “fully disclosed” (i.e., data elements, measure algorithm, if applicable, and risk-adjustment methods/data elements/algorithms are fully described and disclosed; if calculation requires database-dependent coefficients that change frequently, the existence of such coefficients shall be disclosed and the general frequency with which they change shall be disclosed, but the precise numerical value need not be disclosed).

[3] NQF, *Standardizing a Measure of Patient Perspectives of Hospital Care: A Consensus Report,* Washington, DC: NQF; 2005.

patient experience with care measures were considered to consist of the following components:

- survey instrument;
- sampling specifications (e.g., population, proxies, exclusions, sampling, exceptions);
- survey administration (e.g., timing, mode, format, exceptions);
- scoring and patient-mix adjustment, including domain-specific and composite ratings; and
- reporting instructions (e.g., data submission, analysis, timeframes).[4]

Selection Criteria

The following principles guided the selection of potential consensus standards:

- the focus of the measures is primarily accountability, as a driver of quality improvement; and
- measures should be feasible, scientifically accurate, and reflect an aspect of care substantially influenced by the clinician practice.

Additionally, the following important measure characteristics also were considered in the selection of potential consensus standards:

- measures that address vulnerable populations;
- measures that address all relevant populations;
- consideration of possible perverse incentives or unintended consequences;
- clarity and completeness of specifications;
- measures that have been pilot tested or are already in use; and
- measures that address high variation, including overuse or underuse.

[4] When considering the HCAHPS survey instrument as part of NQF's project "Additional Hospital Priority Areas, 2005," NQF Members strongly objected to advancing the instrument without all of the specifications domains lists above.

Evaluation of Candidate Consensus Standards

Measures were evaluated based on the criteria derived from the work of the NQF Strategic Framework Board and endorsed by NQF, including rationale, importance, scientific acceptability, usability, and feasibility. These criteria were applied to candidate consensus standards identified through several complementary tactics:

- open solicitation of measures through a "Call for Measures." In 2005 and 2006, the "Call" was distributed through the following avenues:
  - posted on NQF's web site, and
  - e-mailed to NQF Members, all Steering Committee and Technical Advisory Panel members, and more than 1,300 individuals who have asked to be kept apprised of NQF activities;
- active search of additional candidate measures from:
  - the Agency for Healthcare Research and Quality's National Quality Measures Clearinghouse, and
  - literature searches; and
- passive receipt of candidate measures suggested by others (e.g., NQF member organizations).

The NQF-Endorsed National Voluntary Consensus Standards for Ambulatory Care: Patient Experience with Care

The NQF-endorsed consensus standards for patient experience with ambulatory care encompass seven measures that will facilitate efforts to improve the quality of care delivered in the outpatient setting. Table 2.1 presents brief descriptions of each instrument. Because consensus standards must be consistently specified to meet the goal of standardization, detailed specifications are provided in appendix A.

The consensus standard instruments address different aspects of care, different populations, and different settings. They are complementary, rather than duplicative. The instruments are part of a "suite" of measurement options that may be adopted by organizations based on their populations and measurement needs.

Research Recommendations

In addition to the consensus standards, many recommendations for further research and development of measures were identified to accompany the set of consensus standards.

Research Recommendation 1: Further Development of Survey Methods and Enhancing the Impact of Measurement

Research is needed on how best to disseminate and report survey information to consumers in a comprehensible and effective manner, and additional methods need to be explored to incorporate patient values and preferences into patient surveys to allow for valid and meaningful results. In addition, research on patient-provider shared decisionmaking would be valuable in determining how to effectively encourage patients' involvement in their healthcare.

Also needed are the development of a group-/clinician-level behavioral health survey; the development of a group-/clinician-level survey on pediatric specialty care; and additional data on mode effect and linkage between a practice-based survey administration methodology, such as the one recommended in the *How's Your Health?* survey developed at Dartmouth Medical School[5] and surveys using a specific sampling strategy.

Other recommendations include research on the usefulness, feasibility, and comparability of web-based surveys; additional testing on performance of instruments applied at the provider level; and assessment of the costs associated with collecting and reporting patient experience with care information for individual practitioners, practices, and/or health plans.

Research Recommendation 2: Additional Domains

Additional measures are needed in the cross-cutting domains of coordination of care, shared decisionmaking, and self-care and in condition-specific areas such as interventional procedures and surgery. Although some of these domains appear in the recommended surveys, some technical issues remain that pertain to patient understanding, applicability, and statistical performance. Additional research is needed on question development and reporting strategies for these domains.

Research Recommendation 3: Linkage to Outcomes

Research on how patient experience with care assessments align with and influence other clinical quality measures would help guide future goals and measure development. Also, additional research is needed to evaluate the impact of measuring patient experience with care in behavioral health and to link behavioral health survey data to outcomes, and further evaluation studies are needed on the application of recommended instruments to diverse populations and the impact of adjusting surveys for population differences for reporting purposes.

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[5] See www.howsyourhealth.org.

Table 2.1 – National Voluntary Consensus Standards for Ambulatory Care: Patient Experience with Care

	SURVEY INSTRUMENT	DESCRIPTION	IP OWNER[i]
1	**CAHPS® Clinician & Group Survey (Adult Primary Care, Adult Specialty Care Questionnaire, Child Primary Care Questionnaire)**	■ Adult Primary Care Survey: 37 core and 64 supplemental question survey of adult outpatient primary care patients. ■ Adult Specialty Care Questionnaire: 37 core and 20 supplemental question survey of adult outpatient specialist care patients. ■ Child Primary Care Questionnaire: 36 core and 16 supplemental question survey of outpatient pediatric care patients. **Level of analysis for each of the 3 surveys: clinician and group**	AHRQ
2	**CAHPS Health Plan Survey v. 4.0 Adult Questionnaire**	30-question core survey of adult health plan members that assesses the quality of care and services they receive. **Level of analysis: health plan – HMO, PPO, Medicare, Medicaid, commercial**	AHRQ
3	**NCQA Supplemental Questions to CAHPS Health Plan Survey 4.0H**	20-question supplement to the CAHPS Health Plan Survey v. 4.0 adult questionnaire that assesses the health plan's role in offering information and care management to members. **Level of analysis: health plan – HMO, PPO, Medicare, Medicaid, commercial**	NCQA
4	**CAHPS Child Survey v. 3.0 Children with Chronic Conditions Supplemental Questions**	31-question supplement to the CAHPS Child Survey v. 3.0 Medicaid and Commercial Core Surveys that enables health plans to identify children who have chronic conditions and assess their experience with the healthcare system. **Level of analysis: health plan – HMO, PPO, Medicare, Medicaid, commercial**	AHRQ
5	**Experience of Care and Health Outcomes Survey ("ECHO Survey") (behavioral health, managed care versions)**	52-question survey that includes patient demographic information. The survey measures patient experiences with behavioral healthcare (mental health and substance abuse treatment) and the organization that provides or manages the treatment and health outcomes. **Level of analysis: health plan – HMO, PPO, Medicare, Medicaid, commercial**	AHRQ
6	**Promoting Healthy Development Survey (PHDS)**	43-item survey given to parents of children ages 3 months to 48 months that assesses parents' experience with care for the provision of preventive and developmental services consistent with American Academy of Pediatrics and Bright Futures practice guidelines. **Level of analysis: physician, office, medical group, health plan, community, state, national, and by child and parent health and social economic characteristics**	CAHMI
7	**Young Adult Health Care Survey (YAHCS)**	54-item survey given to teenagers that assesses whether young adults (age 14 and older) are receiving nationally recommended preventive services. **Level of analysis: health, state, national**	CAHMI

[i] IP owner - Intellectual Property owner.

AHRQ - Agency for Healthcare Research and Quality (www.ahrq.gov)

CAHMI is the Child and Adolescent Health Measurement Initiative, Oregon Health & Science University (OHSU), at dch.ohsuhealth.com//CAHMI/about-cahmi.pdf. These surveys originally were developed by CAHMI while it was housed at the Foundation for Accountability. CAHMI is now located at OHSU, which maintains the ownership and copyright.

NCQA - National Committee for Quality Assurance (www.ncqa.org)

Chapter 3: National Voluntary Consensus Standards for Special Settings of Care—Ambulatory Surgical Centers

Introduction

Recent analyses have indicated a dramatic increase in the number of surgical procedures performed on an ambulatory basis over the past decade, from approximately 13 million in 1996 to more than 23 million in 2006.[1,2,3] It is estimated that more than 15 million of these outpatient surgeries are performed at freestanding ambulatory surgical centers (ASCs) annually and that the number of facilities has increased nationally by 25 percent since 2001 to more than 9,000 in 2006.[4,5] Although ambulatory surgery has been shown to have generally good outcomes, routine outpatient procedures can nonetheless result in serious complications and death.[6] Thus, as the frequency with which patients look to outpatient surgical centers to meet their healthcare needs increases, so too does stakeholder interest in ASC oversight and

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[1] National Center for Health Statistics (NCHS), *National Hospital Discharge and Ambulatory Surgery Data.* Available at www.cdc.gov/nchs/about/major/hdasd/nhds.htm. Last accessed August 2007.

[2] Jackson C, Cutting into the market: rise of ambulatory surgical centers, *American Medical News.* April 15, 2002.

[3] ASC Coalition, *Ambulatory Surgery Centers: A Positive Trend in Healthcare.* Available at www.aaasc.org/features/documents/ASCTrendReport118061.pdf. Last accessed August 2007.

[4] Brophy-Marcus M, The spotlight grows on outpatient surgery, *USA Today.* July 31, 2007.

[5] ASC Coalition, *Ambulatory Surgery Centers: A Positive Trend in Healthcare.* Available at www.aaasc.org/features/documents/ASCTrendReport118061.pdf. Last accessed August 2007.

[6] Department of Health and Human Services, Office of Inspector General, *Quality Oversight of Ambulatory Surgical Centers.* Available at www.oig.hhs.gov/oei/reports/oei-01-00-00452.pdf. Last accessed February 2007.

the public reporting of such adverse events.[7,8,9,10,11] In response to this interest, the Robert Wood Johnson Foundation grant for the National Quality Forum's (NQF's) "Ambulatory Care" project specifically identified "special settings of care, such as ambulatory surgical centers" as a priority area.

Identifying the Consensus Standards

An NQF Steering Committee (appendix E) established the initial approach to evaluating potential consensus standards for ambulatory care. This report defines ambulatory care as all types of health services that do not require an overnight stay in a healthcare institution, such as an acute care hospital, nursing facility, or rehabilitation facility.

Purpose

The purpose of this set of ambulatory care consensus standards is to improve the quality of ambulatory care—through accountability and public reporting—by standardizing quality measurement in ambulatory care settings, including physician offices, clinics, emergency rooms, and health centers.

Scope

The NQF-endorsed™ national voluntary consensus standards for ambulatory care encompass those that:

- are suitable for clinician practice-level accountability;
- are derived from all data sources;

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[7] Florida Agency for Health Care Administration, *Ambulatory Surgical and Emergency Department Data.* Available at www.fdhc.state.fl.us/SCHS/apdunit.shtml. Last accessed April 2007.

[8] Indiana State Department of Health, *Reporting a Complaint.* Available at www.in.gov/isdh/regsvcs/asc_index.htm. Last accessed April 2007.

[9] New York State Department of Health, *Statewide Planning and Research Cooperative System.* Available at www.health.state.ny.us/statistics/sparcs/. Last accessed April 2007.

[10] Commonwealth of Pennsylvania, *Patient Safety Authority.* Available at www.psa.state.pa.us. Last accessed April 2007.

[11] Texas Department of State Health Services, *Patient Safety.* Available at www.dshs.state.tx.us/HFP/safety.shtm. Last accessed April 2007.

- are fully developed and precisely specified; and
- are fully open source.[12]

Some aspects of ambulatory care are more amenable for measurement at facility or health plan levels. For the areas of special settings of care, the scope includes facility measurement as well as clinician-level measurement.

Selection Criteria

Measures were evaluated based on the criteria derived from the work of the NQF Strategic Framework Board and endorsed by NQF (see box 2.A on page 7).[13,14,15,16] These criteria were applied to candidate consensus standards identified through several complementary strategies:

- open solicitation of measures through NQF's "Call for Measures";
- review of NQF-endorsed measures and other related, ongoing NQF consensus work to identify ambulatory care measures within these other efforts;
- active search of additional candidate measures from:
  - AHRQ's National Quality Measures Clearinghouse, and
  - literature searches; and
- passive receipt of candidate measures suggested by others (e.g., NQF member organizations).

The primary focus of ambulatory care quality and performance is the clinician practice level. However, the special settings of care areas required a broader scope to include facility-level measures. These clinician-level consensus standards are intended for use at all levels of analysis, including individual practitioners and small and large groups. Implementing organizations should decide rules of attribution, samples size requirements, and statistical significance based on the characteristics and goals of the measurement program.[17]

Additionally, the following priorities were identified to select potential consensus standards:

- address vulnerable populations;
- address all relevant populations;
- consider possible perverse incentives or unintended consequences;
- clear and complete specifications;
- pilot tested/already in use; and
- address high variation, including over/underuse.

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[12] On January 29, 2003, the NQF Board of Directors adopted a policy that NQF will endorse only fully open source measures. Open source is defined by NQF as being "fully disclosed" (i.e., data elements, measure algorithm, if applicable, and risk-adjustment methods/data elements/algorithms are fully described and disclosed; if calculation requires database-dependent coefficients that change frequently, the existence of such coefficients shall be disclosed and the general frequency with which they change shall be disclosed, but the precise numerical value need not be disclosed).

[13] "The Strategic Framework Board's Design for a National Quality Measurement and Reporting System," *Med Care,* 2003;41(1)suppl:I-1 – I-89.

[14] NQF. *A National Framework for Healthcare Quality Measurement and Reporting: A Consensus Report,* Washington, DC: NQF; 2002.

[15] NQF, *A Comprehensive Framework for Hospital Care Performance Evaluation: A Consensus Report,* Washington, DC: NQF; 2003.

[16] NQF, *National Voluntary Consensus Standards for Nursing-Sensitive Care: An Initial Performance Measure Set – A Consensus Report,* Washington, DC: NQF; 2004.

[17] The Implementation Technical Advisory Panel meeting summary and recommendations are available at www.qualityforum.org/.

The following principles also guided the selection of consensus standards:

- The consensus standard should focus primarily on accountability, as a driver of quality improvement.
- The consensus standard should focus on the unit of analysis, for example, physician practice level, rather than the data source.
- The consensus standards should be feasible and scientifically accurate and reflect an aspect of care substantially influenced by the physician practice.

The NQF-Endorsed National Voluntary Consensus Standards for Ambulatory Care: Ambulatory Surgical Centers

This chapter presents nine performance measures that will facilitate efforts to assess and improve the quality of care delivered in our nation's outpatient surgical facilities. The measures are applicable to both hospital-based outpatient surgery and freestanding ASCs. Notably, although to date the primary focus of ambulatory care quality and performance in this project has been at the clinician practice level, the special settings of care areas, including outpatient surgical centers, required a broadening of previous scope to include facility-level measures. Thus, these measures are intended, as indicated, for either physician- or facility-level accountability, including public reporting. Table 3.1 presents brief descriptions of each measure. Detailed specifications can be found in appendix B.

Research Recommendation

The nine recommended measures constitute a solid initial effort to assess the quality of care in ASCs. Additional performance measures specific to these centers are needed to fully evaluate the quality of care in this setting. Measure development in the areas of anesthesia management, preoperative evaluation, and appropriate use of ASCs, as well as communication with clinicians providing postoperative follow-up would provide information of great interest to many stakeholders.

Table 3.1 – National Voluntary Consensus Standards for Ambulatory Care: Ambulatory Surgical Centers

MEASURE	MEASURE DESCRIPTION	IP OWNER[i]
Patient burn	Percentage of ambulatory surgical center (ASC) admissions experiencing a burn prior to discharge	ASC QC
Prophylactic intravenous antibiotic timing	Percentage of ASC patients who received intravenous antibiotics ordered for surgical site infection prophylaxis on time	ASC QC
Hospital transfer/admission	Percentage of ASC admissions requiring a hospital transfer or hospital admission prior to being discharged from the ASC	ASC QC
Patient fall	Percentage of ASC admissions experiencing a fall in the ASC	ASC QC
Wrong site, wrong side, wrong patient, wrong procedure, wrong implant	Percentage of ASC admissions experiencing a wrong site, wrong side, wrong patient, wrong procedure, or wrong implant	ASC QC
Timing of prophylactic antibiotics, ordering physician	Percentage of surgical patients aged ≥18 years with indications for prophylactic parenteral antibiotics who have an order for an antibiotic to be given within one hour (if vancomycin, two hours) prior to the surgical incision or start of procedure when no incision is required	NCQA AMA PCPI
Selection of prophylactic antibiotic, first- or second-generation cephalosporin	Percentage of surgical patients aged ≥18 years undergoing procedures with the indications for a first- or second-generation cephalosporin prophylactic antibiotic who had an order for cefazolin or cefuroxime	NCQA AMA PCPI
Timing of prophylactic antibiotics, administering physician	Percentage of surgical patients aged ≥18 years with indications for prophylactic parenteral antibiotics for whom administration of the antibiotic has been initiated within one hour (if vancomycin, two hours) prior to the surgical incision or start of procedure when no incision is required	NCQA AMA PCPI
Discontinuation of prophylactic antibiotics, non-cardiac procedures	All non-cardiac surgical patients aged ≥18 years undergoing procedures with indications for prophylactic antibiotics who have an order for discontinuation of the antibiotic within 48 hours of surgical end	NCQA AMA PCPI ASC QC

[i] IP owner - Intellectual Property owner. For the most current specifications and supporting information please refer to the IP owner:

ASC QC - Ambulatory Surgical Centers Quality Collaboration (www.ascquality.org)

AMA PCPI - American Medical Association Physician Consortium for Performance Improvement (www.physicianconsortium.org)

NCQA - National Committee for Quality Assurance (www.ncqa.org)

Chapter 4: National Voluntary Consensus Standards for Ambulatory Care—Measuring Healthcare Disparities

Introduction

All Americans should receive quality healthcare, regardless of their race, ethnicity, age, socioeconomic status (SES), insurance status, or gender. Unfortunately, significant disparities based on these characteristics persist, and in some cases they are getting worse.[1] The 2001 Institute of Medicine (IOM) report, *Crossing the Quality Chasm*,[2] identified eliminating disparities as one of the six overarching goals to improve the quality of the American healthcare system. In 2003, IOM published *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*.[3] This report assessed the extent to which racial and ethnic healthcare disparities in the United States can be directly attributed to race and ethnicity and not other known factors, such as access to care, insurance status, or ability to pay for care, and provided recommendations regarding the elimination of these disparities. In 2003, the Agency for Healthcare Research and Quality (AHRQ) published the first national comprehensive report that measured differences in access to and use of healthcare services by various populations in the United States. The results painted a stark picture of the disparate care delivered by the U.S. healthcare system. The *2006 National Healthcare*

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[1] *Disparity* can be defined as "the condition or fact of being unequal, as in age, rank, or degree."

[2] Institute of Medicine (IOM), *Crossing the Quality Chasm: A New Health System for the 21st Century,* Washington, DC: National Academies Press; 2001.

[3] IOM, *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care,* Washington, DC: National Academies Press; 2003.

Disparities Report found that for most core quality measures, blacks (73 percent), Hispanics (77 percent), and poor people (71 percent) received worse quality care than their reference groups.[4] Additionally, for most measures increased disparities were seen in poor people (67 percent). Even more alarming, disparities were increasing and more prevalent in the area of chronic disease management.

Addressing issues of quality within vulnerable patient populations is the overarching highest priority within each of the 23 National Quality Forum (NQF)-endorsed™ national priority areas for healthcare quality improvement,[5] and the Robert Wood Johnson Foundation (RWJF) has designated disparities as one of its two additional priority areas for the "Ambulatory Care" project.[6]

In spring 2006, NQF convened an 18-member Technical Advisory Panel (TAP) to identify measures that highlight healthcare disparities and to develop a set of performance measures that is "disparities sensitive" and that is comprehensive and broadly applicable in ambulatory settings. The TAP formulated a series of recommendations and guiding principles for selecting measures to stratify by race, ethnicity, SES, primary language, and insurance status, and for data collection. It also formulated other recommendations for integrating the amelioration of healthcare disparities into the larger national quality agenda.

Addressing Healthcare Disparities

An NQF Steering Committee and the Healthcare Disparities TAP established the approach to evaluating potential consensus standards as "disparities sensitive." This approach included defining a purpose, scope, guiding principles, and selection criteria for the performance measures and recommendations.

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[4] Agency for Healthcare Research and Quality (AHRQ), *2006 National Healthcare Disparities Report,* Rockville, MD: AHRQ; December 2006. AHRQ Pub. No. 07-0012.

[5] National Quality Forum (NQF), *National Priorities for Healthcare Quality Measurement and Reporting – A Consensus Report,* Washington, DC: NQF; 2004.

[6] The NQF-endorsed standards for ambulatory care can be accessed at www.qualityforum.org/projects/ongoing/ambulatory/index.asp.

Purpose

The purpose of this set of consensus standards is to outline a strategy that includes performance measures and recommendations that can be applied nationally and locally to identify disparities-sensitive underperformance of the healthcare system so that targeted strategies can be developed to reduce disparities quickly.

Scope

Unlike many of the NQF-endorsed consensus standards that focus on practitioner- and practice-level accountability, the disparities-sensitive consensus standards encompass all levels of measurement, including practitioner practices, large and small physician groups, and health plans. This project has also included performance measures at the community level for the purposes of quality improvement.

Defining Disparities Populations

The populations that are addressed by these consensus standards are as follows:

1) gender,
2) race/ethnicity,
3) SES,
4) primary language barriers, and
5) health insurance status.

Additional work will need to address other populations that experience healthcare disparities. These populations, which are just as important as the initial populations, include the elderly, people with cognitive or physical disabilities, people with chronic or multiple conditions, people who live in rural areas, children, and gay, lesbian, bisexual, and transgender persons.

Guiding Principles for Candidate Disparities-Sensitive Consensus Standards

The guiding principles that formed the basis of the evaluation for disparities-sensitive consensus standards include the following:

a. Prevalence

How prevalent is this disease or condition (targeted by the quality measures) in the disparity population?

b. Impact of the Condition

What is the impact of the condition (targeted by the quality measures) on the health of the disparity population—for example, mortality, quality of life, years of life lost, disability, stigma—relative to other conditions? Quality-adjusted life years is a useful metric (when available) for comparing the impact of different conditions. In addition, the strength of the evidence supporting the measure should be considered (whether it is based on the results of several randomized controlled trials, observational data, or expert opinion). Measures backed by stronger evidence merit greater priority. Another consideration is whether the number needed to treat (NNT) for the intervention is associated with the target condition and, if so, the timeframe needed to treat. The NNT, or the inverse of absolute risk reduction, is a convenient way of comparing the overall impact of different interventions. Ideally, these data should be derived from studies involving members of the disparity population, but it is recognized that providers must rely on studies from the overall population.

c. **Impact of the Quality Process**
How strong is the evidence linking improvement in the measure to improved outcomes (e.g., mortality, quality of life, years of life lost, and disability stigma) for any group, but particularly for members of disparity populations, when data are available? If the quality process is improved, what is the likely, relative impact on the healthcare outcomes for members of disparity populations? In other words, if the disparity gap was closed or quality reached a specified benchmark, how might the different measures compare in terms of impact on members of different disparity populations?

d. **Quality Gap**
How large is the gap in quality between the disparity population and the group with the highest quality for that measure? How large is the gap in quality between the disparity population and the benchmark? This is a key criterion because it provides the justification for stratification of quality measures for that disparity population. Measures associated with larger gaps merit greater priority.

e. **Ease and Feasibility of Improving the Quality Process**
The NQF measure evaluation process considers whether a measure is actionable. When there is evidence that a quality process can be improved for a healthcare disparity population, at a reasonable cost, this should be taken into consideration. The evidence addresses whether a process is not being performed as frequently as necessary to improve healthcare outcomes or whether an outcome can be affected positively by known processes (e.g., that all providers are not all performing in the 96 to 100 percent range and that an intervention exists to address the topic effectively).

The NQF-Endorsed National Voluntary Consensus Standards for Ambulatory Care: Performance Measures to Address Healthcare Disparities

All measures evaluated during NQF's "Ambulatory Care" project in 2006-2007 that were considered to be technically sound were reconsidered as potential disparities-sensitive performance measures. A review of the literature found that most of the topic areas addressed by the NQF-endorsed ambulatory care consensus standards have evidence of disparities for the process or outcome of care. For the remaining topic areas, the lack of evidence should not necessarily be construed as evidence that disparities do not exist. Because almost all of the NQF-endorsed ambulatory measures could be potentially appropriate as disparities-sensitive measures, it is important to establish a starter set of measures to encourage providers to begin stratifying measures by gender, race, ethnicity, SES, primary language, and insurance status. The starter set can serve as a catalyst to encourage providers to stratify the measures and take a closer look at the disparate care that may be prevalent in their community. The guiding principles can be used to determine a reasonable set of disparities-sensitive measures for a given population at the national or local level.

National Approach

For the nation to measure and monitor the performance of the healthcare system in reducing disparities, a national set of NQF-endorsed consensus standards that are disparities sensitive was identified using the guiding principles for disparities-sensitive consensus standards, as well as the following prioritization criteria:

1) the guiding principles were applied to the measure as an initial screening tool;
2) the consensus standard falls within an NQF-endorsed national priority area; and
3) there is evidence of a quality gap for disparity populations, based on data from the AHRQ *2006 National Healthcare Disparities Report* and the published literature.

The national set of disparities-sensitive consensus standards for ambulatory care consists of 35 practitioner- and group-level performance measures in 8 priority areas (asthma, diabetes, heart disease, hypertension, medication management, mental health and substance use, prenatal care, and prevention, immunization, and screening) and 1 additional measure in the area of patient experience with care (see below). Using the national data reported in the *National Healthcare Disparities Report* helps to ensure that a disparity exists at the national level and thus that addressing it could contribute to affect widespread quality improvement. Although there is evidence of disparities in all of the measure areas, this evidence was not present for every stratification variable (i.e., gender, race, ethnicity, SES, primary language, or insurance status). Providers implementing the starter set are encouraged to look at the national data and determine which of the data stratification variables are appropriate for collection. Providers are encouraged to stratify measures that are applicable to the populations they serve. Although these 35 measures are offered as a set, if additional performance measures outside of the set are applicable, providers are encouraged to stratify those measures.

Also, because of the importance of collecting and stratifying information about the patient's experience with care, the

Ambulatory Consumer Assessment of Healthcare Providers and Systems (ACAHPS®) was added to the set. Vulnerable populations are disproportionately affected by problems in receiving patient-centered, culturally competent care. Using existing patient experience with care instruments (e.g., the NQF-endorsed ACAHPS measure) and analyzing the data stratified by gender, race, ethnicity, SES, primary language, and insurance status could provide a way to assess disparities involving patients' perspectives on the care they receive. Additionally, this information could be used to formulate interventions to reduce such disparities.

These measures are intended for practitioner practice-level accountability, including public reporting. Table 4.1 presents brief descriptions of each measure; the specifications are available on the NQF web site and from the measure developer.

Local Approach

Different regions of the country serve patient populations that differ markedly by race, ethnicity, SES, insurance status, and primary language. Regions also differ in terms of the resources needed to address the needs of diverse populations. Disparities in healthcare quality also vary regionally. Thus, healthcare organizations and practitioners should not rely solely on the 35 core measures, but should adapt a subset of NQF-endorsed ambulatory care consensus standards that are relevant to the needs of their patient population. This subset should be determined by the provider, the populations served, and the health indicators of the communities they serve.

Fourteen AHRQ Prevention Quality Indicators (PQIs) were initially not included in the "Ambulatory Care" project, because they are community-level measures and not suitable for public reporting and accountability at the provider level. The AHRQ PQIs measure potentially avoidable hospitalizations for ambulatory care-sensitive conditions. The indicators rely on hospital discharge data and are intended to reflect issues of access to high-quality ambulatory care in a system of care. Because the indicators are meant to reflect access to high-quality ambulatory care, stratifying the data would allow providers to see the disparities in the care their collective health systems are providing to the community and identify unmet needs. In particular, patients who are uninsured may not have ready access to care, and this may not be identified through performance measures based on health plan data. Thus, community-level measures will facilitate the inclusion of measures of uninsured patients' access to primary care.

The disparities-sensitive consensus standards also include 14 AHRQ PQIs that measure potentially avoidable hospitalizations for ambulatory care-sensitive conditions. The indicators rely on hospital discharge data and are intended to reflect issues regarding access to high-quality ambulatory care in a system of care. As indicators of healthcare delivery in a community, the PQIs encourage healthcare providers to use community-level measures to assess the health of the areas in which they practice and obtain regional health information from where their patients reside. This information should be used to help determine which performance measures should be stratified by gender, race, ethnicity, SES, primary language, and insurance status. Table 4.2 presents a brief description of each of the PQIs. The detailed specifications for the 14 PQIs are provided in appendix C.

The goal of endorsing the AHRQ PQIs is to encourage healthcare providers to use community-level measures to assess the health of the areas in which they practice and obtain regional health information from the areas where their patients reside. Providers should utilize data that already are being collected at the state and local levels, or encourage local health departments to begin to collect these data. This information should be used to help determine which performance measures should be stratified by gender, race, ethnicity, SES, primary language, and insurance status. Healthcare providers can access state and national data for the AHRQ PQIs on the AHRQ web site, free of charge.[7]

Unfortunately, only one of the PQIs is applicable to pediatric populations (Low Birth Weight, 0 to 28 Days). However, five area-level AHRQ Pediatric Indicators can be considered for endorsement in the future:[8]

- Asthma admission rate (PDI 14)
- Diabetes short-term complication rate (PDI 15)
- Gastroenteritis admission rate (PDI 16)
- Perforated appendix admission rate (PDI 17)
- Urinary tract infection admission rate (PDI 18)

Data Collection Burden and Unintended Consequences

Collecting sensitive information such as gender, race, ethnicity, SES, primary language, and insurance status can lead to unintended or adverse consequences and can increase the data collection burden for providers. Some measures may penalize

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[7] AHRQ, Healthcare Cost and Utilization Project. Available at www.ahrq.gov/data/hcup/. Last accessed December 2007.

[8] AHRQ, *Pediatric Quality Indicators Overview.* AHRQ Quality Indicators; February 2006.

safety net providers based on factors that are beyond their control or because the measures may be confounded by patient characteristics. The use of such measures could cause providers to select patients based on improving performance on quality measures. Steps should be taken to monitor changes in enrollment and disenrollment in health plans and health systems by members of healthcare disparity populations.

There are clear statistical and methodological limitations to assessing individual physician or practice performance. In some cases, even physician offices that use electronic health records may not have the data variables available to them that are needed to collect this information. These limitations are magnified when small samples are stratified by membership in a healthcare disparity population. The use of disparity measures at the physician or practice level should be encouraged for the purposes of internal quality improvement, and when appropriate, public reporting. Additionally, there will be more data collection burden at intake to collect the information needed to stratify the data. Although some of the data will need to be collected only once (e.g., race/ethnicity, gender), some of the information will need to be collected annually (e.g., SES, health literacy, insurance status).

Recommendations

The recommendations presented below have been formulated to assist users with implementing the national disparities-sensitive measure set or a local disparities-sensitive measure set.

Recommendation 1:

Ambulatory healthcare providers should stratify the national set and a locally determined subset of NQF-endorsed ambulatory care consensus standards, including patient experience with care instruments, by gender, race, ethnicity, SES, primary language, and insurance status.

Collecting these data is imperative to improving quality. Quality improvement efforts at all levels of the healthcare system have been implemented for years, resulting in a dramatic increase in the quality of care in the United States. Major accrediting bodies, public and private purchasers, and health plans are implementing quality improvement and public reporting programs to improve quality. Although most of these programs address three of the six aims outlined in IOM's *Crossing the Quality Chasm* report (safety, effectiveness, timeliness), very few address efficiency, equity, and patient-centeredness.[9]

Stratifying measures by gender, race, ethnicity, SES, primary language, and insurance status would go a long way toward addressing the aims of equity and patient-centeredness and further drive the quality agenda. Box 4.A, on best practices for the stratification and implementation of consensus standards, provides additional

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[9] IOM, *Crossing the Quality Chasm: A New Health System for the 21st Century,* Washington, DC: National Academy Press; 2001.

information on what variables should be collected and how to collect the information.

The data collection for and stratification of these measures are valuable both at the practice and provider levels. The data collected can be aggregated up and results reported at the local, state, and national levels for comparison and public reporting. If small numbers limit the use of the data at the individual provider level for comparison and public reporting, the data are still valuable for a provider to respond to any disparities within the practice. Information at the provider and practice levels will encourage providers to initiate quality improvement interventions to reduce those disparities.

Box 4.A – Best Practices for Stratification and Implementation of Consensus Standards

Stratifying measures by gender, race, ethnicity, SES, primary language, and insurance status requires additional data collection variables and methodologies that are reliable, valid, and patient centered and that ensure the privacy and confidentiality of the patient.

While a large body of evidence has accumulated that documents the finding that disparities persist in the services delivered to racial and ethnic minority patients throughout the healthcare system, there is no consensus around a methodology that should be used to collect the data necessary to stratify by gender, race, ethnicity, SES, primary language, and insurance status. Although collecting any personal health information is sensitive, unique challenges exist when that information is linked with extensive demographic information.

Best Practices for Preparing the Patients for the Questions

- Collect primary data to stratify consensus standards by gender, race, ethnicity, SES, primary language, and insurance status. When primary data are not available, indirect collection through geocoding, surname analysis, and Bayesian estimation can be used for many of these measures. The indirect methodology is best applied to population-based assessments of quality of care and should not be used to target interventions for individual patients.[10]
- Provide adequate training for all staff involved in the collection of demographic data to ensure that the collection is respectful, patient centered, and culturally competent.
- Provide assurances to patients about the use and release of their demographic information. The provider must take the appropriate precautions to balance the ease of access to and interoperability of the data across quality reporting entities while ensuring patient confidentiality through de-identification of the data and reporting. Providers also must fully inform patients that their demographic information will be released only on a "need-to-know" basis, and that the information will be used at the organizational level to ensure that high-quality care is provided for all patients. Individual providers, provider groups, hospitals, and health plans may transfer the de-identified data to accomplish this goal.
- Before a patient is asked to provide his or her racial and/or ethnic background, provide a rationale for why gender, race, ethnicity, SES, primary language,

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[10] Fiscella K, Fremont AM, Use of geocoding and surname analysis to estimate race and ethnicity, *Health Serv Res,* 2006;41(4 Pt 1):1482-1500.

Box 4.A – Best Practices for Stratification and Implementation of Consensus Standards (continued)

and insurance status information is being collected that emphasizes that the data are being collected to monitor the quality of care that everyone receives.[11,12,13]

Preferred Practices for Asking a Patient About His or Her Race and Ethnicity[14,15,16]

- Race and ethnicity information should be collected at the most granular level possible, based on an assessment of the local population served by healthcare providers. Those granular categories should be designed to allow for aggregation to the broader Office of Management and Budget (OMB) categories, which facilitates national comparisons of performance and promotes adherence to several reporting requirements.
- Race and ethnicity information should be collected using two questions—one for ethnicity and another for race—using as many response categories as dictated by local circumstances, while allowing for aggregation to the OMB categories and adhering to OMB standards.[17] The minimum OMB categories for race are American Indian or Alaska Native; Asian; Black or African American; Native Hawaiian or Other Pacific Islander; and White. The minimum OMB categories for ethnicity are Hispanic or Latino and Not Hispanic or Latino. Hispanics and Latinos may be of any race.
- When only a single question or response category is available that does not allow for the collection of ethnicity and race as separate questions, data can be collected in one question using the following categories:
  - African American/Black
  - Asian
  - Caucasian/White
  - Hispanic/Latino/White
  - Hispanic/Latino/Black
  - Hispanic/Latino/Declined
  - Native American
  - Native Hawaiian/Pacific Islander
  - Multiracial
  - Declined
  - Unavailable/Unknown

more

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[11] The HRET Disparities Initiative conducted focus groups to determine the best way to explain to patients why the data were being collected. It was found that explaining the rationale to the patients before asking them to provide information about their racial and ethnic background proved to be most effective. The HRET project found the following wording to be most effective: "We want to make sure that all our patients get the best care possible, regardless of their race or ethnic background. We would like you to tell us your race or ethnic background so that we can review the treatment that all patients receive and make sure that everyone gets the highest quality of care."

[12] Baker DW, Cameron KA, Feinglass J, et al., Patients' attitudes toward health care providers collecting information about their race and ethnicity, *J Gen Intern Med,* 2005;20(10):895-900.

[13] Hasnain-Wynia R, Baker DW, Obtaining data on patient race, ethnicity, and primary language in health care organizations: current challenges and proposed solutions, *Health Serv Res,* 2006;41(4 Pt 1):1501-1518.

[14] Collecting and reporting race, ethnicity, and primary language data are legal and permitted under Title VI of the Civil Rights Act of 1964.

[15] HRET, *A Toolkit for Collecting Race, Ethnicity, and Primary Information from Patients.* Available at www.hretdisparities.org/. Last accessed December 2007.

[16] The HRET Disparities Initiative conducted multiple studies to determine the best way to explain the collection of these data from patients. It found the categories listed to be the most reliable and valid.

[17] U.S. Census Bureau, Population Division, Special Population Staff, *Racial and Ethnic Classifications Used in Census 2000 and Beyond.* Available at www.census.gov/population/www/socdemo/race/racefactcb.html. Last accessed July 2007.

Box 4.A – Best Practices for Stratification and Implementation of Consensus Standards (continued)

Best Practices for Asking a Patient About His or Her SES

Examples of collecting SES data can be found at the California Health Interview Survey (CHIS),[18] the Current Population Survey (CPS),[19] or the National Health and Nutrition Examination Survey (NHANES).[20] At a minimum, the following questions should be asked:

- What is your best estimate of your household's total annual income from all sources before taxes last year?
- Including yourself, how many people living in your household are supported by your total household income?
- How many of these people are children under the age of 18?

Health literacy is difficult to assess outside of administering a Test of Functional Health Literacy in Adults (TOFHLA) or Rapid Estimate of Adult Literacy in Medicine (REALM). Similar tools are available in Spanish (e.g., TOFHLA-S and SAHLSA). The TOFHLA assesses not only reading comprehension, but also how well patients comprehend real healthcare situations presented to them as examples. However, although health literacy consists of more than education level, assessing the highest level of school completed in addition to other SES and language assessments can prove to be an adequate proxy. Assessing patients with REALM or the shortened version of TOFHLA may be preferable. The TOFHLA-S takes approximately seven minutes to administer.[21,22] However, if implementing the TOFHLA or REALM is not possible, providers should collect from patients, at a minimum, the highest level of school completed as a proxy for health literacy. Direct measurement of literacy is the gold standard, but in the absence of direct measurement, educational level provides a crude estimate of both general and health literacy, particularly when used in the aggregate. However, educational level is much less useful at the individual patient level.

Primary language should be collected by using this series of questions:[23]

- What language would you feel most comfortable speaking with your doctor or nurse (Patient's Primary Language)?
- How would you rate your ability to speak and understand English?
- In which language would you feel most comfortable reading medical or healthcare instructions?
- How satisfied are you with your ability to read English?
- Would you like to have a professional interpreter present for your doctor's visit?

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[18] UCLA Center for Health Policy Research, *California Health Interview Survey.* Available at www.chis.ucla.edu/. Last accessed December 2007.

[19] U.S Census Bureau. *Current Population Survey.* Available at www.bls.census.gov/cps/tp/tp63.htm. Last accessed May 2007.

[20] Centers for Disease Control and Prevention (CDC), National Center for Health Statistics (NCHS), *National Health and Nutrition Examination Survey Questionnaire (or Examination Protocol, or Laboratory Protocol)*, Hyattsville, MD: CDC. Available at www.cdc.gov/nchs/data/nhanes/nhanes_05_06/fi_inq_d.pdf. Last accessed May 2007.

[21] Bass PF, Wilson JF, Griffith CH, A shortened instrument for literacy screening, *J Gen Intern Med,* 2003;18(12):1036–1038.

[22] Chew LD, Bradley KA, Boyko EJ, Brief questions to identify patients with inadequate health literacy, *Fam Med,* 2004:36:588-594.

[23] HRET, *A Toolkit for Collecting Race, Ethnicity, and Primary Language Information from Patients.* Available at www.hretdisparities.org/. Last accessed December 2007.

Box 4.A – Best Practices for Stratification and Implementation of Consensus Standards (continued)

Best Practices for Asking a Patient About His or Her Insurance Status

Insurance status is optimally assessed by using a series of questions asking about a patient's health insurance coverage over the past calendar year, the type of insurance, and the amount of coverage. An example of how this is being collected currently is the Annual Social and Economic Supplement (ASEC) to the U.S. Census Bureau Current Population Survey.[24] The following questions should be used when assessing a patient's insurance status:[25]

- At any time in <year> (were you/was anyone in this household) covered by a health insurance plan provided through (your/his-her) current or former employer or union?
- Who in this household were policyholders?
- Did (your/names) former or current employer or union pay for all, part, or none of the health insurance premium?
- At anytime during <year> (were you/was anyone in this household) covered by a health insurance plan that (you/he-she) purchased directly from an insurance company, that is, not related to current or past employment?
- At any time in <year> (were you/was anyone in this household) covered by the health plan of someone who does not live in this household?
- At any time in <year> (were you/was anyone in this household) covered by Medicare?
- At any time in <year> (were you/was anyone in this household) covered by Medicaid/(enter state name)?
- If applicable, how many months during <year> (were/was) (you/name) covered by Medicaid (enter local name)?
- In (state), the (enter state CHIP program name) program (also) helps families get health insurance for children. (Just to be sure) Were any of the children in this household covered by that program?
- I have recorded that (you/name) (were/was) (person 1) not covered by a health plan at any time during (person 2) <year>. Is that correct?

Given the significant differences across Medicaid and state health insurance programs, providers will need to adapt these questions to be relevant to their states' coverage.

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[24] U.S. Census Bureau, *Current Population Survey, Annual Social and Economic Supplement (ASEC)*. Available at www.bls.census.gov/cps/asec/adsmain.htm. Last accessed December 2007.

[25] The questions listed reflect the entire section on health insurance. Survey skip patterns can be found embedded in the tool.

Recommendation 2:

In order to drive improvement, addressing healthcare disparities must be fully integrated into the overarching national quality agenda. National and local healthcare quality efforts and activities should adopt a specific goal of eliminating disparities in healthcare quality.[26] Measure developers, NQF, government agencies, health plans, and healthcare providers all play important roles in reducing healthcare disparities.

As the focus on performance measurement and quality improvement builds momentum, the elimination of healthcare quality disparities must move in concert with all national quality activities or risk becoming marginalized. Efforts to improve healthcare quality must be aimed at not only reducing medical errors and improving patient safety and overall performance, but also at ensuring equitable treatment for all. Thus, healthcare quality measurement and reporting strategies that do not address the health needs of disparate patient populations neglect a significant and growing portion of the U.S. population, and ignore one of the main domains of quality outlined by IOM.[27]

The many stakeholders who are striving to improve healthcare quality all have roles to play:

Healthcare providers and practitioners. Providers and practitioners should become aware of the national and local issues regarding the various disparity populations they serve. Providers and practitioners should stratify appropriate consensus standards by gender, race, ethnicity, SES, primary language, and insurance status. This information can be used for internal quality improvement and to implement targeted interventions to close any gaps in their practices.

Health plans and health systems. Health plans and health systems can provide incentives for practitioners and providers within their organizations to identify and target performance for disparities populations without penalizing safety net providers. Health plans and systems should collect data on gender, race, ethnicity, SES, primary language, and insurance status to better understand the populations they serve and assess whether their members are being treated equitably.

[26] This recommendation is from NQF's *Improving Healthcare Quality for Minority Patients,* 2002.

[27] IOM, *Crossing the Quality Chasm: A New Health System for the 21st Century,* Washington, DC: National Academy Press; 2001.

Federal government agencies. Agencies such as the Centers for Medicare & Medicaid Services (CMS), AHRQ, and the Health Resources and Services Administration (HRSA) should continue to fund new research and measure development focusing on how to close the healthcare disparities gap and provide leadership in reporting national performance through the lens of addressing disparities.

Measure developers.[28] Although these measures and recommendations are an important initial step, they alone will not eliminate healthcare quality disparities. New measures should be developed for the express purpose of identifying and reducing healthcare quality disparities, and the data should be stratified to collect and track this information. By and large, these measures also would be applicable to all patients and could therefore be integrated into the broader measure sets that are applied to the general population. In fact, isolating new, disparities-specific measures from the mainstream measure sets would make successful implementation of any new measures unlikely and also would undermine efforts to unify the general and healthcare disparities quality movements.

Additionally, measure developers should stratify the measures they develop during the testing phase by gender, race, ethnicity, SES, primary language, and insurance status. The results should be analyzed so it can be determined if the measure captures disparate care at a leverage point. The stratification should be part of the routine process of measure development.

Health information technology community. In its *Crossing the Quality Chasm* report, IOM noted that there is a fundamental need for automated information management in order to achieve a healthcare system that focuses on the patient. Likewise, the healthcare quality community has long recognized that such electronic information systems are a critical factor in providing data for measures of healthcare quality. Additionally, the systems should be designed to capture specific demographic data that also can be linked to the clinical data. The following recommendations regarding integrating demographic information into electronic information systems should be pursued:

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[28] This recommendation is from NQF's 2002 publication *Improving Healthcare Quality for Minority Patients.*

- Engage the health information technology community and encourage collaboration with those conducting research on how to collect electronic data on gender, race, ethnicity, SES, primary language, and insurance status.
- Mandate incorporating the collection of these data into electronic health record vendor certification in order to ensure that these data can be collected when systems are implemented.
- Ensure that clinical data and related performance measures can be linked to the demographic information and reported out stratified by those variables.
- Employ innovative strategies to support healthcare providers that serve large numbers of members of healthcare disparity populations in acquiring health information technology that supports quality improvement. A notable example is the decision by New York City to assist community providers and Medicaid managed care companies in acquiring electronic medical record systems to share patient health information to improve the quality of care.[29]

NQF. NQF can better integrate the reduction of healthcare disparities into its priority areas by taking the following steps:

***Disparities-sensitive criteria* -** At the onset of future NQF projects in which quality measures are reviewed, the disparities-sensitive criteria should be considered and applied when reviewing all candidate consensus standards.

***NQF measure submission* -** Measure developers should provide the following information when submitting their measures to NQF:

- whether the measure can be used to detect disparities;
- whether the measure has not been used to detect disparities to date; and
- any current research that indicates that a healthcare disparity is present in that measurement domain, disease, or condition.

Measure developers also should report the measure and any findings stratified by gender, race, ethnicity, SES, primary language, and insurance status.

Research Recommendations

Additional research is needed in many areas to fully utilize performance measurement to reduce inequities in the healthcare system for disparities populations.

Research Recommendation 1:

Researchers and measure developers should place a priority on developing process measures that are specifically aimed at reducing disparities in care. Although the national disparities-sensitive set and local disparities-sensitive sets will capture disparate care, stratifying alone will not close the gap. Targeted processes of care need to be researched and developed to help providers intervene when healthcare disparities are found. Additionally, priority must be placed on developing outcome measures that address the reduction of healthcare disparities.

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[29] *Community Health Electronic Health Record Exchange (CHEX): A HEAL NY Proposal by PCIP.* Available at www.nyc.gov/html/doh/html/pcip/pcip-ehr.shtml. Last accessed September 2007.

Research Recommendation 2:

Further research and consensus are needed on the best and most efficient way to collect demographic data for disparities-sensitive measures. Urgently needed is an emphasis on collecting measures of Latino ethnicity combined with best methods for racial identification among Latino respondents. Race and ethnicity data should be collected at the most granular level possible, based on an assessment of the local population served by healthcare providers. Those granular categories should be designed to allow for aggregation to the broader OMB categories, which facilitates national comparisons. Additional research also is needed to find the most efficient and valid way to collect data for assessing insurance coverage.

Research Recommendation 3:

Additional research and analysis is needed to better understand the degree to which performance measurement may lead to unintended or adverse consequences, such as penalizing safety net and other providers and practitioners who care for significant disparities populations. The use of such measures could promote provider selection and/or deselection of patients. Organizations that implement performance measures should look specifically for potential unintended consequences pertaining to healthcare disparity populations. Research also should identify best practices for pay-for-performance and measurement efforts that are most likely to reduce disparities.

Research Recommendation 4:

Researchers and those who implement measurement programs should investigate what additional resources are needed for practices or systems that have greater needs because they provide care for disparity populations. Examples include the urgent need for adequate health information technology systems, the need for reimbursement schemes that account for the increased time that is spent serving many members of these populations, and the need for language translation and outreach services.

Table 4.1 – National Voluntary Consensus Standards for Ambulatory Care: Measuring Healthcare Disparities (National Approach)

PRIORITY AREA	MEASURE TITLE	IP OWNER[i]
Asthma	Use of appropriate medications for people with asthma	NCQA
Asthma	Asthma: pharmacologic therapy	AMA PCPI
Diabetes	HbA1c test for pediatric patients	NCQA
Diabetes	Percentage of patients with at least one LDL-C test	Alliance/NCQA
Diabetes	Percentage of patients who received a dilated eye exam or seven standard field stereoscopic photos with interpretation by an ophthalmologist or optometrist or imaging validated to match diagnosis from these photos during the reporting year, or during the prior year, if patient is at low risk for retinopathy	Alliance/NCQA
Diabetes	Percentage of eligible patients receiving at least one foot exam	Alliance/NCQA
Diabetes	Percentage of patients with one or more A1c test(s)	AMA PCPI
Diabetes	Percentage of patients with most recent A1c level >9.0% (poor control)	Alliance/NCQA
Diabetes	Percentage of patients with most recent blood pressure <140/80 mm Hg	Alliance/NCQA
Diabetes	Percentage of patients with at least one test for microalbumin during the measurement year; or who had evidence of medical attention for existing nephropathy (diagnosis of nephropathy or documentation of microalbuminuria or albuminuria)	Alliance/NCQA
Heart disease	Coronary artery disease (CAD): angiotensin-converting enzyme inhibitor (ACE inhibitor)/ angiotensin receptor blocker (ARB) therapy	Alliance/NCQA
Heart disease	CAD: beta blocker therapy—prior myocardial infarction	AMA PCPI and ACC/AHA
Heart disease	CAD: beta blocker treatment after a heart attack	NCQA
Ischemic vascular disease (IVD): complete lipid profile and LDL control <100	IVD: patients with a full lipid profile completed during the 12-month measurement period with date of each component of the profile documented; LDL-C<100	NCQA
Heart disease	Heart failure–left ventricular function (LVF) assessment	AMA PCPI and ACC/AHA
Heart disease	Heart failure: ACE inhibitor/ARB therapy	AMA PCPI and ACC/AHA
Hypertension	Controlling high blood pressure	CMS/NCQA

(more)

Additional information, including the specifications, for each of these measures can be found in *National Voluntary Consensus Standards for Ambulatory Care – Part 1: A Consensus Report.*

[i] IP owner - Intellectual Property owner. For the most current specifications and supporting information, please refer to the IP owner:
ACC/AHA - American College of Cardiology/American Heart Association
AHRQ - Agency for Healthcare Research and Quality (www.cahps.ahrq.gov)
Alliance - National Diabetes Quality Improvement Alliance (www.nationaldiabetesalliance.org)
AMA PCPI - American Medical Association Physician Consortium for Performance Improvement (www.physicianconsortium.org)
CMS - Centers for Medicare & Medicaid Services (www.cms.gov)
ICSI - Institute for Clinical Systems Improvement (www.icsi.org)
NCQA - National Committee for Quality Assurance (www.ncqa.org)
NCQA/WC - National Committee for Quality Assurance and Washington Circle (www.washingtoncircle.org)

Table 4.1 – National Voluntary Consensus Standards for Ambulatory Care: Measuring Healthcare Disparities (National Approach) (continued)

PRIORITY AREA	MEASURE TITLE	IP OWNER[i]
Medication management	Drugs to be avoided in the elderly a. Patients who receive at least one drug to be avoided b. Patients who receive at least two different drugs to be avoided	NCQA
Mental health and substance use	Antidepressant medication management	NCQA
Mental health and substance use	Initiation and engagement of alcohol and other drug dependence treatment	NCQA/WC
Prenatal care	Prenatal screening for HIV	AMA PCPI
Prenatal care	Prenatal anti-D immune globulin	AMA PCPI
Prenatal care	Prenatal blood group and type	AMA PCPI
Prenatal care	Prenatal D antibody testing	AMA PCPI
Immunization	Childhood immunization status	NCQA
Immunization	Flu shots for adults ages 50 to 64	NCQA
Immunization	Flu shot for older adults	CMS/NCQA
Immunization	Pneumonia vaccination status for older adults	NCQA
Screening	Breast cancer screening	CMS/NCQA
Screening	Cervical cancer screening	NCQA
Screening	Colorectal cancer screening	NCQA
Prevention	Smoking cessation–medical assistance a. Advising smokers to quit b. Discussing smoking cessation medications c. Discussing smoking cessation strategies	NCQA
Prevention	Measure pair a. Tobacco use assessment b. Tobacco cessation intervention	AMA PCPI
Prevention	Measure pair a. Tobacco use prevention for infants, children, and adolescents b. Tobacco use cessation for infants, children, and adolescents	ICSI
Patient experience with care	Ambulatory Consumer Assessment of Healthcare Providers and Systems (ACAHPS®)	AHRQ

(more)

Table 4.2 – National Voluntary Consensus Standards for Ambulatory Care: Measuring Healthcare Disparities (Local Approach)

AHRQ PREVENTION QUALITY INDICATORS[i]	
	MEASURE TITLE
PQI 1	**Diabetes, short-term complications.** This measure is used to assess the number of admissions for diabetes short-term complications per 100,000 population.
PQI 2	**Perforated appendicitis.** This measure is used to assess the number of admissions for perforated appendix per 100 admissions for appendicitis within Metro Area or county.
PQI 3	**Diabetes, long-term complications.** This measure is used to assess the number of admissions for long-term diabetes complications per 100,000 population.
PQI 5	**Chronic obstructive pulmonary disease (COPD).** This measure is used to assess the number of admissions for COPD per 100,000 population.
PQI 7	**Hypertension.** This measure is used to assess the number of admissions for hypertension per 100,000 population.
PQI 8	**Congestive heart failure (CHF).** This measure is used to assess the number of admissions for CHF per 100,000 population.
PQI 9	**Low birth weight.** This measure is used to assess the number of low birth weight infants per 100 births.
PQI 10	**Dehydration.** This measure is used to assess the number of admissions for dehydration per 100,000 population.
PQI 11	**Bacterial pneumonia.** This measure is used to assess the number of admissions for bacterial pneumonia per 100,000 population.
PQI 12	**Urinary infections.** This measure is used to assess the number of admissions for urinary tract infection per 100,000 population.
PQI 13	**Angina without procedure.** This measure is used to assess the number of admissions for angina (without procedures) per 100,000 population.
PQI 14	**Uncontrolled diabetes.** This measure is used to assess the number of admissions for uncontrolled diabetes per 100,000 population.
PQI 15	**Adult asthma.** This measure is used to assess the number of admissions for asthma in adults per 100,000 population.
PQI 16	**Lower extremity amputations among patients with diabetes.** This measure is used to assess the number of admissions for lower-extremity amputation among patients with diabetes per 100,000 population.

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[i] AHRQ, *Prevention Quality Indicators Overview.* AHRQ Quality Indicators; July 2004.

Chapter 5: Implementing Ambulatory Care Performance Measures

Introduction

Implementation of the ambulatory care measures poses tremendous challenges. The National Quality Forum's (NQF's) Technical Advisory Panel (TAP) for Implementing Ambulatory Care Measures initially met on June 9, 2005, to assess the concerns voiced by NQF members and others during the review period for the draft report, *National Voluntary Consensus Standards for Ambulatory Care: An Initial Physician-Focused Performance Measure Set,* in order to provide general guidance for implementation of the endorsed measures.

This guidance provides a road map for implementation that was created from the Implementation TAP's discussions that covered the following:

- the challenges to implementation that must be addressed;
- the long-term goals that will define successful implementation;
- recommendations on getting started; and
- other developments and inputs.

The Implementation TAP noted that measuring performance in some settings within the healthcare delivery system has become well established, particularly in hospitals, nursing homes, and home health care. However, for the largest setting of care—ambulatory (or outpatient) care—such measurement lags far behind. There is an urgent need for measurement of performance in the office practice setting. Large purchasers, such as the Centers for Medicare & Medicaid Services (CMS) and insurance and health plans, are urgently seeking performance measures for the outpatient arena. The growing set of NQF-endorsed™ consensus standards is becoming a comprehensive set of measures that will address all settings of outpatient care, including the office practice, ambulatory surgery, and others, and that can be used for accountability and also provide performance measurement tools for all practitioners, including primary care physicians, specialists, and other licensed independent practitioners.

Challenges to Implementation

Unlike hospitals and nursing homes, ambulatory care is provided in a wide range of settings that have no coordinated infrastructure for collecting information. Clinical and administrative data (claims, pharmacy, and laboratory) are collected in many paper and electronic formats. The many providers within the healthcare system, including all types of practitioners, and the various settings, such as small, private offices, large groups, community health centers, urgent care centers, emergency departments, ambulatory surgery centers, independent pharmacies, imaging centers, and laboratories, do not share a common format or infrastructure for collecting and sharing data for performance measurement in a central location. Thus, information ends up in a variety of places.

Clinical data collection varies from logically structured electronic health records systems (EHRs) to paper files organized according to the idiosyncrasies of the practitioner. Furthermore, the clinical data that are recorded are not uniform between systems, and many consensus standards require information that is not routinely recorded. Physicians are trained to record a patient encounter in a traditional "SOAP" (Subjective, Objective, Assessment, Plan) format; however, this paradigm may not translate easily to the extraction of pertinent elements of quality measurements.

The burden of clinical data collection from retrospective review of paper medical records is enormous. Thumbing though a paper chart that is not standardized or organized for data collection in order to find certain data elements is extremely time consuming and costly (estimated at $50 per chart). EHRs, however, are not a panacea. Only 15 to 20 percent of physicians report using some type of EHR. Moreover, currently there are no widely adopted EHR data organization standards, which means that each of the hundreds of EHR vendors needs to create its own quality measure data queries.

Additionally, significant technical issues remain, such as using coded fields versus free text fields and needing to add data elements for prospective record keeping. And, performance measurement results from practices using EHRs may not be comparable to those using paper, because the superior ability of an EHR to potentially identify most, if not all, eligible denominator patients may bias results.

Currently, the most widely available data from which the quality of ambulatory care can be assessed are administrative claims data. However, claims data are only a surrogate for primary source, clinical data. The availability of automated claims data, the fact that they are structured and use uniform coding (i.e., ICD-9 and CPT-4), and the relatively low cost to implement performance measurement using these data, mean that in the near term, it is likely that they will be used much more frequently than clinical data. Physicians, however, generally distrust the accuracy of nonclinical data and prefer clinical data for performance measurement.

Healthcare delivery is undergoing systems change for a number of reasons. The use of teams, rather than single primary care practitioners and group visits, challenges the traditional concept of what constitutes a "doctor visit." New approaches to care delivery and new practice models must be incorporated into performance measurement programs. Additionally, the TAP noted that the large number of uninsured patients must be considered and included in measurement of ambulatory care performance. Finally, the availability of automated/electronic data for uninsured patients is uncertain; claims data are not collected or aggregated by an insurer. Federally Qualified Health Centers use a system that is a major modification of the Veterans Health Administration system. Many uninsured patients use urgent care centers and emergency departments for ambulatory care. Aggregation of clinical data for uninsured patients at the community level may be possible through Regional Health Information Organizations.

Long-Term Goals for Implementation

Several current pay-for-performance programs, including the Integrated Healthcare Association program in California and CMS's Physician Group Practice Demonstration, have been implemented for large groups. However, the experiences from these programs cannot easily be extrapolated to smaller groups or solo practices, in part because small practices lack the infrastructure or resources needed for measurement collection and submission. Nonetheless, despite the nascent stage of many of these efforts, TAP members believed that an initial road map for implementing ambulatory care measures could be developed. The road map provided here is not NQF endorsed, and it is not intended to be the final word on the matter. Rather, it is an initial guidance document that will evolve as the project develops and subsequent lessons from implementation unfold. The road map is intended to lead from the current chaotic, disorganized, dysfunctional system to a healthcare delivery system that, in contrast to the current payer system, manages information and data in such a way that enables the accurate and efficient assessment of healthcare quality by all involved, including patients. The characteristics of such an ideal system proposed by the TAP are as follows:

- quality measurements are generated almost entirely from clinical data;
- clinical data are generated at the patient encounter within an integrated, electronic system that includes flexible EHRs, seamless data flow, and interoperable health data exchanges that allow a holistic view of the patient record;
- the system is supported by a flexible and compatible information infrastructure, including vendor participation in system development;
- clinical record keeping is redesigned, with input from clinicians and EHR vendors, to support the capture of data elements that are crucial to calculating clinical measures;
- data elements, formats, and definitions are standardized to facilitate electronic compatibility and automated quality measurement with minimal customization;
- data extracted for performance measurement are verifiable and audited;
- physician and provider attribution is understood to include all team members who care for a patient, with an emphasis on coordination of care; and
- accountability and performance incentives are used to foster improvement in the quality of care for all patients.

Getting Started: Recommendations

The TAP discussed the pros and cons of recommending a “starter set” to facilitate implementation, but ultimately decided that selecting a subset would not facilitate implementation and could actually hinder it. For example, some office practices may have many heart disease patients and few asthmatics in their patient populations. For them, the asthma measures will be less useful than the heart disease measures. Some measures that appear to be easy to implement may in reality be very difficult to implement for some offices because of unique practice characteristics. The TAP believed that anticipating the specific implementation challenges for various types of office practices is impossible. Moreover, it was noted that payers (e.g., insurers and CMS) face a different set of challenges than practitioners and healthcare providers, because they have a biased view of a subset of patients, rather than a full view of the scope of practice/ care provided.

Although it opted not to recommend a “starter set,” the TAP did make several recommendations to encourage the implementation of the ambulatory care measures.

Recommendation: Start Measuring to Learn and Build on Experience

Implementing the measure set may require a "leap of faith." The measures endorsed by NQF are good measures, and waiting for the perfect set of measures will not change the implementation challenges. Only by using the measures can all stakeholders learn and share their experiences. Measurement will encourage the building of processes that will push the evolution of new systems, and data quality will improve with measurement. Progress along the road map cannot be made without taking the first step.

Recommendation: Understand That Clinical Data Trump Claims Data

Among the variety of data sources currently available that are likely to be used for performance measurement, there is a data hierarchy. Clinical data are primary, and claims data are a surrogate for clinical data and are secondary. Whenever possible, clinical data should be used. As processes and systems evolve, the overarching goal is to use primary source, clinical data. Clinical data should be used to adjudicate disputes regarding the accuracy of claims data. Mechanisms should be developed that allow clinical data to be substituted for claims data, when available.

Recommendation: Initially Allow the Use of Multiple Data Sources by Multiple Users

The various users of performance measurement are likely to use the data that are readily available to them. Initially, insurance plans may be in a better position to integrate and aggregate data from multiple sources. However, improvement in quality occurs during the physician-patient encounter. As plans and purchasers approach measurement from the "top-down," physicians and providers will measure from the "bottom-up." The evolution of processes and systems should build on the experience and needs of both perspectives.

Recommendation: Build Auditing and Data Verification into Measurement Programs

The credibility of performance measurement and cooperation among all stakeholders rely on the integrity of the data and information generated from measurement. Data verification and auditing systems are ubiquitous within healthcare. Electronic data checks and auditing similar to CMS's audit of E and M codes are all important elements in establishing and maintaining the integrity of performance data.

Recommendation: Establish Clear Rules for a Performance Measurement Program

Implementation will be easier if everyone knows the rules up front. Even though the users who are implementing a performance measurement program will determine the level of accountability, clear rules of attribution will allow office practices to build processes to accommodate the rules.

Rules for sample size and denominator minimums should vary depending on the program. Poor data quality affects large and small samples alike. The TAP suggested that the further removed the sample is from clinical data, the larger the sample should be. For example, if a practice has only four diabetic patients, a single patient's compliance with a HgbA1c laboratory test can instantly change the practice's adherence to the measure from 100 percent to 75 percent.

Recommendation: Use Financial Incentives to Drive Implementation and Innovation

Financial rewards for participation or performance have facilitated the implementation of performance measures in other settings and have provided resources for building processes and infrastructure. Experience gained from existing pay-for-performance programs highlights the effectiveness of incentives in changing behavior and systems.

Recommendation: Focus on Prospective Data Collection

A new performance measurement program should strongly consider prospective data collection, particularly if it will use medical records as the data source. Prospective programs establish the rules upfront and allow office practices to establish new data collection processes that may be more efficient to export or abstract. Retrospective review of paper charts presents a number of significant challenges, because data in support of a measure may not have been collected at the point of care.

Recommendation: Conduct Preliminary Review

A preliminary review of early data by those being measured provides an opportunity to assess the implementation challenges and the overall fairness of the program before accountability is instituted.

Recommendation: Direct Feedback Issues to the Measure Owner/Developer

The measure owner/developer is responsible for monitoring the measure specifications. As measures are implemented, feedback on issues regarding the specifications should be directed to the measure owner/developer. Issues of clarity in the microspecifications should be addressed by the measure owner/developer. Additionally, measure owners/developers should be responsive to feedback and evidence-based changes in medical practice that may require appropriate changes in the specifications.

Recommendation: Feedback, Learn, and Make Progress Toward Goals

As various users implement the ambulatory care measures, mechanisms should be established to capture feedback on specific and general implementation issues. Opportunities to share experiences, solve problems, and pursue innovations should be established within NQF and/or other appropriate multistakeholder entities. Mechanisms for monitoring the progress along the road map toward the long-term goals should be established.

Other Developments and Inputs

Activities among the various stakeholders will contribute to progress along the road map. The TAP noted the following:

- Additions to existing coding systems, such as CMS's G codes and CPT Category II ("non-payable") codes, will expand the content of automated data. Category II codes are intended to bridge the gap between clinical data and administrative data—that is, they offer an administrative data reporting and collection process for clinical data.
- Representatives from CMS, the National Committee for Quality Assurance, and the American Medical Association Physician Consortium for Performance Improvement have indicated their commitment to work together to coordinate the updating of measures and changes in specifications.

Initial Implementation Activities

Eighteen months after the initial meeting, the Implementation TAP met again to discuss progress. This meeting took place in conjunction with a conference on "Implementing Measures for Ambulatory Care," held in Washington, D.C., on December 18-19, 2006. During the conference, presenters described their current activities, including challenges and successes, in implementing ambulatory care performance measures (see box 5.A for the conference agenda).

The TAP identified the following implementation issues after hearing the presentations at the conference:

NQF Measure Stringency: The "One-Off" Measure Phenomenon

Many TAP members pointed out that it appears that many organizations are implementing the spirit of the NQF measures. That is, institutions are choosing aspects of measures piecemeal based on what their market will bear, and this creates impediments to comparing facilities. Very few institutions are capable of instituting the required stringency in measurement and data collection for the measures. There is a gap between what is desired and what metrics are available.

Urgency

Providers are rushing to fill employers' demands for quality data with metrics that may or may not be completely sound. There is concern that the speed at which this is occurring may undermine and dilute the integrity of the effort. TAP members expected that NQF would take action to promote stop-gap or preliminary measures that can function within existing infrastructures and resource pools until systems change to the point that they can support "perfect" measurement.

Measure Development Gap and Proprietary Obstacles

TAP members were frustrated by the fact that stop-gap measures already exist, but are embedded in proprietary tools. However, they acknowledged that these measures are primarily designed for and marketed to purchasers and do not have the precision of well-developed measures.

Rural Medicine

TAP members pointed out that the pressure from purchasers and employers does not exist at the levels of rural medicine and private practice. These providers do not see a return on their investments in measurement, and most are already under financial strain. Competition and comparison through public reporting is not an incentive for rural practices that may be the only healthcare resource in a community.

Data Sources and Data Integrity

During the TAP's June 2005 deliberations, it had focused on the importance of clinical data sources; however, during the conference, organizations consistently noted the feasibility issues that are involved with clinical data collection. TAP members agreed that their original recommendations may need to be modified. Although some members were hopeful that CPT Category II codes would facilitate better data collection, others pointed out that CPT codes are only relevant in an electronic environment. Others stressed the need to incorporate pharmacy claims into the data collection approach.

Uninsured Populations

Whether or not the integrity of administrative data is improving, relying on claims data cannot provide information on care of the uninsured population.

Who Sets the Mark?

TAP members debated who has the authority to set a benchmark for performance. Although some members advocated that the medical profession should set the mark, others disagreed, making the comparison that it would be inappropriate to allow the automobile industry to set emissions standards. The physicians in the group stressed that healthcare professionals want to help patients and want to perform to a mark even without the incentive of pay for performance, but in the absence of a transparent approach to measurement, there will be suspicions about the intent of measurement. The group agreed that there must be leadership in this area from academic medical centers and that performance measurement must be integrated into medical education and training in order to take hold.

Reconciling Efficiency and Patient-Centeredness

The tension between patient-centeredness and efficiency/evidence-based practices was discussed, as was how this tension could impact the attribution of measurement outcomes.

Process and Outcome Correlations

TAP members discussed the difficulty of identifying correlations between processes and outcomes. The group discussed the possibility that even after implementing many of the process measures, outcomes may not be affected, and that without a direct correlation, process measures are not meaningful. TAP members suggested that the problem hints at a deeper question: What should one expect from a care provider—a guarantee that a person will do everything he or she is supposed to do for a patient's health, or a guarantee of a good outcome? No process will ever be completely predictive. It was noted that the goal is not guaranteeing an outcome, but changing behavior—that is, if purchasers will pay for an outcome, practitioners will find a way to achieve it. Some TAP members cautioned that incentives are not simple and that work must be done to identify the incentive that yields the right outcome.

Need for Pilot Testing of Measures

After discussion of the issues and obstacles to general measurement in the ambulatory setting, the TAP returned to the topic of the NQF ambulatory care measure set and the experiences presented during the conference. TAP members were enthusiastic about the experiences of ambulatory care measures early adopters, but believed that because of "one-off" and selective measurement, the need remains to test implementation of the measures *exactly* as specified.

Electronic Health Record Systems/Computerized Prescriber Order Entry

The TAP discussed the need for standardization of EHRs. Dr. Kleinpeter provided examples of how EHRs were rapidly implemented in the wake of Hurricane Katrina damage to hospital records, but hospitals used different and highly variable electronic systems. Although TAP members acknowledged that in some cases, implementation of EHRs had a measurable effect on patient outcomes, some members cautioned that the EHR is not a cure-all. Without clear quality improvement expectations communicated to the vendor, an EHR may not necessarily be a useful tool for improvement. TAP members also acknowledged that the lack of resources and infrastructure in many facilities is a significant obstacle to widespread EHR adoption.

Box 5.A – Agenda of the "Implementing Measures for Ambulatory Care" Conference

Measurement, Reporting, and Payment Programs: Individual Providers and Small Practice Settings

Moderator: Bruce Bagley, MD, American Academy of Family Physicians
Sherry Grund, RN, Iowa Foundation for Medical Care
Christine Izui, Blue Cross Blue Shield Association
Earl P. Steinberg, MD, Resolution Health
Thomas Valuck, MD, JD, Centers for Medicare & Medicaid Services

Measurement, Reporting, and Payment Programs: Large Group Practice

Moderator: Daniel Varga, MD, SSM Healthcare
Albert Bothe, Jr., MD, Geisinger
Albert Fisk, MD, Everett Clinic
Gail Amundson, MD, HealthPartners

Measurement, Reporting, and Payment Programs: Pharmacy Practice

Moderator: Eleanor M. Vogt, RPh, PhD, University of California, San Francisco
Patty Kumbera, RPh, Outcomes Pharmaceutical Health Care
John Miall, American Pharmacists Association Foundation
Christine Whipple, Pittsburgh Business Group on Health

Keynote: Quality and Price Information Collaboratives—Peter Lee, JD, Pacific Business Group on Health

Better Quality Improvement Pilots

Moderator: Christopher Queram, Wisconsin Collaborative for Healthcare Quality
Elizabeth A. Clough, MPH, Wisconsin Collaborative for Healthcare Quality
David Hopkins, PhD, Pacific Business Group on Health
Chris Schultz, Indiana Health Information Exchange

Ambulatory Care Quality Measurement: Current Status and Future Directions

Kevin B. Weiss, MD, MPH, Northwestern University

Developing Composite Measures

Moderator: Katherine Browne, National Partnership for Women & Families
David Shahian, Society for Thoracic Surgeons
Gail Amundson, MD, HealthPartners

Electronic Health Records in Public Health Centers

Moderator: Myra Kleinpeter, MD, MPH, Tulane School of Medicine
Neil Calman, MD, Institute for Urban Family Health
Farzad Mostashari, MD, City of New York Department of Health

more

Box 5.A – Agenda of the "Implementing Measures for Ambulatory Care" Conference (continued)

Role of Electronic Health Records in Performance Measurement and Improvement

Paul C. Tang, MD, Palo Alto Medical Foundation

Role of Performance Measures in Development, Adoption, and Certification of Electronic Health Records

Moderator: Paul C. Tang, MD, Palo Alto Medical Foundation
Jinnet Fowles, PhD, Park Nicollet Health Services
Karen Kmetik, PhD, AMA Physician Consortium for Performance Improvement
Rod Piechowski, National Alliance for Health Information Technology

Transitioning to Electronic Health Records: Providing Encouragement and Technical Assistance

Moderator: Michael O'Toole, MD, Midwest Heart Specialists
Charles Parker, Doctor's Office Quality
Steven R. Simon, MD, MPH, Harvard Pilgrim Health Care/Harvard Medical School
Phyllis Torda, National Committee for Quality Assurance

Professional Recertification Recognition Programs

Moderator: Larry Friedman, UCSD Medical Center
Christine Cassel, MD, American Board of Internal Medicine
Eric Holmboe, MD, American Board of Internal Medicine
Phyllis Torda, National Committee for Quality Assurance

Appendix A

Specifications of the National Voluntary Consensus Standards for Ambulatory Care: Patient Experience with Care

This appendix contains a brief summary of each survey instrument's characteristics and administrative instructions. The full survey tool and administrative specifications are available by following the links that are provided. Additional information about each survey can be found on the measure developer's web site.

1. The Consumer Assessment of Healthcare Providers and Systems (CAHPS®) Clinician & Group Survey

- **Adult Primary Care**
- **Child Primary Care Questionnaire**
- **Adult Specialty Care Questionnaire**

Source: Agency for Healthcare Research and Quality (AHRQ)

Date of Last Review/Update: July 2006

Proprietary Status: Public domain

Description: Self-reported survey that assesses the quality of adult ambulatory primary care provided by medical groups and/or individual clinicians

MEASURE SPECIFICATIONS – SURVEY CHARACTERISTICS

Download Survey Tool and Instructions: www.qualityforum.org/pdf/ambulatory/txCAHPSC&GALL3(onepager&specs&survey)03-23-07.pdf

Measure Developer/Instrument Web Site: www.cahps.ahrq.gov/content/products/CG/PROD_CG_CG40Products.asp

Domains: Getting Appointments and Health Care When Needed (Q6, Q8, Q10, Q12, & Q13), How Well Doctors Communicate (Q14, Q15, Q17, Q18, Q19, & Q20), Courteous and Helpful Office Staff (Q24 & Q25)

Number of Questions:

- **Adult Primary Care Questionnaire:** The survey instrument consists of 37 core items and 64 supplemental items.
- **Adult Specialty Care Questionnaire:** The survey instrument consists of 37 core items and 20 supplemental items.
- **Child Primary Care Questionnaire:** The survey instrument consists of 36 core items and 16 supplemental items.

Survey Population:

- **Adult Primary Care Questionnaire:** Adult patients (≥18 years) who received outpatient primary care from any of the doctors who are the subject of the survey
- **Adult Specialty Care Questionnaire:** Adult patients (≥18 years) who received care from any of the specialist doctors who are the subject of the survey
- **Child Primary Care Questionnaire:** Parents or guardians of children who received care from any of the doctors who are the subject of the survey

Reporting: Clinician and group

Level of Analysis: Clinician and group

MEASURE SPECIFICATIONS – SURVEY ADMINISTRATION

Sampling Specifications: Random sample of eligible patients. How many patients should be in the initial sample per physician should be determined based on the number of performance levels at which physicians are to be distinguished, desired level of confidence about these distinctions, expected amounts and types of variability in survey scores, and expected response rates.[1] Reports of survey data should make public statistical confidence levels and other aspects of survey and analysis methods.

Survey Administration: Mail only, telephone only, and mixed mail/telephone modes of administration are specified.

Scoring Instructions: Provided for global rating and three domain-level composite scores.

Reporting Instructions: Guidance on reporting is provided.

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[1] Field test analyses indicate that with a sample size of 30 patients per physician (e.g., initial sample size of 100 patients per physician and an average response rate of 30 percent), a few test sites yielded reliability estimates that were sufficiently high to produce performance group distinctions that their users considered sufficient. At other sites, a sample size of 45 patients per physician (e.g., initial sample sizes of 113 patients per physician and average response rates of 40 percent) were required to make the desired numbers of distinctions.

2. CAHPS Health Plan Survey v. 4.0 (CAHPS 4.0)

Source: AHRQ CAHPS Study Team and National Committee for Quality Assurance (NCQA)

Date of Last Review/Update: 2006

Proprietary Status: Public Domain

Description: The CAHPS Health Plan (HP) Survey v. 4.0 asks adult health plan members to report on and rate the quality of care and services they receive. Available in both English and Spanish, it consists of core items, which ensure standardization across survey sponsors. Sponsors may add supplemental items to meet their specific needs. CAHPS v. 4.0 focuses on health plan questions. It reduces the number of clinician group questions and adds new questions in other domains.

MEASURE SPECIFICATIONS – SURVEY CHARACTERISTICS

Download Survey Tool and Instructions: www.qualityforum.org/pdf/ambulatory/txCAHPS40HALL(onepager&specs&survey)03-23-07.pdf

Measure Developer/Instrument Web Site:
www.cahps.ahrq.gov/cahpskit/Healthplan/HPChooseQx2.asp
www.cahps.ahrq.gov/content/products/HP3/PROD_HP3_NCQA.asp?p=1021&s=211

Domains: CAHPS Core provides 4 global ratings of health plan characteristics, and 4 composites. Composite measure domains are: getting care quickly; getting needed care; doctor communication; customer service; and paperwork.

Number of Questions: CAHPS v. 4.0 core survey includes 29-30 questions plus demographic information.

Survey Population: Adult health plan members

Reporting: Plan-level information is reported; CAHPS 3.0 has been in widespread use for public reporting. Data are available through NCQA and through the National CAHPS Benchmarking Database. Similar reporting is expected from CAHPS 4.0.

Level of Analysis: Health plan – HMO, PPO, Medicare, Medicaid, commercial

Recent Modifications: According to AHRQ, the CAHPS v. 4.0H draft survey for the field test differed from CAHPS v. 3.0H in several ways:

- Response sets and wording of items were changed to ensure better comprehension among diverse populations.
- Some items were dropped to allow focus on content of greater relevance and subject to greater influence by health plans, e.g., composite, Courtesy and Helpfulness of Office Staff, was dropped.
- New content added to the NCQA supplement describes a health plan's role in offering information and care management to members: Shared Decision Making; Health Promotion and Education; Coordination of Care; Information on Costs of Care; Information on Costs of Prescriptions; Information for Provider Choice.

MEASURE SPECIFICATIONS – SURVEY ADMINISTRATION

A comprehensive administrative toolkit is available now for CAHPS v. 3.0 and is anticipated for HP-CAHPS v. 4.0. Sampling and administration instructions remain largely unchanged.

Sampling Specifications: Specific sampling protocols are provided, as are methods for identifying eligible respondents when only policy holders are known. The population to be surveyed is comprised of plan members who have had continuous enrollment in a health plan for a specified period of time. That time period depends on the source of coverage: commercial, Medicaid, or Medicare.

Survey Administration: CAHPS can be administered in a mixed mail only, mail/phone model, or telephone only. (Data presented to NQF are from mail mode administration.)

Scoring Instructions: Scoring instructions are provided in the toolkit.

Reporting Instructions: Guidance on reporting measures is provided in a comprehensive toolkit. Technical assistance is also available.

3. NCQA Supplemental Questions to CAHPS Health Plan Survey v. 4.0H

Source: NCQA

Date of Last Review/Update: 2006

Proprietary Status: Public domain

Description: The NCQA version of CAHPS includes supplemental questions that have been tested as part of the CAHPS development process, as well as instructions for administration, analysis, and reporting. The NCQA version is called CAHPS 4.0H and includes slightly modified administration protocols.

MEASURE SPECIFICATIONS – SURVEY CHARACTERISTICS

Download Survey Tool and Instructions: www.qualityforum.org/pdf/ambulatory/txCAHPS40HALL(onepager&specs&survey)03-23-07.pdf

Survey Instrument Available at Measure Developer/Instrument Web Site:
www.cahps.ahrq.gov/cahpskit/Healthplan/HPChooseQx2.asp
www.cahps.ahrq.gov/content/products/HP3/PROD_HP3_NCQA.asp?p=1021&s=211

Domains: NCQA supplemental questions yield additional composites on shared decisionmaking, claims processing, and plan information on cost. Additional questions are added in the NCQA version of the customer service composite measure.

Number of Questions: The NCQA supplement includes approximately 20 questions.

Reporting: Plan-level information is reported; CAHPS v. 3.0 has been in widespread use for public reporting. Data are available through NCQA and through the National CAHPS Benchmarking Database. Similar reporting is expected from CAHPS v. 4.0.

Level of Analysis: Health plan – HMO, PPO, Medicare, Medicaid, commercial

Recent Modifications: According to AHRQ, the CAHPS v. 4.0H draft survey for the field test differed from CAHPS v. 3.0H in several ways:

- Response sets and wording of items were changed to ensure better comprehension among diverse populations.
- Some items were dropped to allow focus on content of greater relevance and subject to greater influence by health plans, e.g., composite, Courtesy and Helpfulness of Office Staff, was dropped.
- New content added to the NCQA supplement describes the health plan's role in offering information and care management to members: Shared Decision Making; Health Promotion and Education; Coordination of Care; Information on Costs of Care; Information on Costs of Prescriptions; Information for Provider Choice.

MEASURE SPECIFICATIONS – SURVEY ADMINISTRATION

A comprehensive administrative toolkit is available now for CAHPS v. 3.0 and is anticipated for HP-CAHPS v. 4.0. Sampling and administration instructions will remain largely unchanged.

Sampling Specifications: Specific sampling protocols are provided, as are methods for identifying eligible respondents when only policy holders are known. The population to be surveyed is comprised of plan members who have had continuous enrollment in a health plan for a specified period of time. That time period depends on the source of coverage: commercial, Medicaid, or Medicare.

Survey Administration: CAHPS can be administered in a mixed mail only, mail/phone model, or telephone only. (Data presented to NQF are from mail mode administration.)

Scoring Instructions: Scoring instructions are provided in the toolkit.

Reporting Instructions: Guidance on reporting measures is provided in a comprehensive toolkit. Technical assistance is also available.

4. CAHPS Child Survey v. 3.0 Children with Chronic Conditions Supplemental Questions

Source: AHRQ CAHPS Study Team in collaboration with The Child and Adolescent Health Measurement Initiative (CAHMI)

Date of Last Review/Update: 2006

Proprietary Status: Public Domain

Description: The CAHPS Children with Chronic Conditions supplemental set consists of 31 questions that supplement the CAHPS Child Survey v. 3.0 Medicaid and Commercial Core Surveys. The set also includes the CAHMI CSHCN Screener, a 5-item, non-condition-specific screener for identification of children who experience current health or healthcare use consequences due to a health condition that has lasted or is expected to last for at least 12 months. The set enables health plans to: identify children who have chronic conditions; assess their experience with the healthcare system; and compare it to the experiences of similar children in other health plans and/or children without chronic conditions in the same plan.

MEASURE SPECIFICATIONS – SURVEY CHARACTERISTICS

Download Survey Tool and Instructions: www.qualityforum.org/pdf/ambulatory/txCAHPSCHILDCCALL(onepager&specs&survey)03-23-07.pdf

Survey Instrument Available at Measure Developer/Instrument Web Site: www.ahrq.gov/chtoolbx/measure2.htm#cahpsexpandedsurvey

Domains: The survey supplements the core domains of the CAHPS Child Survey. Supplemental domains include: access to prescription medicines; access to specialized services; family-centered care: having a personal doctor or nurse who knows the child; shared decisionmaking; getting needed information; and coordination of care and services.

Number of Questions: Supplemental items include 31 questions plus 5 screener questions.

Reporting: Plan level information is reported.

Level of Analysis: Health plan – HMO, PPO, Medicaid, commercial. The CSHCN Screener and many of the other supplemental items are also included in national surveys.

MEASURE SPECIFICATIONS – SURVEY ADMINISTRATION

A comprehensive administrative toolkit is available for CAHPS v. 3.0 Child Commercial and Medicaid versions.

Sampling Specifications: Users are instructed to follow guidelines in the document: *Fielding the CAHPS Health Plan Survey- Medicaid Questionnaires: Sampling Guidelines and Protocols for Surveying Adults and Children*. Additional sampling protocols have been published in the literature.

Survey Administration: CAHPS can be administered in a mixed mail only or mail/phone model.

Scoring Instructions: Scoring instructions are provided in the CAHPS toolkit.

Reporting Instructions: Guidance on reporting measures is provided in a comprehensive toolkit. Technical assistance is also available.

5. Experience of Care and Health Outcomes (ECHO) Survey

Source: AHRQ

Date of Last Review/Update: 2004

Proprietary Status: Public Domain

Description: Survey measure of patient experiences with behavioral healthcare (mental health and substance abuse treatment) and the organization that provides or manages the treatment and health outcomes.

MEASURE SPECIFICATION – SURVEY CHARACTERISTICS

Download Survey Tool and Instructions: www.qualityforum.org/pdf/ambulatory/txECHOALL(onepager&specs&survey)03-23-07.pdf

Measure Developer/Instrument Web Site: www.cahps.ahrq.gov/content/products/ECHO/PROD_ECHO_MBHO.asp?p=1021&s=214

Multiple Versions/Combinations Are Available: adult, pediatric, health plan, managed behavioral health organization (MBHO), English and Spanish. There are small variations in the question count for various surveys.

Domains: Survey domains support reporting of the following composite measures: getting treatment quickly; how well clinicians communicate; getting treatment and information from the MBHO; perceived improvement; and information about treatment options. A number of single-item measures are also included that address issues such as wait times, medication- and condition-specific education, inclusion of family and friends, patient rights, privacy, and cultural competency.

Number of Questions: 52 questions including patient demographic information

Survey Population: Eligible respondents are health plan or MBHO patients who have been continuously reenrolled for the past 12 months, 18 years or older, with diagnostic or procedural code in administrative records indicating receipt of behavioral health services in the past 12 months. Enrollees who received behavioral health services only in primary care settings (e.g., psychotropic medications from their primary care physician) are not included.

Reporting: Plan-level information is reported.

Level of Analysis: Health plan. The survey may be administered in managed care plans or managed behavioral health plans.

MEASURE SPECIFICATION – SURVEY ADMINISTRATION

Sampling Specifications: Eligible respondents are health plan or MBHO patients who have been continuously reenrolled for the past 12 months, 18 years or older, with diagnostic or procedural code in administrative records indicating receipt of behavioral health services in the past 12 months. Enrollees who received behavioral health services only in primary care settings are not included.

Survey Administration: Survey is available in English and Spanish and adult/child versions. Survey may be administered by mail, phone, or Internet. A variety of protocols are offered to protect confidentiality of eligible candidates. Template communications and scripts are provided.

Scoring Instructions: Scoring methods are provided through instructions for adapting CAHPS scoring protocols.

Reporting Instructions: Guidance on reporting measures is provided in a comprehensive toolkit. The format is based on CAHPS.

6. Promoting Healthy Development Survey (PHDS)

Source: The Child and Adolescent Health Measurement Initiative (CAHMI), Oregon Health & Science University

Date of Last Review/Update: November 2006

Proprietary Status: Privately developed for public use

Description: The Promoting Healthy Development Survey (PHDS) is a parent survey that can be used by healthcare providers, health systems, Medicaid agencies, and other stakeholders to measure and improve the quality of preventive and developmental care. Three modules are available PHDS (mail, English/Spanish), PHDS-Plus (phone), and Pro-PHDS (reduced item mail or on site in practitioner office, English/Spanish). The survey is given to parents of children ages 3 to 48 months and assesses recommended, clinical aspects of developmental care that are provided in the context of discussions between the healthcare provider and the parent, including parent experience with care.

MEASURE SPECIFICATIONS – SURVEY CHARACTERISTICS

Download Survey Tool and Instructions: www.qualityforum.org/pdf/ambulatory/txPHDSALL(onepager&specs&survey)03-23-07.pdf

Survey Instrument Available at Measure Developer/Instrument Web Site:
www.ahrq.gov/chtoolbx/measure6.htm#availability
http://dch.ohsuhealth.com//index.cfm?cfid=58936&cftoken=84206894&pageid=459&sectionID=133

Domains: The following measures of quality care can be gathered and scored using PHDS and PHDS-Plus: provision of anticipatory guidance and parental education by a doctor or other health provider; provider asks about and addresses parents' concerns about their child's learning, development, and behavior; whether the parent completed a standardized developmental and behavioral screening tool during well-child care visits; provision of basic follow-up care for children identified as being at risk for developmental, behavioral, or social problems; assessment of psychosocial well-being and safety in the family; assessment of smoking, drug, and alcohol use and safety in the family; family-centered care (communication, respect, partnership, cultural sensitivity, etc.); provision of health information; helpfulness of care; effect of care provided; care coordination; provision of information about resources in the community that can support parents.

Number of Questions: 43 items in standard PHDS; the PHDS-Plus enhanced telephone version is available, as is the "In Office PHDS" reduced item version. English and Spanish versions are available.

Reporting: PHDS data have been used for quality measurement and practice/policy improvement at the provider, office, medical group, health plan, state, and national levels.

Level of Analysis: Physician, office, medical group, health plan, community, state, national, and by child and parent health and socioeconomic characteristics

MEASURE SPECIFICATIONS – ADMINISTRATION

Sampling Specifications: Full administrative specifications including sampling, scoring, and detailed administration and reporting scripts and templates for the full and reduced item PHDS are available on the CAHMI or the Commonwealth Fund web sites and on AHRQ's ChildHealth Toolbox web site. Detailed sampling instructions are provided for survey administration for group or provider level administration. In general, sample size required is 35-50 completed surveys over several months per healthcare provider. Scripts are provided for office staff.

Survey Administration: Survey can be administered by mail or phone. Online administration options are also available.

Scoring Instructions: Scoring protocol, data dictionary, and response variables provided.

Reporting Instructions: Detailed instructions are provided for reporting PHDS findings to parents and providers for purposes of motivating and informing improvements in care. Templates are available.

7. Young Adult Health Care Survey (YAHCS)

Source: CAHMI, Oregon Health & Science University

Proprietary Status: Privately developed for public use

Description: The Young Adult Health Care Survey (YAHCS) is a 54-item teen survey that assesses whether young adults (aged 14 and older) are receiving nationally recommended preventive services. The YAHCS can be administered by mail, phone, or online. To date, the YAHCS has been administered by several state Medicaid agencies at the health plan level of analysis as well as nationally in an online survey sponsored by the Robert Wood Johnson Foundation. The YAHCS also includes a screener for chronic conditions (CSHCN Screener) and health status (CHIP-AE), allowing identification and stratification of scores for youth with special healthcare needs as well as by sociodemographic subgroups of youth.

MEASURE SPECIFICATIONS – SURVEY CHARACTERISTICS

Download Survey Tool and Instructions: www.qualityforum.org/pdf/ambulatory/txYAHCSALL(onepager&specs&survey)03-23-07.pdf

Survey Instrument Available at Measure Developer/Instrument Web Site:
www.cahmi.org/pages/Sections.aspx?section=9
www.ahrq.gov/chtoolbx/measure7.htm

Domains: Eight measures of quality care can be gathered and scored using YAHCS:

- Preventive screening and counseling on risky behaviors
- Preventive screening and counseling on sexual activity and STDs
- Preventive screening and counseling on weight, healthy diet, and exercise
- Preventive screening and counseling on emotional health and relationship issues
- Private and confidential care
- Helpfulness of counseling
- Communication and experience of care (derived from Draft Adolescent CAHPS)
- Health information

Number of Questions: 54 items

Reporting: YAHCS data have been used for quality improvement at the health plan, state Medicaid agency, and national levels.

Level of Analysis: Health plan, state, national

MEASURE SPECIFICATIONS – ADMINISTRATION

Sampling Specifications: Administered to adolescents having a qualifying healthcare visit (ICD and CPT codes provided) ensuring 35-50 completed surveys per provider or a minimum of 150 per health plan if overall scores are desired only (more if subgroup measurement and comparison is desired)

Survey Administration: Survey can be administered by mail or phone; detailed sampling and administrative instructions with sample letters are available from CAHMI and on AHRQ's ChildHealth Toolbox web site.

Scoring Instructions: Scoring methods are published and available from CAHMI and on AHRQ's ChildHealth Toolbox web site.

Reporting Instructions: Reporting templates are available from CAHMI and on AHRQ's ChildHealth Toolbox and the National Quality Measures Clearinghouse web sites.

Appendix B

Specifications of the National Voluntary Consensus Standards for Ambulatory Care: Ambulatory Surgical Centers

This appendix presents the detailed specifications of the national voluntary consensus standards for ambulatory surgical centers.

Appendix B – Specifications of the National Voluntary Consensus Standards for Ambulatory Care: Ambulatory Surgical Centers

Measure	IP Owner[1]	Numerator	Denominator	Exclusions	Data Source
PATIENT BURN	ASC QC	Ambulatory Surgical Center (ASC) admissions experiencing a burn prior to discharge.	All ASC admissions.	None.	ASC operational data, including administrative records, medical records, incident/occurrence reports, and quality improvement reports.
PROPHYLACTIC INTRAVENOUS ANTIBIOTIC TIMING	ASC QC	Number of ASC admissions with an order for a prophylactic intravenous (IV) antibiotic for prevention of surgical site infections who received the prophylactic antibiotic on time.	All ASC admissions with a preoperative order for a prophylactic IV antibiotic for prevention of surgical site infections.	ASC admissions with a preoperative order for a prophylactic IV antibiotic for prevention of infection other than surgical site infections (e.g., bacterial endocarditis).	ASC operational data, including medical records, medication administration records, nursing notes, IV flow sheets, clinical logs, incident/occurrence reports, and quality improvement reports.
HOSPITAL TRANSFER/ ADMISSION	ASC QC	ASC admissions requiring a hospital transfer or hospital admission prior to being discharged from the ASC.	All ASC admissions.	None.	ASC operational data, including administrative records, medical records, incident/occurrence reports, and quality improvement reports.

(more)

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[1] Intellectual Property (IP) owner. Specifications as of November 2007. For the most current specifications and supporting information please refer to the IP owner.
ACS - American College of Surgeons (www.facs.org)
AMA/PCPI - American Medical Association Physician Consortium for Performance Improvement (www.physicianconsortium.org)
ASC QC - Ambulatory Surgical Centers Quality Collaboration (www.ascquality.org)
NCQA - National Committee for Quality Assurance (www.ncqa.org)

Appendix B – Specifications of the National Voluntary Consensus Standards for Ambulatory Care: Ambulatory Surgical Centers (continued)

Measure	IP Owner[1]	Numerator	Denominator	Exclusions	Data Source
PATIENT FALL	ASC QC	ASC admissions experiencing a fall in the ASC.	All ASC admissions.	ASC admissions experiencing a fall outside the ASC.	ASC operational data, including administrative records, medical records, incident/ occurrence reports, and quality improvement reports.
WRONG SITE, WRONG SIDE, WRONG PATIENT, WRONG PROCEDURE, WRONG IMPLANT	ASC QC	ASC admissions experiencing a wrong site, wrong side, wrong patient, wrong procedure, or wrong implant.	All ASC admissions.	None.	ASC operational data, including administrative records, medical records, incident/ occurrence reports, and quality improvement reports.
TIMING OF PROPHYLACTIC ANTIBIOTICS, ORDERING PHYSICIAN	ACS AMA PCPI NCQA[2]	Surgical patients who have an order for a prophylactic antibiotic to be given within one hour (if fluoroquinolone or vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required).	All surgical patients aged 18 years and older undergoing procedures with the indications for prophylactic parenteral antibiotics **Electronic** Electronic data collection requires users to identify the eligible population (denominator) and	**Denominator Exclusions** Documentation of medical reason(s) for not ordering antibiotics to be given within one hour (if fluoroquinolone or vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required).	Data sources used will depend on implementation and approach. The electronic data option requires *(more)*

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[2] Physician Performance Measures (Measures) and related data specifications, developed by the American Medical Association (AMA) in collaboration with the Physician Consortium for Performance Improvement (the Consortium) and the National Committee for Quality Assurance (NCQA) pursuant to government sponsorship under subcontract 6205-05-054 with Mathematica Policy Research, Inc. under contract 500-00-0033 with the Centers for Medicare & Medicaid Services.

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Appendix B – Specifications of the National Voluntary Consensus Standards for Ambulatory Care: Ambulatory Surgical Centers (continued)

Measure	IP Owner[1]	Numerator	Denominator	Exclusions	Data Source
TIMING OF PROPHYLACTIC ANTIBIOTICS, ORDERING PHYSICIAN *continued*		**Instructions:** There must be documentation of order (written order, verbal order, or standing order/protocol) specifying that antibiotic is to be given within one hour (if fluoroquinolone or vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required) *OR* documentation that antibiotic *has* been given within one hour (if fluoroquinolone or vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required). The antimicrobial drugs listed below are considered prophylactic antibiotics for the purposes of this measure: ■ Ampicillin/sulbactam ■ Aztreonam ■ Cefazolin ■ Cefmetazole ■ Cefotetan ■ Cefoxitin ■ Cefuroxime ■ Ciprofloxacin ■ Clindamycin ■ Ertapenem ■ Erythromycin base ■ Gatifloxacin ■ Gentamicin ■ Levofloxacin ■ Metronidazole ■ Moxifloxacin ■ Neomycin ■ Vancomycin	numerator using electronic data (also referred to as "administrative data"). Users report a rate based on all patients in a given practice for whom data are available and who meet the eligible population/denominator criteria. **Denominator** CPT Procedure Codes and patient demographics (age, etc.) are used to determine patients that are included in the measure. **CPT Procedure Codes** **Integumentary:** 15734, 15738, 19260, 19271, 19272, 19301-19307,19361, 19364, 19366-19369 **Le Fort Fractures:** 21422, 21423, 21346-21348, 21432, 21433, 21435, 21436 **Mandibular Fracture:** 21454, 21461, 21462, 21465, 21470 **Spine:** 22325, 22612, 22630, 22800, 22802, 22804, 63030, 63042 **Hip Reconstruction:** 27125, 27130, 27132, 27134, 27137, 27138 **Trauma (Fractures):** 27235, 27236, 27244, 27245, 27758, 27759, 27766, 27792, 27814 **Knee Reconstruction:** 27440-27443, 27445-27447 **Laryngectomy:** 31360, 31365, 31367, 31368, 31370, 31375, 31380, 31382, 31390, 31395 **Vascular:** 33877, 33880, 33881, 33883, 33886, 33891, 34800, 34802-34805, 34825, 34830-34832, 34900, 35081, 35091, 35102, 35131, 35141, 35151, 35601, 35606, 35612, 35616, 35621, 35623, 35626, 35631, 35636-35638, 35642, 35645-35647, 35650, 35651, 35654, 35656, 35661, 35663, 35665, 35666, 35671, 36830	Exclude patients for whom prophylactic antibiotics were not ordered by reason of appropriate denominator exclusions. If using electronic data, exclude patients using the following code: Append a modifier (1P) to the CPT Category II Code to report patients with documented circumstances that meet the denominator exclusion criteria. ■ 1P: Documentation of medical reason(s) for not ordering antibiotics to be given within one hour (if fluoroquinolone or vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required). If using the medical record or hybrid methodologies, exclude patients who have documentation in the medical record of medical reason(s) for not ordering antibiotics to be given within one hour (if fluoroquinolone or vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required). If using the EHR methodology, exclude patients using the codes listed in the electronic data collection methodology or who have documentation in the medical record of the appropriate denominator exclusion.	use of data that is capable of being analyzed by computer including patient demographics, claims, or encounter data for visits and procedures. The medical record option requires manual or electronically coded data for visits or encounters to determine the sample, and access to either written or electronic medical records to both confirm information in the sampling framework for the denominator and for determination of the numerator. As noted in the measure description, those practices that have an electronic health records system can use

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Appendix B – Specifications of the National Voluntary Consensus Standards for Ambulatory Care: Ambulatory Surgical Centers (continued)

Measure	IP Owner[1]	Numerator	Denominator	Exclusions	Data Source
TIMING OF PROPHYLACTIC ANTIBIOTICS, ORDERING PHYSICIAN *continued*		**Electronic** Electronic data collection requires users to identify the eligible population (denominator) and numerator using electronic data (also referred to as "administrative data"). Users report a rate based on all patients in a given practice for whom data are available and who meet the eligible population/denominator criteria. **Numerator** CPT Category II Codes are used to report the numerator of the measure. ■ If reporting CPT Category II Codes, submit the listed ICD-9, CPT E&M Service Codes, and the appropriate CPT Category II Code. Identify patients with documentation of order for prophylactic antibiotic: ■ CPT II 4047F: Documentation of order for prophylactic antibiotic to be given within one hour (if fluoroquinolone or vancomycin, two hours) prior to surgical incision (or start of procedure when no incision is required). *OR* documentation that prophylactic antibiotic *has* been given within one hour prior to the surgical incision (or start of procedure when no incision is required) ■ CPT II 4048F: Documentation that prophylactic antibiotic was given within one hour (if fluoroquinolone or vancomycin, two hours) prior to surgical incision (or start of procedure when no incision is required).	**Spleen and Lymph Nodes:** 38115 **Glossectomy:** 41130, 41135, 41140, 41145, 41150, 41153, 41155 **Esophagus:** 43045, 43100, 43101, 43107, 43108, 43112, 43113, 43116-43118, 43121-43124, 43130, 43135, 43300, 43305, 43310, 43312, 43313, 43320, 43324-43326, 43330, 43331, 43340, 43341, 43350, 43351, 43352, 43360, 43361, 43400, 43401, 43405, 43410, 43415, 43420, 43425, 43496 **Stomach:** 43500-43502, 43510, 43520, 43600, 43605, 43610, 43611, 43620-43622, 43631-43634, 43640, 43641, 43653, 43800, 43810, 43820, 43825, 43830-43832, 43840, 43842, 43843, 43845-43848, 43850, 43855, 43860, 43865, 43870 **Small Intestine:** 44005, 44010, 44020, 44021, 44050, 44055, 44100, 44120, 44125-44127, 44130, 44132, 44133, 44135, 44136 **Colon and Rectum:** 43880, 44025, 44110, 44111, 44140, 44141, 44143-44147, 44150, 44151, 44155-44158, 44160, 44202, 44204-44208, 44210-44212, 44300, 44310, 44312, 44314, 44316, 44320, 44322, 44340, 44345, 44346, 44602-44605, 44615, 44620, 44625, 44626, 44640, 44650, 44660, 44661, 44700, 44950, 51597 **Anus and Rectum:** 45108, 45110-45114, 45116, 45119-45121, 45123, 45126, 45130, 45135, 45136, 45150, 45160, 45170, 45190, 45500, 45505, 45520, 45540, 45541, 45550, 45560, 45562, 45563, 45800, 45805, 45820, 45825 **Hepatic Surgery:** 47133, 47135, 47136, 47140-47142		either electronic or medical record approach but include all eligible patients, rather than a sample, in both the denominator and numerator.

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Appendix B – Specifications of the National Voluntary Consensus Standards for Ambulatory Care: Ambulatory Surgical Centers (continued)

Measure	IP Owner[1]	Numerator	Denominator	Exclusions	Data Source
TIMING OF PROPHYLACTIC ANTIBIOTICS, ORDERING PHYSICIAN *continued*		**Manual Abstraction** Manual abstraction of data elements from patient records (hard-copy charts) constitutes medical record data collection. Surgical patients who have an order for prophylactic antibiotic to be given within one hour (if fluoroquinolone or vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required). **Hybrid** Users should follow the requirements of electronic data collection, select a sample of patients, and then supplement the electronic data where needed with medical record abstraction of data elements to fulfill measure reporting requirements. **Electronic Health Records** Surgical patients who have an order for prophylactic antibiotic to be given within one hour (if fluoroquinolone or vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required). EHR users may opt to use the codes listed in the electronic data collection methodology to identify surgical patients who have an order for prophylactic antibiotic to be given within one hour (if fluoroquinolone or vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required).	**Biliary Surgery:** 47420, 47425, 47460, 47480, 47560, 47561, 47570, 47600, 47605, 47610, 47612, 47620, 47700, 47701, 47711, 47712, 47715, 47719-47721, 47740, 47741, 47760, 47765, 47780, 47785, 47800, 47802, 47900 **Pancreas:** 48020, 48100, 48120, 48140, 48145, 48146, 48148, 48150, 48152-48155, 48160, 48500, 48510, 48511, 48520, 48540, 48545, 48547, 48548, 48550, 48554, 48556 **Abdomen, Peritoneum, and Omentum:** 49215, 49568 **Renal Transplant:** 50300, 50320, 50340, 50360, 50365, 50370, 50380 **Gynecologic Surgery:** 58150, 58152, 58180, 58200, 58210, 58260, 58262, 58263, 58267, 58270, 58275, 58280, 58285, 58290-58294 **Acoustic Neuroma:** 61591, 61595, 61596, 61598, 61520, 61526, 61530, 61606, 61616, 61618, 61619, 69720, 69955, 69960, 69970 **Cochlear Implants:** 69930 **Neurological Surgery:** 22524, 22554, 22558, 22600, 22612, 22630, 35301, 61154, 61312, 61313, 61315, 61510, 61512, 61518, 61548, 61697, 61700, 61750, 61751, 61867, 62223, 62230, 63015, 63020, 63030, 63042, 63045, 63047, 63056, 63075, 63081, 63267, 63276 **Cardiothoracic Surgery:** 33120, 33130, 33140, 33141, 33202, 33250, 33251, 33256, 33261, 33305, 33315, 33321, 33322, 33332, 33335, 33400, 33401, 33403-33406, 33410, 33411, 33413, 33416, 33422, 33425-33427, 33430, 33460, 33463-33465, 33475, 33496, 33510-33519, 33521-33523, 33530, 33533-33536, 33542, 33545, 33548, 33572, 35021, 35211, 35216, 35241, 35246, 35271, 35276, 35311		

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Appendix B – Specifications of the National Voluntary Consensus Standards for Ambulatory Care: Ambulatory Surgical Centers (continued)

Measure	IP Owner[1]	Numerator	Denominator	Exclusions	Data Source
TIMING OF PROPHYLACTIC ANTIBIOTICS, ORDERING PHYSICIAN *continued*			**Cardiothoracic (Pacemaker):** 33203, 33206-33208, 33212-33218, 33220, 33222-33226, 33233-33238, 33240, 33241, 33243, 33244, 33249, 33254, 33255 **Genitourinary Surgery:** 51550, 51555, 51565, 51570, 51575, 51580, 51585, 51590, 51595, 51596, 51920, 51925, 52450, 52601, 52612, 52614, 52620, 52630, 52647, 52648, 54401, 54405, 54406, 54408, 54410, 54415, 54416, 55801, 55810, 55812, 55815, 55821, 55831, 55840, 55842, 55845 **General Thoracic Surgery:** 19272, 21627, 21632, 21740, 21750, 21805, 21825, 31760, 31766, 31770, 31775, 31786, 31805, 32095, 32100, 32110, 32120, 32124, 32140, 32141, 32150, 32215, 32220, 32225, 32310, 32320, 32402, 32440, 32442, 32445, 32480, 32482, 32484, 32486, 32488, 32491, 32500, 32501, 32800, 32810, 32815, 32900, 32905, 32906, 32940, 33020, 33025, 33030, 33031, 33050, 33300, 33310, 33320, 34051, 35021, 35216, 35246, 35276, 35311, 35481, 35526, 37616, 38381, 38746, 38747, 39000, 39010, 39200, 39220, 39545, 39561, 60521, 60522, 64746. **Manual Abstraction** Manual abstraction of data elements from patient records (hard-copy charts) constitutes medical record data collection. **Denominator** All surgical patients aged 18 years and older undergoing procedures with the indications for prophylactic parenteral antibiotics. Physicians are encouraged to review data on all patients. Sample sizes may be defined by different implementers.		

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Appendix B – Specifications of the National Voluntary Consensus Standards for Ambulatory Care: Ambulatory Surgical Centers (continued)

Measure	IP Owner[1]	Numerator	Denominator	Exclusions	Data Source
TIMING OF PROPHYLACTIC ANTIBIOTICS, ORDERING PHYSICIAN *continued*			**Hybrid** Users should follow the requirements of electronic data collection, select a sample of patients, and then supplement the electronic data where needed with medical record abstraction of data elements to fulfill measure reporting requirements. **Electronic Health Record** All surgical patients aged 18 years and older undergoing procedures with the indications for prophylactic parenteral antibiotics. EHR users may opt to use the codes listed in the electronic data collection methodology to identify all surgical patients aged 18 years and older undergoing procedures with the indications for prophylactic parenteral antibiotics.		
TIMING OR PROPHYLACTIC ANBIOTICS, ADMINISTERING PHYSICIAN	ACS AMA PCPI NCQA[2]	Surgical patients for whom administration of a prophylactic antibiotic has been initiated within one hour (if fluoroquinolone or vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required). The antimicrobial drugs listed below are considered prophylactic antibiotics for the purposes of this measure: ■ Ampicillin/sulbactam ■ Aztreonam ■ Cefazolin ■ Cefmetazole ■ Cefotetan ■ Cefoxitin ■ Cefuroxime ■ Ciprofloxacin ■ Clindamycin	All surgical patients aged 18 years and older who have an order for a parenteral antibiotic to be given within one hour (if fluoroquinolone or vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required). **Instructions:** For denominator inclusion, there must be documentation of order (written order, verbal order, or standing order/protocol) specifying that prophylactic parenteral antibiotic is to be given within one hour (if fluoroquinolone or vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required). **Electronic** Electronic data collection requires users to identify the eligible population (denominator) and numerator using electronic data (also referred to as "administrative data"). Users report a rate based on all patients in a given practice for whom	None.	Data sources used will depend on implementation and approach. The electronic data option requires use of data that is capable of being analyzed by computer including patient demographics, claims, or encounter data for visits and procedures. The medical record option requires manual or electronically coded *(more)*

Appendix B – Specifications of the National Voluntary Consensus Standards for Ambulatory Care: Ambulatory Surgical Centers (continued)

Measure	IP Owner[1]	Numerator	Denominator	Exclusions	Data Source
TIMING OR PROPHYLACTIC ANBIOTICS, ADMINISTERING PHYSICIAN *continued*		■ Ertapenem ■ Erythromycin base ■ Gatifloxacin ■ Gentamicin ■ Levofloxacin ■ Metronidazole ■ Moxifloxacin ■ Neomycin ■ Vancomycin **Electronic** Electronic data collection requires users to identify the eligible population (denominator) and numerator using electronic data (also referred to as "administrative data"). Users report a rate based on all patients in a given practice for whom data are available and who meet the eligible population/denominator criteria. **Numerator** CPT Category II Codes are used to report the numerator of the measure. ■ If reporting CPT Category II Codes, submit the listed ICD-9, CPT E&M Service Codes, and the appropriate CPT Category II Code. Identify patients with documentation of administration of prophylactic antibiotic: ■ CPT II 4048F: Documentation that prophylactic antibiotic was given within one hour (if fluoroquinolone or vancomycin, two hours) prior to surgical incision (or start of procedure when no incision is required).	data are available and who meet the eligible population/denominator criteria. **Denominator** A CPT Category II Code and patient demographics (age, etc.) are used to determine patients that are included in the measure. A CPT Category II Code to identify patients who have an order for a parenteral antibiotic is required for denominator inclusion. ■ CPT II 4047F: Documentation of order for prophylactic antibiotics to be given within one hour (if fluoroquinolone or vancomycin, two hours) prior to surgical incision (or start of procedure when no incision is required). **Manual Abstraction** Manual abstraction of data elements from patient records (hard-copy charts) constitutes medical record data collection. **Denominator** All surgical patients aged 18 years and older who have an order for a parenteral antibiotic to be given within one hour (if fluoroquinolone or vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required). Physicians are encouraged to review data on all patients. Sample sizes may be defined by different implementers. **Hybrid** Users should follow the requirements of electronic data collection, select a sample of patients, and then supplement the electronic data where needed with medical record abstraction of data elements to fulfill measure reporting requirements.		data for visits or encounters to determine the sample, and access to either written or electronic medical records to both confirm information in the sampling framework for the denominator and for determination of the numerator. As noted in the measure description, those practices that have an electronic health records system can use either electronic or medical record approach but include all eligible patients, rather than a sample, in both the denominator and numerator.

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Appendix B – Specifications of the National Voluntary Consensus Standards for Ambulatory Care: Ambulatory Surgical Centers (continued)

Measure	IP Owner[1]	Numerator	Denominator	Exclusions	Data Source
TIMING OR PROPHYLACTIC ANBIOTICS, ADMINISTERING PHYSICIAN *continued*		**Manual Abstraction** Manual abstraction of data elements from patient records (hard-copy charts) constitutes medical record data collection. Surgical patients for whom administration of a prophylactic antibiotic has been initiated within one hour (if fluoroquinolone or vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required). **Hybrid** Users should follow the requirements of electronic data collection, select a sample of patients, and then supplement the electronic data where needed with medical record abstraction of data elements to fulfill measure reporting requirements. **Electronic Health Record** Surgical patients for whom administration of a prophylactic antibiotic has been initiated within one hour (if fluoroquinolone or vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required). EHR users may opt to use the codes listed in the electronic data collection methodology to identify surgical patients for whom administration of a prophylactic antibiotic has been initiated within one hour (if fluoroquinolone or vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required).	**Electronic Health Record** All surgical patients aged 18 years and older who have an order for a parenteral antibiotic to be given within one hour (if fluoroquinolone or vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required). EHR users may opt to use the codes listed in the electronic data collection methodology to identify all surgical patients aged 18 years and older who have an order for a parenteral antibiotic to be given within one hour (if fluoroquinolone or vancomycin, two hours) prior to the surgical incision (or start of procedure when no incision is required).		

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Appendix B – Specifications of the National Voluntary Consensus Standards for Ambulatory Care: Ambulatory Surgical Centers (continued)

Measure	IP Owner[1]	Numerator	Denominator	Exclusions	Data Source
SELECTION OF PROPHYLACTIC ANTIBIOTIC, FIRST- OR SECOND-GENERATION CEPHALOSOPRIN	ACS AMA PCPI NCQA[2]	Surgical patients who had an order for cefazolin *OR* cefuroxime for antimicrobial prophylaxis. **Instructions:** There must be documentation of order (written order, verbal order, or standing order/protocol) for cefazolin or cefuroxime for antimicrobial prophylaxis *OR* documentation that cefazolin or cefuroxime was *given*. **Acceptable First- and Second-Generation Cephalosporin Prophylactic Antibiotics** ■ First generation cephalosporin: cefazolin ■ Second-generation cephalosporin: cefuroxime. **Electronic** Electronic data collection requires users to identify the eligible population (denominator) and numerator using electronic data (also referred to as "administrative data"). Users report a rate based on all patients in a given practice for whom data are available and who meet the eligible population/denominator criteria. **Numerator** CPT Category II Codes are used to report the numerator of the measure: ■ If reporting CPT Category II Codes, submit the listed ICD-9, CPT E&M Service Codes, and the appropriate CPT Category II Code. Identify patients with documentation of order for cefazolin or cefuroxime for antimicrobial prophylaxis (written order, verbal order, or standing order/protocol): ■ CPT II 4041F: Documentation of order for cefazolin *OR* cefuroxime for antimicrobial prophylaxis.	All surgical patients aged 18 years and older undergoing procedures with the indications for a first- or second-generation cephalosporin prophylactic antibiotic. **Electronic** Electronic data collection requires users to identify the eligible population (denominator) and numerator using electronic data (also referred to as "administrative data"). Users report a rate based on all patients in a given practice for whom data are available and who meet the eligible population/denominator criteria. **Denominator** CPT Procedure Codes and patient demographics (age, etc.) are used to determine patients that are included in the measure. **CPT Procedure Codes** **Integumentary:** 15734, 15738, 19260, 19271, 19272, 19301-19307,19361, 19364, 19366-19369 **Spine:** 22325, 22612, 22630, 22800, 22802, 22804, 63030, 63042 **Hip Reconstruction:** 27125, 27130, 27132, 27134, 27137, 27138 **Trauma (Fractures):** 27235, 27236, 27244, 27245, 27758, 27759, 27766, 27792, 27814 **Knee Reconstruction:** 27440-27443, 27445-27447 **Vascular:** 33877, 33880, 33881, 33883, 33886, 33891, 34800, 34802-34805, 34825, 34830-34832, 34900, 35081, 35091, 35102, 35131, 35141, 35151, 35601, 35606, 35612, 35616, 35621, 35623, 35626, 35631, 35636-35638, 35642, 35645-35647, 35650, 35651, 35654, 35656, 35661, 35663, 35665, 35666, 35671, 36830	**Denominator Exclusions** Documentation of medical reason(s) for not ordering cefazolin *OR* cefuroxime for antimicrobial prophylaxis. Exclude patients for whom prophylactic antibiotics was not ordered by reason of appropriate denominator exclusion. If using electronic data, exclude patients using the following code: Append a modifier (1P) to the CPT Category II Code to report patients with documented circumstances that meet the denominator exclusion criteria. ■ 1P: Documentation of medical reason(s) for not ordering cefazolin *OR* cefuroxime for antimicrobial prophylaxis. If using the medical record or hybrid methodologies, exclude patients who have documentation in the medical record of medical reason(s) for not ordering cefazolin OR cefuroxime for antimicrobial prophylaxis If using the EHR methodology, exclude patients using the codes listed in the electronic data collection methodology or who have documentation in the medical record of the appropriate denominator exclusion.	Data sources used will depend on implementation and approach. The electronic data option requires use of data that is capable of being analyzed by computer including patient demographics, claims, or encounter data for visits and procedures. The medical record option requires manual or electronically coded data for visits or encounters to determine the sample, and access to either written or electronic medical records to both confirm information in the sampling framework for the denominator and for determination of the numerator. As noted in the measure *(more)*

Appendix B – Specifications of the National Voluntary Consensus Standards for Ambulatory Care: Ambulatory Surgical Centers (continued)

Measure	IP Owner[1]	Numerator	Denominator	Exclusions	Data Source
SELECTION OF PROPHYLACTIC ANTIBIOTIC, FIRST- OR SECOND-GENERATION CEPHALOSOPRIN *continued*		*Note:* CPT Category II Code **4041F** is provided for antibiotic *ordered* or antibiotic *given*. Report CPT Category II Code **4041F** if cefazolin *OR* cefuroxime was given for antimicrobial prophylaxis. **Manual Abstraction** Manual abstraction of data elements from patient records (hard-copy charts) constitutes medical record data collection. Surgical patients who had an order for cefazolin *OR* cefuroxime for antimicrobial prophylaxis. **Hybrid** Users should follow the requirements of electronic data collection, select a sample of patients, and then supplement the electronic data where needed with medical record abstraction of data elements to fulfill measure reporting requirements. **Electronic Health Record** Surgical patients who had an order for cefazolin *OR* cefuroxime for antimicrobial prophylaxis. EHR users may opt to use the codes listed in the electronic data collection methodology to identify surgical patients who had an order for cefazolin *OR* cefuroxime for antimicrobial prophylaxis.	**Spleen and Lymph Nodes:** 38115 **Esophagus:** 43045, 43100, 43101, 43107, 43108, 43112, 43113, 43116-43118, 43121-43124, 43130, 43135, 43300, 43305, 43310, 43312, 43313, 43320, 43324-43326, 43330, 43331, 43340, 43341, 43350, 43351, 43352, 43360, 43361, 43400, 43401, 43405, 43410, 43415, 43420, 43425, 43496 **Stomach:** 43500-43502, 43510, 43520, 43600, 43605, 43610, 43611, 43620-43622, 43631-43634, 43640, 43641, 43653, 43800, 43810, 43820, 43825, 43830-43832, 43840, 43842, 43843, 43845-43848, 43850, 43855, 43860, 43865, 43870 **Small Intestine:** 44005, 44010, 44020, 44021, 44050, 44055, 44100, 44120, 44125-44127, 44130, 44132, 44133, 44135, 44136 **Biliary Surgery:** 47420, 47425, 47460, 47480, 47560, 47561, 47570, 47600, 47605, 47610, 47612, 47620, 47700, 47701, 47711, 47712, 47715, 47719-47721, 47740, 47741, 47760, 47765, 47780, 47785, 47800, 47802, 47900 **Pancreas:** 48020, 48100, 48120, 48140, 48145, 48146, 48148, 48150, 48152-48155, 48160, 48500, 48510, 48511, 48520, 48540, 48545, 48547, 48548, 48550, 48554, 48556 **Abdomen, Peritoneum, & Omentum:** 49215, 49568 **Renal Transplant:** 50300, 50320, 50340, 50360, 50365, 50370, 50380 **Neurological Surgery:** 22524, 22554, 22558, 22600, 22612, 22630, 35301, 61154, 61312, 61313, 61315, 61510, 61512, 61518, 61548, 61697, 61700, 61750, 61751, 61867, 62223, 62230, 63015, 63020, 63030, 63042, 63045, 63047, 63056, 63075, 63081, 63267, 63276		description, those practices that have an electronic health records system can use either electronic or medical record approach but include all eligible patients, rather than a sample, in both the denominator and numerator.

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Measure	IP Owner[1]	Numerator	Denominator	Exclusions	Data Source
SELECTION OF PROPHYLACTIC ANTIBIOTIC, FIRST- OR SECOND-GENERATION CEPHALOSOPRIN *continued*			**Cardiothoracic Surgery:** 33120, 33130, 33140, 33141, 33202, 33250, 33251, 33256, 33261, 33305, 33315, 33321, 33322, 33332, 33335, 33400, 33401, 33403-33406, 33410, 33411, 33413, 33416, 33422, 33425-33427, 33430, 33460, 33463-33465, 33475, 33496, 33510-33519, 33521-33523, 33530, 33533-33536, 33542, 33545, 33548, 33572, 35021, 35211, 35216, 35241, 35246, 35271, 35276, 35311 **General Thoracic Surgery:** 19272, 21627, 21632, 21740, 21750, 21805, 21825, 31760, 31766, 31770, 31775, 31786, 31805, 32095, 32100, 32110, 32120, 32124, 32140, 32141, 32150, 32215, 32220, 32225, 32310, 32320, 32402, 32440, 32442, 32445, 32480, 32482, 32484, 32486, 32488, 32491, 32500, 32501, 32800, 32810, 32815, 32900, 32905, 32906, 32940, 33020, 33025, 33030, 33031, 33050, 33300, 33310, 33320, 34051, 35021, 35216, 35246, 35276, 35311, 35481, 35526, 37616, 38381, 38746, 38747, 39000, 39010, 39200, 39220, 39545, 39561, 60521, 60522, 64746. **Manual Abstraction** Manual abstraction of data elements from patient records (hard-copy charts) constitutes medical record data collection. **Denominator** All surgical patients aged 18 years and older undergoing procedures with the indications for a first- or second-generation cephalosporin prophylactic antibiotic. Physicians are encouraged to review data on all patients. Sample sizes may be defined by different implementers.		

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Appendix B – Specifications of the National Voluntary Consensus Standards for Ambulatory Care: Ambulatory Surgical Centers (continued)

Measure	IP Owner[1]	Numerator	Denominator	Exclusions	Data Source
SELECTION OF PROPHYLACTIC ANTIBIOTIC, FIRST- OR SECOND-GENERATION CEPHALOSOPRIN *continued*			**Hybrid** Users should follow the requirements of electronic data collection, select a sample of patients, and then supplement the electronic data where needed with medical record abstraction of data elements to fulfill measure reporting requirements. **Electronic Health Record** All surgical patients aged 18 years and older undergoing procedures with the indications for a first- or second-generation cephalosporin prophylactic antibiotic. EHR users may opt to use the codes listed in the electronic data collection methodology to identify all surgical patients aged 18 years and older undergoing procedures with the indications for a first- or second-generation cephalosporin prophylactic antibiotic.		
DISCONTINUATION OF PROPHYLACTIC ANTIBIOTICS (NON-CARDIAC PROCEDURES)	ACS AMA PCPI NCQA[2]	Non-cardiac surgical patients who have an order for discontinuation of prophylactic antibiotics within 24 hours of surgical end time. **Instructions:** There must be documentation of order (written order, verbal order, or standing order/protocol) specifying that prophylactic antibiotic is to be discontinued within 24 hours of surgical end time *OR* specifying a course of antibiotic administration limited to that 24-hour period (e.g., "to be given every 8 hours for three doses") *OR* documentation that prophylactic antibiotic *was* discontinued within 24 hours of surgical end time. **Electronic** Electronic data collection requires users to identify the eligible population (denominator) and numerator using electronic data (also referred	All non-cardiac surgical patients undergoing procedures with the indications for prophylactic antibiotics *AND* who received a prophylactic antibiotic. **Instructions:** For the purpose of this measure of antibiotic discontinuation, patients may be counted as having "received a prophylactic antibiotic" if the antibiotic was received within 4 hours prior to the surgical incision (or start of procedure when no incision is required) or intraoperatively. **Electronic** Electronic data collection requires users to identify the eligible population (denominator) and numerator using electronic data (also referred to as "administrative data"). Users report a rate based on all patients in a given practice for whom data are available and who meet the eligible population/denominator criteria.	**Denominator Exclusions** Documentation of medical reason(s) for not discontinuing prophylactic antibiotics within 24 hours of surgical end time. Exclude patients for whom prophylactic antibiotics was not ordered by reason of appropriate denominator exclusion. If using electronic data, exclude patients using the following code: Append a modifier (1P) to the CPT Category II Code to report patients with documented circumstances that meet the denominator exclusion criteria. ■ 1P: Documentation of medical reason(s) for not discontinuing prophylactic antibiotics within 24 hours of surgical end time.	Data sources used will depend on implementation and approach. The electronic data option requires use of data that is capable of being analyzed by computer including patient demographics, claims, or encounter data for visits and procedures. The medical record *(more)*

Appendix B – Specifications of the National Voluntary Consensus Standards for Ambulatory Care: Ambulatory Surgical Centers (continued)

Measure	IP Owner[1]	Numerator	Denominator	Exclusions	Data Source
DISCONTINUATION OF PROPHYLACTIC ANTIBIOTICS (NON-CARDIAC PROCEDURES) *continued*		to as "administrative data"). Users report a rate based on all patients in a given practice for whom data are available and who meet the eligible population/denominator criteria. **Numerator** CPT Category II Codes are used to report the numerator of the measure: ■ If reporting CPT Category II Codes, submit the listed ICD-9, CPT E&M Service Codes, and the appropriate CPT Category II Code. Identify patients with documentation of order for discontinuation of prophylactic antibiotics (written order, verbal order, or standing order/protocol) within 24 hours of surgical end time: ■ CPT II 4049F: Documentation that order was given to discontinue prophylactic antibiotics within 24 hours of surgical end time, non-cardiac procedure. *Note:* CPT Category II Code 4049F is provided for documentation that antibiotic discontinuation was ordered or that antibiotic discontinuation was accomplished. Report CPT Category II Code 4049F if antibiotics were discontinued within 24 hours. **Manual Abstraction** Manual abstraction of data elements from patient records (hard-copy charts) constitutes medical record data collection. Non-cardiac surgical patients who have an order for discontinuation of prophylactic antibiotics within 24 hours of surgical end time.	**Denominator** CPT Procedure Codes, CPT Category II Codes, and patient demographics (age, etc.) are used to determine patients that are included in the measure. ■ CPT II 4046F: Documentation that prophylactic antibiotics were given within 4 hours prior to surgical incision or given intraoperatively; ■ CPT II 4042F: Documentation that prophylactic antibiotics were neither given within 4 hours prior to surgical incision nor given intraoperatively; *AND* **CPT Procedure Codes** **Integumentary:** 15734, 15738, 19260, 19271, 19272, 19301-19307,19361, 19364, 19366-19369 **Le Fort Fractures:** 21422, 21423, 21346-21348, 21432, 21433, 21435, 21436 **Mandibular Fracture:** 21454, 21461, 21462, 21465, 21470 **Spine:** 22325, 22612, 22630, 22800, 22802, 22804, 63030, 63042 **Hip Reconstruction:** 27125, 27130, 27132, 27134, 27137, 27138 **Trauma (Fractures):** 27235, 27236, 27244, 27245, 27758, 27759, 27766, 27792, 27814 **Knee Reconstruction:** 27440-27443, 27445-27447 **Laryngectomy:** 31360, 31365, 31367, 31368, 31370, 31375, 31380, 31382, 31390, 31395 **Vascular:** 33877, 33880, 33881, 33883, 33886, 33891, 34800, 34802-34805, 34825, 34830-34832, 34900, 35081, 35091, 35102, 35131, 35141, 35151,	If using the medical record or hybrid methodologies, exclude patients who have documentation in the medical record of medical reason(s) for not discontinuing prophylactic antibiotics within 24 hours of surgical end time. If using the EHR methodology, exclude patients using the codes listed in the electronic data collection methodology or who have documentation in the medical record of the appropriate denominator exclusion.	option requires manual or electronically coded data for visits or encounters to determine the sample, and access to either written or electronic medical records to both confirm information in the sampling framework for the denominator and for determination of the numerator. As noted in the measure description, those practices that have an electronic health records system can use either electronic or medical record approach but include all eligible patients, rather than a sample, in both the denominator and numerator. *(more)*

Appendix B – Specifications of the National Voluntary Consensus Standards for Ambulatory Care: Ambulatory Surgical Centers (continued)

Measure	IP Owner[1]	Numerator	Denominator	Exclusions	Data Source
DISCONTINUATION OF PROPHYLACTIC ANTIBIOTICS (NON-CARDIAC PROCEDURES) *continued*		**Hybrid** Users should follow the requirements of electronic data collection, select a sample of patients, and then supplement the electronic data where needed with medical record abstraction of data elements to fulfill measure reporting requirements. **Electronic Health Record** Non-cardiac surgical patients who have an order for discontinuation of prophylactic antibiotics within 24 hours of surgical end time. EHR users may opt to use the codes listed in the electronic data collection methodology to identify non-cardiac surgical patients who have an order for discontinuation of prophylactic antibiotics within 24 hours of surgical end time.	35601, 35606, 35612, 35616, 35621, 35623, 35626, 35631, 35636-35638, 35642, 35645-35647, 35650, 35651, 35654, 35656, 35661, 35663, 35665, 35666, 35671, 36830 **Glossectomy:** 41130, 41135, 41140, 41145, 41150, 41153, 41155 **Esophagus:** 43045, 43100, 43101, 43107, 43108, 43112, 43113, 43116-43118, 43121-43124, 43130, 43135, 43300, 43305, 43310, 43312, 43313, 43320, 43324-43326, 43330, 43331, 43340, 43341, 43350, 43351, 43352, 43360, 43361, 43400, 43401, 43405, 43410, 43415, 43420, 43425, 43496 **Stomach:** 43500-43502, 43510, 43520, 43600, 43605, 43610, 43611, 43620-43622, 43631-43634, 43640, 43641, 43653, 43800, 43810, 43820, 43825, 43830-43832, 43840, 43842, 43843, 43845-43848, 43850, 43855, 43860, 43865, 43870 **Small Intestine:** 44005, 44010, 44020, 44021, 44050, 44055, 44100, 44120, 44125-44127, 44130, 44132, 44133, 44135, 44136 **Colon and Rectum:** 43880, 44025, 44110, 44111, 44140, 44141, 44143-44147, 44150, 44151, 44155-44158, 44160, 44202, 44204-44208, 44210-44212, 44300, 44310, 44312, 44314, 44316, 44320, 44322, 44340, 44345, 44346, 44615, 44620, 44625, 44626, 44640, 44650, 44660, 44661, 44700, 44950, 51597 **Anus and Rectum:** 45108, 45110-45114, 45116, 45119-45121, 45123, 45126, 45130, 45135, 45136, 45150, 45160, 45170, 45190, 45500, 45505, 45520, 45540, 45541, 45550, 45560, 45562, 45563, 45800, 45805, 45820, 45825		

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Appendix B – Specifications of the National Voluntary Consensus Standards for Ambulatory Care: Ambulatory Surgical Centers (continued)

Measure	IP Owner[1]	Numerator	Denominator	Exclusions	Data Source
DISCONTINUATION OF PROPHYLACTIC ANTIBIOTICS (NON-CARDIAC PROCEDURES) *continued*			**Biliary Surgery:** 47420, 47425, 47460, 47480, 47560, 47561, 47570, 47600, 47605, 47610, 47612, 47620, 47700, 47701, 47711, 47712, 47715, 47719-47721, 47740, 47741, 47760, 47765, 47780, 47785, 47800, 47802, 47900 **Pancreas:** 48020, 48100, 48120, 48140, 48145, 48146, 48148, 48150, 48152-48155, 48160, 48500, 48510, 48511, 48520, 48540, 48545, 48547, 48548, 48550, 48554, 48556 **Abdomen, Peritoneum, & Omentum:** 49215, 49568 **Renal Transplant:** 50300, 50320, 50340, 50360, 50365, 50370, 50380 **Gynecologic Surgery:** 58150, 58152, 58180, 58200, 58210, 58260, 58262, 58263, 58267, 58270, 58275, 58280, 58285, 58290-58294 **Acoustic Neuroma:** 61591, 61595, 61596, 61598, 61520, 61526, 61530, 61606, 61616, 61618, 61619, 69720, 69955, 69960, 69970 **Cochlear Implants:** 69930 **Neurological Surgery:** 22524, 22554, 22558, 22600, 22612, 22630, 35301, 61154, 61312, 61313, 61315, 61510, 61512, 61518, 61548, 61697, 61700, 61750, 61751, 61867, 62223, 62230, 63015, 63020, 63030, 63042, 63045, 63047, 63056, 63075, 63081, 63267, 63276 **Cardiothoracic (Pacemaker):** 33203, 33206-33208, 33212-33218, 33220, 33222-33226, 33233-33238, 33240, 33241, 33243, 33244, 33249, 33254, 33255		

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Appendix B – Specifications of the National Voluntary Consensus Standards for Ambulatory Care: Ambulatory Surgical Centers (continued)

Measure	IP Owner[1]	Numerator	Denominator	Exclusions	Data Source
DISCONTINUATION OF PROPHYLACTIC ANTIBIOTICS (NON-CARDIAC PROCEDURES) *continued*			**General Thoracic Surgery:** 19272, 21627, 21632, 21740, 21750, 21805, 21825, 31760, 31766, 31770, 31775, 31786, 31805, 32095, 32100, 32110, 32120, 32124, 32140, 32141, 32150, 32215, 32220, 32225, 32310, 32320, 32402, 32440, 32442, 32445, 32480, 32482, 32484, 32486, 32488, 32491, 32500, 32501, 32800, 32810, 32815, 32900, 32905, 32906, 32940, 33020, 33025, 33030, 33031, 33050, 33300, 33310, 33320, 34051, 35021, 35216, 35246, 35276, 35311, 35481, 35526, 37616, 38381, 38746, 38747, 39000, 39010, 39200, 39220, 39545, 39561, 60521, 60522, 64746. **Manual Abstraction** Manual abstraction of data elements from patient records (hard-copy charts) constitutes medical record data collection. **Denominator** All non-cardiac surgical patients undergoing procedures with the indications for prophylactic antibiotics *AND* who received a prophylactic antibiotic. Physicians are encouraged to review data on all patients. Sample sizes may be defined by different implementers. **Hybrid** Users should follow the requirements of electronic data collection, select a sample of patients, and then supplement the electronic data where needed with medical record abstraction of data elements to fulfill measure reporting requirements. **Electronic Health Record** All non-cardiac surgical patients undergoing procedures with the indications for prophylactic antibiotics *AND* who received a prophylactic antibiotic.		

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Appendix B – Specifications of the National Voluntary Consensus Standards for Ambulatory Care: Ambulatory Surgical Centers (continued)

Measure	IP Owner[1]	Numerator	Denominator	Exclusions	Data Source
DISCONTINUATION OF PROPHYLACTIC ANTIBIOTICS (NON-CARDIAC PROCEDURES) *continued*			EHR users may opt to use the codes listed in the electronic data collection methodology to identify all non-cardiac surgical patients undergoing procedures with the indications for prophylactic antibiotics *AND* who received a prophylactic antibiotic.		

Appendix C

Specifications of the National Voluntary Consensus Standards for Ambulatory Care: Measuring Healthcare Disparities (Local Approach)

The disparities-sensitive consensus standards include 14 Agency for Healthcare Research and Quality Prevention Quality Indicators (PQIs). The detailed specifications for the PQIs are presented in this appendix.

Appendix C – Specifications of the National Voluntary Consensus Standards for Ambulatory Care: Measuring Healthcare Disparities (Local Approach)

Measure	Measure Use	IP Owner	Numerator	Denominator	Exclusions
DIABETES, SHORT-TERM COMPLICATIONS (PQI 1)	This measure is used to assess the number of admissions for diabetes short-term complications per 100,000 population.	AHRQ[1]	All non-maternal/ non-neonatal discharges age 18 years and older with ICD-9-CM Principal Diagnosis Code for short-term complications (ketoacidosis, hyperosmolarity, coma).	Population in Metro Area or county, age 18 years and older.	Exclude cases: ■ transferring from another institution (SID ASOURCE=2) ■ MDC 14 (pregnancy, childbirth, and puerperium) ■ MDC 15 (newborn and other neonates).
PERFORATED APPENDICITIS (PQI 2)	This measure is used to assess the number of admissions for perforated appendix per 100 admissions for appendicitis within Metro Area or county.	AHRQ[1]	Discharges with ICD-9-CM Diagnosis Code for perforations or abscesses of appendix in any field.	Number of discharges with diagnosis code for appendicitis in any field in MSA or county.	Exclude cases: ■ transferring from another institution (SID ASOURCE=2) ■ MDC 14 (pregnancy, childbirth, and puerperium) ■ MDC 15 (newborn and other neonates).
DIABETES, LONG-TERM COMPLICATIONS (PQI 3)	This measure is used to assess the number of admissions for long-term diabetes complications per 100,000 population.	AHRQ[1]	Discharges age 18 years and older with ICD-9-CM Principal Diagnosis Code for long-term complications (renal, eye, neurological, circulatory, or complications not otherwise specified) (see below).	Population in Metro Area or county, age 18 years and older.	Exclude cases: ■ transferring from another institution (SID ASOURCE=2) ■ MDC 14 (pregnancy, childbirth, and puerperium) ■ MDC 15 (newborn and other neonates).
CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) (PQI 5)	This measure is used to assess the number of admissions for COPD per 100,000 population.	AHRQ[1]	All non-maternal discharges of age 18 years and older with ICD-9-CM Principal Diagnosis Code for COPD.	Population in Metro Area or county, age 18 years and older.	Exclude cases: ■ transferring from another institution (SID ASOURCE=2) ■ MDC 14 (pregnancy, childbirth, and puerperium) ■ MDC 15 (newborn and other neonates).

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[1] These measures are in the public domain and maintained by the Agency for Healthcare Research and Quality. They can be found at www.qualityindicators.ahrq.gov. Specifications as of November 2007.

Appendix C – Specifications of the National Voluntary Consensus Standards for Ambulatory Care: Measuring Healthcare Disparities (Local Approach) (continued)

Measure	Measure Use	IP Owner	Numerator	Denominator	Exclusions
HYPERTENSION (PQI 7)	This measure is used to assess the number of admissions for hypertension per 100,000 population.	AHRQ[1]	All non-maternal discharges of age 18 years and older with ICD-9-CM Principal Diagnosis Code for hypertension.	Population in Metro Area or county, age 18 years and older.	Exclude cases: ■ transferring from another institution (SID ASOURCE=2) ■ MDC 14 (pregnancy, childbirth, and puerperium) ■ MDC 15 (newborn and other neonates) with cardiac procedure codes in any field.
CONGESTIVE HEART FAILURE (CHF) (PQI 8)	This measure is used to assess the number of admissions for CHF per 100,000 population.	AHRQ[1]	All non-maternal/nonneonatal discharges of age 18 years and older with ICD-9-CM Principal Diagnosis Code for CHF.	Population in Metro Area or county, age 18 years and older.	Exclude cases: ■ transferring from another institution (SID ASOURCE=2) ■ MDC 14 (pregnancy, childbirth, and puerperium) ■ MDC 15 (newborn and other neonates) ■ with cardiac procedure codes in any field.
LOW BIRTH WEIGHT (PQI 9)	This measure is used to assess the number of low birth weight infants per 100 births.	AHRQ[1]	Number of births with ICD-9-CM Diagnosis Codes for birth weights less than 2500 grams in any field. *Exclusions:* Transfer from other institution.	All births (discharges in MDC 15, newborns and other neonates) in Metro Area or county.	Adjustment: risk-adjusted by multivariate regression for patient sex.
DEHYDRATION (PQI 10)	This measure is used to assess the number of admissions for dehydration per 100,000 population.	AHRQ[1]	All non-maternal discharges of age 18 years and older with ICD-9-CM Principal Diagnosis Code for hypovolemia.	Population in Metro Area or county, age 18 years and older.	Exclude cases: ■ transferring from another institution (SID ASOURCE=2) ■ MDC 14 (pregnancy, childbirth, and puerperium) ■ MDC 15 (newborn and other neonates).

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Appendix C – Specifications of the National Voluntary Consensus Standards for Ambulatory Care: Measuring Healthcare Disparities (Local Approach) (continued)

Measure	Measure Use	IP Owner	Numerator	Denominator	Exclusions
BACTERIAL PNEUMONIA (PQI 11)	This measure is used to assess the number of admissions for bacterial pneumonia per 100,000 population.	AHRQ[1]	All non-maternal discharges of age 18 years and older with ICD-9-CM Principal Diagnosis Code for bacterial pneumonia.	Population in Metro Area or county, age 18 years and older.	Exclude cases: ■ transferring from another institution (SID ASOURCE=2) ■ MDC 14 (pregnancy, childbirth, and puerperium) ■ MDC 15 (newborn and other neonates) ■ with diagnosis code for sickle cell anemia or HB-S disease.
URINARY INFECTIONS (PQI 12)	This measure is used to assess the number of admissions for urinary tract infection per 100,000 population.	AHRQ[1]	All non-maternal discharges of age 18 years and older with ICD-9-CM Principal Diagnosis Code of urinary tract infection.	Population in Metro Area or county, age 18 years and older.	Exclude cases: ■ transferring from another institution (SID ASOURCE=2) ■ MDC 14 (pregnancy, childbirth, and puerperium) ■ MDC 15 (newborn and other neonates) ■ with diagnosis code of kidney/urinary tract disorder ■ with diagnosis code of immunocompromised state ■ with immunocompromised state procedure code.
ANGINA WITHOUT PROCEDURE (PQI 13)	This measure is used to assess the number of admissions for angina (without procedures) per 100,000 population.	AHRQ[1]	All non-maternal discharges of age 18 years and older with ICD-9-CM Principal Diagnosis Code for angina.	Population in Metro Area or county, age 18 years and older.	Exclude cases: ■ transferring from another institution (SID ASOURCE=2) ■ MDC 14 (pregnancy, childbirth, and puerperium) ■ MDC 15 (newborn and other neonates) ■ with a code for cardiac procedure in any field.

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Appendix C – Specifications of the National Voluntary Consensus Standards for Ambulatory Care: Measuring Healthcare Disparities (Local Approach) (continued)

Measure	Measure Use	IP Owner	Numerator	Denominator	Exclusions
UNCONTROLLED DIABETES ADMISSION RATE (PQI 14)	This measure is used to assess the number of admissions for uncontrolled diabetes among patients with diabetes per 100,000 population.	AHRQ[1]	All non-maternal discharges of age 18 years and older with ICD-9-CM principal diagnosis code for uncontrolled diabetes, without mention of a short-term or long-term complication.	Population in Metro Area or county, age 18 years and older.	Exclude cases: ■ transferring from another institution (SID ASOURCE=2) ■ MDC 14 (pregnancy, childbirth, and puerperium) ■ MDC 15 (newborn and other neonates).
ADULT ASTHMA (PQI 15)	This measure is used to assess the number of admissions for asthma in adults per 100,000 population.	AHRQ[1]	All non-maternal discharges of age 18 years and older with ICD-9-CM Principal Diagnosis Code of asthma.	Population in Metro Area or county, age 18 years and older.	Exclude cases: ■ transferring from another institution (SID ASOURCE=2) ■ MDC 14 (pregnancy, childbirth, and puerperium) ■ MDC 15 (newborn and other neonates) ■ with any diagnosis code of cystic fibrosis and anomalies of the respiratory system.
LOWER EXTREMITY AMPUTATIONS AMONG PATIENTS WITH DIABETES (PQI 16)	This measure is used to assess the number of admissions for lower-extremity amputation among patients with diabetes per 100,000 population.	AHRQ[1]	All non-maternal discharges of age 18 years and older with ICD-9-CM Procedure Code for lower-extremity amputation in any field and diagnosis code of diabetes in any field.	Population in Metro Area or county, age 18 years and older.	Exclude cases: ■ transferring from another institution (SID ASOURCE=2) ■ MDC 14 (pregnancy, childbirth, and puerperium) ■ MDC 15 (newborn and other neonates) ■ with trauma diagnosis code in any field.

Appendix D

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Premier, Inc.

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Providence Health System
Robert Wood Johnson Health Network
Robert Wood Johnson Hospital - Hamilton
Robert Wood Johnson University Hospital - New Brunswick
Rockford Health System
Sentara Norfolk General Hospital
Sisters of Mercy Health System
Society of Critical Care Medicine
Society of Thoracic Surgeons
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CareScience
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Coral Initiative, LLC
CRG Medical
Delmarva Foundation
Dialog Medical
Disease Management Association of America
ECRI Institute
eHealth Initiative
Eli Lilly and Company
excelleRx
Florida Initiative for Children's Healthcare Quality
Forum of End Stage Renal Disease Networks
GlaxoSmithKline
Health Alliance of Mid-America
Health Care Compliance Strategies
Health Grades
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Healthcare Association of New York State
Hospira
Illinois Department of Public Health
Infectious Diseases Society of America
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Institute for Safe Medication Practices
Integrated Healthcare Association
Integrated Resources for the Middlesex Area
Iowa Foundation for Medical Care
Iowa Healthcare Collaborative
IPRO
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Johnson & Johnson Health Care Systems
Kidney Care Partners
Long Term Care Institute
Loyola University Health System - Center for Clinical Effectiveness
Lumetra
Maine Quality Forum
McKesson Corporation
MedAssets
MedMined
MEDRAD, Inc.
MHA Keystone Center for Patient Safety and Quality
Minnesota Community Measurement
National Academy for State Health Policy
National Association for Healthcare Quality
National Committee for Quality Assurance
National Institutes of Health
National Minority Quality Forum
National Patient Safety Foundation
National Research Corporation
Neocure
New Jersey Hospital Association
New York University College of Nursing
North Carolina Center for Hospital Quality and Patient Safety
Northeast Health Care Quality Foundation
Ohio KePRO
Online Users for Computer-assisted Healthcare
Onmicare, Inc.
Partnership for Prevention
Pennsylvania Health Care Cost Containment Council
Pennsylvania Patient Safety Authority
Pfizer
PhRMA
Press, Ganey Associates
Professional Research Consultants, Inc.
Renal Physicians Association
Research!America
Rhode Island Department of Health
Roswell Park Cancer Institute
sanofi-aventis
Schering-Plough
Society for Healthcare Epidemiology of America
Society of Hospital Medicine
Solucient
State of New Jersey Department of Health and Senior Services
Substance Abuse and Mental Health Services Administration
Texas Medical Institute of Technology
The Joint Commission
The Lewin Group
Thomson Healthcare
Uniform Data System for Medical Rehabilitation
United Hospital Fund
United Surgical Partners International
University of North Carolina - Program on Health Outcomes
URAC
US Pharmacopeia
Virginia Cardiac Surgeon Quality Initiative
Vitas Healthcare Corporation
West Virginia Medical Institute
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Appendix E

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[1] Through December 2006
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Appendix F

Commentary
Patient Experience with Care

Introduction

Patient experience with care was identified as a priority area for measurement in ambulatory care by National Quality Forum (NQF) Members at a workshop in 2004.[1] NQF's work in ambulatory care began in 2005 under the direction of the Ambulatory Care Steering Committee (appendix E). The Steering Committee—representing key healthcare constituencies including consumers, providers, purchasers, and research and quality improvement organizations—was convened to evaluate ambulatory care measures across a number of priority areas. A Patient Experience with Care (PEC) Technical Advisory Panel (TAP) (appendix E) was formed to assist NQF staff with measure evaluations, advise the Steering Committee on the technical aspects of the measures, and make recommendations to the Steering Committee. This appendix summarizes the deliberations of the Steering Committee and the TAP with respect to the patient experience with care measures.

Approach to Measure Evaluation

Identification of Candidate Consensus Standards

Candidate consensus standards for patient experience with care were identified through several complementary strategies:

- open solicitation of measures through a "Call for Measures." In 2005 and 2006 the "Call" was distributed through the following avenues:

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[1] National Quality Forum (NQF), *Improving the Quality of Ambulatory Care: Workgroup Meeting Summary.* Washington, DC: NQF; 2004. Available at www.qualityforum.org/pdf/ambulatory/txmtgsummaryambulatoryFINALcolor.pdf. Last accessed August 2007.

  - posted on NQF's web site, and
  - e-mailed to NQF Members, all project Steering Committee and TAP members, and more than 1,300 individuals who have asked to be kept apprised of NQF activities;
- active search of additional candidate measures from:
  - the Agency for Healthcare Research and Quality's (AHRQ's) National Quality Measures Clearinghouse, and
  - literature searches; and
- passive receipt of candidate consensus standards suggested by others (e.g., NQF member organizations).

NQF staff identified several measures and instruments relating to patient experiences with care, ranging from instruments evaluating satisfaction with a single clinical procedure to broad instruments soliciting patient information across a number of domains. Many of the surveys were available in multiple versions or formats (e.g., English and Spanish, adult and pediatric versions). In these instances, developers were asked to identify the most representative version of the instrument, which was then reviewed by the TAP and Steering Committee.

Definition

The Steering Committee accepted the TAP's recommendation for the following definition of *patient experience with care*:

> *Patient experience with care* is a patient-centered survey measure that obtains information from patients about the process of obtaining care from a specific clinician (physician and other licensed, independent practitioners), practice, care setting, or healthcare organization. Patient care experience measures are designed to go beyond, but not exclude, the assessment of 'patient satisfaction.' Patient experience measures obtain information about specific and clinically relevant aspects of the care process, such as whether clinicians' explanations were clear and easy to understand, whether adequate time was provided, whether patients' questions were answered, and whether care was delivered and coordinated by the clinician, practice, or healthcare organization in a timely and efficient manner across people, functions, and sites over time.

Purpose

Previously, NQF endorsed the following purpose statement for ambulatory care measures, which also applies to the patient experience with care measures:

> The purpose of this set of ambulatory care consensus standards is to improve the quality of ambulatory care—via accountability and public reporting—by standardizing quality measurement in ambulatory care settings, including physician offices, clinics, emergency rooms, and health centers.

Scope

The Steering Committee identified several criteria to define the scope of the ambulatory care measure patient experience with care set. The set of ambulatory care patient experience with care measures includes:

- measures that are suitable for assessing patient experience with care in the ambulatory care setting, including physician/clinician practice, group, health plan, and community-level accountability;

- measures that are derived from multiple data sources;
- measures that are fully developed and precisely specified; and
- measures that are fully open source.[2]

Evaluation of Candidate Measures

NQF staff prepared detailed measure evaluations using standard criteria established in NQF's *National Framework for Healthcare Quality Measurement and Reporting*.[3] That report details work of the NQF Strategic Framework Board and endorsed by NQF concluding that measures should be evaluated based on the following criteria: rationale, importance, scientific acceptability, usability, and feasibility. Information for the measure evaluations was obtained from the measure developers, literature review, and independent research. The PEC TAP provided a preliminary review of those measure evaluations and made recommendations to the Steering Committee based on the perceived strengths and weaknesses of each instrument and technical reasons why the measure should or should not be recommended. The TAP and Steering Committee evaluated the specifications of each patient experience with care measure (survey), which included:

- the survey instrument;
- sampling specifications (e.g., population, proxies, exclusions, sampling, exceptions);
- survey administration (e.g., timing, mode, format, exceptions);
- scoring and patient-mix adjustment, including domain-specific and composite ratings; and
- reporting instructions (e.g., data submission, analysis, timeframes).[4]

For surveys with multiple versions, such as English/Spanish or for managed care/non-managed care, the TAP and Steering Committee considered the "parent" instrument. For instruments with multiple modes or methodologies (e.g., mail and phone administration), the TAP considered data from each source. Additional data tables on quality level responses, validity, and reliability were submitted by the measure developers.

The Steering Committee provided guidance to the TAP regarding the following:

- the clarity and completeness of specifications, including definitions and instructions;
- possible unintended consequences;
- level of analysis;

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[2] On January 29, 2003, the National Quality Forum (NQF) Board of Directors adopted a policy that NQF will endorse only fully open source measures. Open source is defined by NQF as being "fully disclosed" (i.e., data elements, measure algorithm, if applicable, and risk-adjustment methods/data elements/algorithms are fully described and disclosed; if calculation requires database-dependent coefficients that change frequently, the existence of such coefficients shall be disclosed and the general frequency with which they change shall be disclosed, but the precise numerical value need not be disclosed).

[3] NQF, *National Framework for Healthcare Quality Measurement and Reporting: A Consensus Report*, Washington, DC: NQF; 2002.

[4] Of note, when considering the HCAHPS survey instrument as part of NQF's project "Additional Hospital Priority Areas, 2005," NQF Members strongly objected to advancing the instrument without all of the specifications domains lists above.

- accountability/ability to influence process or outcome; and
- inference about measurement burden.

Additionally, the Steering Committee made the following recommendations related to the evaluation of patient experience with care instruments:

- **Level of analysis.** Recognizing that the exclusion of surveys that address plan- or community-level performance in this area would leave relatively few surveys to consider, the Steering Committee agreed that, for this priority area, all candidate consensus standards should be considered, as long as the level of analysis is clearly specified.
- **Patient population.** Because a number of the candidate consensus standards address patients' experience with care for a narrowly defined population (e.g., age, insurance type, condition/disease, other respondent characteristic), the Steering Committee recommended that the TAP review all candidate measures in this area, regardless of respondent population, as long as the population is clearly defined.

Evaluation and Recommendation of Individual Survey Instruments

The members of the TAP met in person and by conference call to review nine candidate consensus standards and prepared summary tables to facilitate the Steering Committee's consideration of the TAP comments and recommendations. These comments and recommendations formed the basis of the initial deliberations of the Steering Committee, which considered the patient experience with care measures over several conference calls and during a meeting on February 7, 2007, in Washington, D.C.

1. Consumer Assessment of Healthcare Providers and Systems (CAHPS®) Clinician & Group Survey

The CAHPS Clinician & Group suite of surveys (Clinician & Group Adult Primary Care Survey, Clinician & Group Adult Specialty Care Questionnaire, and Clinician & Group Child Primary Care Questionnaire) are new instruments developed to capture patient experience with care at the provider level. The instruments were developed by AHRQ through a process developed for other CAHPS instruments that included extensive cognitive and field testing. The survey tools, administrative specifications, and results of cognitive and psychometric field tests were evaluated by the TAP, which found that the three clinician group surveys are constructed on a common platform and were developed and tested with a similar methodology (therefore, unless noted otherwise, the TAP's comments applied to all of the surveys in this group). The TAP found that the surveys are unique, address issues important to both consumers and providers, and would fill an important void in performance measurement. In addition, the TAP found that the survey questions have been extensively field tested and are valid and reliable measures of patients' experience with care.

The TAP identified several issues for each of the surveys and recommended that the resolution of these issues be a condition of advancement for potential endorsement. The Steering Committee accepted the TAP's recommendation for advancement of the surveys as contingent upon the resolution of the following issues:

Response scale. Although field testing of the surveys was conducted using a six-point response scale, the instrument submitted to NQF for consideration used a four-point scale. AHRQ agreed to finalize the instrument using a six-point scale.

Sample size. TAP members concurred that the recommended sample size of 45 completed surveys per physician was larger than necessary to achieve reliability in many instances and could render the surveys technically and/or financially unfeasible for some providers. The TAP therefore recommended that the developer precisely define how reliability varies with sample size—both for the entire survey and for individual composites—and offer guidance to those unable to attain the suggested number of completed surveys. In response to reviewers who expressed concern about the large desired sample size, the measure developer stated that the development team "settled on 45 completes because it is an adequate sample to achieve practical reporting results, while not overly burdening the clinicians participating in the survey."

Response rate. The TAP was concerned that the recommended response rate of 40 percent may be higher than necessary and may be unachievable in many cases. Several reviewers disagreed with the developer's assertion that the minimum acceptable response rate is 40 percent, citing the Massachusetts Ambulatory Care Experience Survey Project,[5] which yielded a 30 percent response rate after excluding ineligibles.

Survey administration protocols. The TAP had concerns regarding the expense and multiple process steps in the recommended survey administrative methodology. A specific administrative issue concerned the requirement that a reminder postcard be sent to non-respondents, a requirement that the TAP feared would significantly escalate cost. The developer responded that the postcard substantially improves response rates and cited evidence[6] that postcards have been shown to increase response rates by nearly 20 percent.

The Steering Committee reviewed the responses of the measure developer to the TAP's concerns and found the responses and modifications to be sufficient and thus recommended the survey instruments.

2. CAHPS Health Plan Survey v. 4.0 (CAHPS 4.0)

The CAHPS Health Plan Survey version 4.0 was submitted combined with supplemental items developed by the National Committee for Quality Assurance (NCQA). The instruments were tested together and were considered together by the TAP and Steering Committee, but were voted on as separate items, because some users may implement the CAHPS Health Plan Survey without the NCQA supplemental items.

The revised 4.0 version of the CAHPS survey builds on more than 10 years of extensive testing and application of the CAHPS Health Plan Survey. The 4.0 version has been changed somewhat to reflect the launch of the clinician group CAHPS survey, which addresses some of the provider-level questions formerly contained in CAHPS Health Plan Survey version 3.0. The current

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[5] Safran DG, Karp M, Coltin K, et al., Measuring patients' experience with individual primary care physicians: results of a statewide demonstration project. *J Gen Int Med,* 2006:21:13-21.

[6] Heje H, Vedsted P, Olesen F., A cluster-randomized trial of the significance of a reminder procedure in a patient evaluation survey in general practice., *Int J Qual Health Care,* 2006;18:232-237.

CAHPS Health Plan Survey version 4.0 has fewer questions addressing provider office issues and has expanded the number of questions addressing issues for which health plans are accountable.

The TAP and Steering Committee noted that the CAHPS survey has been in use for a decade and has gone through extensive testing and field use, providing a published track record on its use for plan comparisons and consumer information. The CAHPS Health Plan Survey has been revised to reflect the launch of the CAHPS Clinician & Group Survey and is therefore more precisely targeted to health plan accountability issues. The revision reflected in version 4.0 ensures that the tools provide complementary, not redundant, information. Both the TAP and the Steering Committee strongly recommended the CAHPS instrument due to its high validity and the strong technical support from AHRQ. However, some reviewers noted that even with the additional content areas, the survey still does not provide enough "diagnostic" information to identify the concerns of health plan members that can be addressed through quality improvement.

3. NCQA Supplemental Questions to CAHPS Health Plan Survey v. 4.0H

The NCQA supplemental items were considered as an integrated component of the CAHPS Health Plan Survey version 4.0 and can be administered only as an add-on to the AHRQ survey. The supplemental items were tested with the CAHPS instrument. The TAP noted that one composite measure would be reported differently in the NCQA version than in the CAHPS 4.0 version without the supplement, which may cause confusion. NCQA subsequently changed its instructions to align the composite measures, and the TAP and Steering Committee commended the developers for the instrument's excellent track record in field use and research testing of the instrument and recommended it highly.

4. CAHPS Child Survey v. 3.0 Children with Chronic Conditions Supplemental Questions

This survey was originally developed by the Child and Adolescent Health Measurement Institute (CAHMI), which conducted the field testing and work involved in HEDIS endorsement between 1998 and 2001. CAHMI subsequently transferred ownership to AHRQ. This survey instrument was reviewed in combination with the supplement most commonly used by health plans. Reporting on this instrument could consist of children's CAHPS core only, or core plus chronic conditions. AHRQ reported that the Child Survey version 4.0 was to be released in summer 2007 to reflect the launch of the CAHPS Clinician & Group Survey-pediatric version. This development was expected to allow the Clinician & Group Survey and the health plan survey to provide complementary information on patient experiences.

The CAHPS Child Survey with chronic condition questions has not been used extensively in the commercial sector, but it has been used in Medicaid administration at the state level. The TAP had concerns about the sample size in some important sections, including shared decisionmaking and chronic illness care, because patients must opt in for those questions, which may create a sample size problem. AHRQ reported that the surveys can be administered with a targeted sample frame to increase the probability of having an adequate sample size, or "screener" questions embedded in the instrument can be used to identify the target population of children with chronic illness.

The TAP and Steering Committee believed that the testing and field use track record of this survey and the version 4.0 update provided sufficient confidence to recommend the survey and supplemental questions strongly.

5. Experience of Care and Health Outcomes Survey ("ECHO Survey")

The ECHO Survey is part of the CAHPS family. ECHO addresses plan-level measurement in behavioral health. Results from the survey can be submitted to the CAHPS database by sponsors, but there are relatively little data because the survey has seen limited use.

The ECHO Survey was intended to supersede non-standard tools used in the behavioral health industry, but a number of non-standard surveys remain in use, and the ECHO Survey is still lightly used compared with CAHPS. Many managed behavioral health organizations (MBHOs) are already administering CAHPS and do not have resources to administer two instruments. NCQA does not require that any particular survey be used for MBHO accreditation.

The TAP and Steering Committee concurred that behavioral health appears to lag behind other fields in the availability of performance measures intended for accountability. Identifying standard instruments is a high priority because of significant morbidity and gaps in quality in behavioral health. Also, no clinician-group equivalent survey for behavioral health has been developed. A number of technical issues were identified with the ECHO Survey:

Discrimination properties. AHRQ reported that the survey has high discrimination properties for urgent care and help by phone; courtesy; wait time; communication; outcomes; privacy; access; and overall plan rating. Some of the non-discriminating factors involved medication use, cultural competency, provider ratings, other care strategies, and problems with information.

Confidentiality. Behavioral health surveys can be challenging because of confidentiality issues involved in the creation of a sample. The ECHO Survey sampling methodology is designed to protect patient confidentiality by over-sampling to include some non-eligible participants, thus protecting the confidentiality of target respondents.

Cost. Costs may be high for several reasons, including the complex sampling methodology and the fact that this survey is administered in addition to the CAHPS Health Plan Survey. AHRQ noted that the costs are comparable to CAHPS and that the cost is highest for the dual-mode method (mail followed up by mail or phone options). Costs are incurred in obtaining a sufficient response rate and are based on sample size.

Redundancy. The ECHO Survey has some overlapping issue areas with the Mental Health Statistics Improvement Program (MHSIP) survey. The developers reported that MHSIP was considered during the evolution of the ECHO Survey. Also, the ECHO Survey is considered by many to have superseded the MHSIP survey, although MHSIP is still used in some states, and the ECHO Survey has been updated regularly.

The TAP recommended the ECHO Survey because its strengths—response rates, reading level, and discrimination—were considered to be the best in the field; the survey can be completed via the Internet; the sampling strategy has a unique approach to protect patient confidentiality; and the survey has been well tested in key domains (i.e., cognitive, validity, reliability), despite the acknowledged weaknesses of cost and length.

Several reviewers expressed concerns, noting that the survey is long, some questions are not worded properly, the protocol is burdensome, the administrative costs are high, the response rate is low, and there is a lack of support for the use of this survey in the behavioral health community and a lack of use of it by NCQA for the accreditation of MBHOs.

Despite the imperfections, the TAP and Steering Committee believed that a behavioral health survey is critically needed. The ECHO Survey has been tested extensively and benefits from AHRQ maintenance and oversight and thus was recommended.

6. Promoting Healthy Development Survey (PHDS)

The PHDS was initially developed by the Foundation for Accountability (FACCT) and has been further developed, tested, and maintained by CAHMI. The two CAHMI surveys considered by the TAP—PHDS and the Young Adult Health Care Survey (YAHCS)—combine patient experience and patient/parent report on clinical conditions. The content is informed by research on what consumers want to know about their healthcare.

The CAHMI tools were developed for public reporting and accountability, with testing focused on sampling and validity issues. The instruments are specified for use at multiple levels, including community, plan, and provider group. There are slight variations in the instruments depending on the level of use, and the administrative specifications vary according to level of use. CAHMI uses a six-stage development process that includes field testing at the health plan level and psychometric testing. PHDS has had extensive office-level testing. Versions including PHDS Plus and PRO PHDS have been tested at the large group level.

The TAP and Steering Committee noted that the administration protocols for PHDS are complex, particularly given the various administration modes of the surveys—phone, mail, and Internet—and asked about the relationship between the phone PHDS Plus and the mail version of the complete PHDS. There are some overlapping issue areas with CAHPS, although the PHDS goes beyond CAHPS in some areas; the PHDS provides complementary information on clinician-level patient experience with care relating specifically to child development issues.

Other issues raised by the TAP and Steering Committee included the following:

- The survey appears to be very long (although with the skip pattern the developer reports that it can be completed in less than 20 minutes and that there is a 40 to 60 percent response rate, depending on the setting).
- The survey appears to have a high literacy/complexity level, despite cognitive testing results. The developers report that the literacy level tests at the eighth- or ninth-grade level, largely because of the use of words such as "development" that appear multiple times.
- Sampling instructions are unclear for various levels of use (provider/plan).
- The discrimination properties of the survey may vary by setting, given the sample size and response rates for each question.

The Steering Committee recommended the PHDS survey due to its importance, solid development process, and use in Medicaid programs with vulnerable populations. They noted that the survey is consistent with recommendations of the American Academy of Pediatrics and others and has high face validity, as well as extensive testing. The costs and methods are similar to those used in CAHPS, which may simplify the survey process for users. The survey is complementary to CAHPS, and could perhaps be used in a rotation with more general surveys or for measurement in vulnerable populations.

7. Young Adult Health Care Survey (YAHCS)

The Young Adult Health Care Survey was initially developed by FACCT and is maintained by CAHMI using an approach similar to that of the PHDS. The Steering Committee and TAP recommended the YAHCS because of its unique focus on adolescents and the diligent development, testing, and management process applied by CAHMI. Adolescents are often an underserved population and are difficult to reach to query about health questions. The Steering Committee observed that the YAHCS has been widely tested and has high internal consistency ratings. It is widely available on the AHRQ, National Quality Measures Clearinghouse™, and CAHMI web sites and is accompanied by appropriate administrative specifications. CAHMI also has created a benchmark database with 10,000 responses that can be used for comparisons.

The YAHCS instrument was designed for use in health plans and communities, but not at the provider level. Steering Committee members noted that the available sample for young adults may be small in health plans and that there will be a need to balance the statistical properties affecting validity with the practical elements of simply having enough people to survey. CAHMI reported that the 150 completed surveys is the completed survey rate, not the initial sample. Response rates are lowest for substance use questions, so question-level reliability may be affected if there is a low overall response rate. Composites such as "helpfulness of counseling" may be affected, since some teens opt out of that section due to lack of counseling.

CAHMI is testing methods for increasing response rates among adolescents and to reduce costs. Online and mail administration costs are comparable to CAHPS survey costs in similar modes of surveying. The online mode is much less expensive than mail, and response rates are good. There is some bias using the online approach toward positive responses.

The Steering Committee commented that the YAHCS would be used in addition to survey instruments such as CAHPS. In addition to patient experience, however, the YAHCS provides significant clinical counseling and prevention data. It was noted that there may be systematic variations in response patterns. CAHMI reports that there are systematic variations based on race, income, and other factors, but that it does not recommend applying adjustments, because these variations may actually reflect systematic differences in quality. This tool can be used to identify disparities in healthcare for adolescents.

Measures Not Recommended

The TAP reviewed two additional instruments but did not recommend them for the purposes of public reporting and accountability.

Patient Physician Assessment Module of the American Board of Internal Medicine (ABIM)

The TAP commended the ABIM for measuring patient-physician communication and for encouraging the development of quality improvement activities to improve performance in this domain. It noted that the instrument may be useful for individual feedback and quality improvement, but that it was not designed for and has not been tested for use in public reporting. The TAP, therefore, did not recommend the survey instrument.

HowsYourHealth Survey Developed at Dartmouth Medical School

TAP members commented that the *HowsYourHealth* instrument is valuable for informing collaborative care in the doctor-patient relationship. They noted that few questions address patient assessments of care, such as rating of education and information provided to the patient. Results may be challenging for public reporting, because much of the information is clinical. The web-based "all comers" strategy could also affect standard reporting, although the TAP recommended additional research on the comparability of this method with a high response rate to a standard sampling strategy.

The TAP commented that both instruments, even though not recommended, are well designed for their intended purpose, but not for public reporting. In particular it commended the *HowsYourHealth* instrument for its patient-centered approach and its positive impact on improving quality at the patient-clinician level. The TAP recommended that practices should consider offering *HowsYourHealth* as a quality improvement tool in combination with or alternating with a practice-level accountability measurement approach.

Set of Patient Experience with Care Measures

In reviewing the group of recommended patient experience with care survey instruments, the Steering Committee found that the recommended tools are complementary and may be used in a comprehensive measurement approach. Because of the cost and complexity of carrying out multiple measurement strategies and reporting the results, the Steering Committee anticipated that users may develop approaches for rotating the use of the instruments or otherwise targeting measurement efforts to best facilitate quality improvement, accountability, and public reporting.

Appendix G

Commentary
Ambulatory Surgical Centers

Introduction

The Robert Wood Johnson Foundation has identified "special settings of care, such as ambulatory surgical centers" as a priority area. Although the National Quality Forum's (NQF's) "Call for Measures" in October 2007 solicited measures from all potential settings, only 19 candidate consensus standards applicable to ambulatory surgical centers (ASCs) were submitted or identified. Notably, many of the candidates were identified by NQF staff from previously endorsed hospital surgical measures or from the clinician-level perioperative hospital measures that were at the time under consideration within the "Physician Hospital" project. The remaining measures had been developed specifically for use in ASCs by a recently convened ASC Quality Collaboration, whose mission is to promote healthcare quality and patient safety in the outpatient surgical setting.

A Technical Advisory Panel (TAP) was convened to provide preliminary review of the candidate measures and make recommendations to the Steering Committee. The ASC TAP met both in person and by conference call over a 4-month period to review and assess the 19 candidate standards. The Ambulatory Care Steering Committee subsequently considered and deliberated on the TAP's counsel, generating the recommendations summarized in the following sections.

Measures Recommended

The following three candidate ASC standards were strongly recommended for endorsement by both the TAP and the Steering Committee:

Patient burn

Prophylactic intravenous antibiotic timing

Wrong site, wrong side, wrong patient, wrong procedure, wrong implant

There was consensus that these measures address clinically important topics or unacceptable (i.e., "never") events; are clearly specified and feasible to implement; and can be linked to care processes known to positively affect outcomes in the ambulatory surgical setting. Also of import to the Committee's decision was the fact that these measures were developed specifically for use in ASCs and are applicable at the facility level.

Likewise, the Steering Committee agreed with the TAP's recommendation for endorsement of five additional ASC measures:

Patient fall

Selection of prophylactic antibiotic, first- or second-generation cephalosporin

Timing of prophylactic antibiotics, ordering physician

Timing of prophylactic antibiotics, administering physician

Discontinuation of prophylactic antibiotics, non-cardiac procedures

However, although there was broad agreement that these measures are both clinically important and well specified, there was concern that they might prove challenging to implement in a feasible manner in the ASC setting. Notably, four of these five measures (selection of prophylactic antibiotic, first- or second-generation cephalosporin; timing of prophylactic antibiotics, ordering physician; timing of prophylactic antibiotics, administering physician; discontinuation of prophylactic antibiotics, non-cardiac procedures) were submitted for consideration as clinician-level hospital measures and had been identified by NQF staff as potentially applicable to the ASC setting. The Steering Committee acknowledged that only a small percentage of the procedures listed in these measures are performed in outpatient surgical centers, yet Committee members agreed that each of the measures addresses a topic of substantial importance in surgical care—regardless of setting—for which there is significant room for improvement in performance.

It also should be noted that the TAP recommended the antibiotic discontinuation measure with some reservation. TAP members originally opined that the specified 24-hour timeframe invalidated the measure's applicability to outpatient surgical care. However, because it was ultimately agreed that there is substantial overuse of oral antibiotics following ambulatory surgical procedures, both the TAP and the Steering Committee concluded that this measure is, in fact, applicable to ASCs and would effectively address the increasingly important issue of antimicrobial resistance.

Finally, the Steering Committee recommended one measure that the TAP found problematic:

Hospital transfer/admission

Some TAP members expressed concern that this measure would provide a better assessment of an ASC's ability to select low-risk patients than of care provided. Others believed the measure should be risk-adjusted to account for the more highly complex cases routinely handled at multispecialty ASCs or should exclude pain management patients, because pain is the most common cause of hospital admission following an outpatient surgical procedure. Conversely, the majority of Steering Committee members believed the measure would encourage providers to more carefully consider which patients are truly appropriate candidates for the ASC setting and would ultimately minimize the number of unexpected hospital transfers. Thus, the Steering Committee recommended the measure.

Measures Not Recommended

The Steering Committee recommended that the remaining 10 candidate consensus standards not be further considered for endorsement within the ambulatory surgical priority area of facility-level measures:

Return to surgery/procedure within 48 hours

Unintentional retained foreign object

Death within 48 hours

Medical device failure

Correct site

Selection of intravenous antibiotic administration

Timing of intravenous antibiotic administration

Surgery patients with recommended venous thromboembolism (VTE) prophylaxis ordered

The following clinician-level measures were not recommended:

Discontinuation of prophylactic antibiotic, cardiac procedures

Perioperative VTE prophylaxis

Although it was acknowledged that these measures are both clinically and conceptually important, both the TAP and Steering Committee ultimately agreed that they are unsuitable as publicly reportable performance standards for ASCs. Concerns varied from those regarding significant potential for unintended consequences to those regarding infeasible or excessively burdensome data collection.

Research Recommendation

The Steering Committee concurred with the research recommendation formulated and advanced by the ASC TAP that additional measures specifically targeted to the ambulatory surgical setting should be developed for future endorsement consideration.

Appendix H

Commentary
Performance Measures to Address Healthcare Disparities (Local Approach)

Introduction

Addressing issues of quality within vulnerable patient populations is the overarching and highest priority within each the 23 National Quality Forum (NQF)-endorsed™ national priority areas for healthcare quality improvement.[1] Accordingly, the Robert Wood Johnson Foundation (RWJF) designated disparities as one of its two additional priority areas for the "Ambulatory Care" project, asking NQF to examine measures considered during Phases 2 and 3 through the lens of care disparities.[2] In the spring of 2006, NQF convened an 18-member Technical Advisory Panel (TAP) to engage in a systematic analysis to identify measures that highlight healthcare disparities and to endorse a set of performance measures that is "disparities sensitive" and that is comprehensive and broadly applicable in ambulatory settings. The TAP formulated a series of recommendations and guiding principles to be used in selecting measures to stratify by race, ethnicity, socioeconomic status (SES), primary language, and insurance status and in data collection, and other recommendations involving integrating the amelioration of healthcare disparities into the larger, national quality agenda.

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[1] National Quality Forum (NQF), *National Priorities for Healthcare Quality Measurement and Reporting*, Washington, DC: NQF; 2004.

[2] To date, more than 100 ambulatory care consensus standards have been endorsed.

Identifying the Set

The Healthcare Disparities TAP reviewed 149 measures that had been deemed technically sound by the other "Ambulatory Care" project TAPs by applying the criteria described below. The measures reviewed by the TAP included not only those currently endorsed by NQF, but also some that were deemed technically sound by other TAPs but that were not included because the "Ambulatory Care" project Steering Committee determined that the primary focus of ambulatory care quality and performance in this project would be at the physician practice level. Accordingly, the consensus standards endorsed to date do not include measures that are exclusively used at the plan level or the community level or population based. After applying these criteria, the TAP identified 108 measures representing all of the ambulatory care priority areas. NQF staff recommended further refinement of the set to include no more than 30 to 40 measures based on the criteria of type of measure (process, outcome, survey) and prevalence. The TAP believed that it was preferable to pursue stratification of every measure, where appropriate. However, after the Steering Committee considered the TAP's recommendations, a starter set was reconsidered and approved by the Steering Committee. The Steering Committee believed strongly that in order to implement a disparities-sensitive measure set, the initial measures needed to be limited to high-priority, high-impact areas.

Scope

The TAP did not re-evaluate technical specifications that already were deemed sound by another ambulatory care TAP. The Healthcare Disparities TAP conducted a *full* measure evaluation only on measures that had not been evaluated by a TAP. The Healthcare Disparities TAP did, however, discuss and comment on additional data elements that will be needed for implementation to collect the appropriate data for each measure.

The Ambulatory Care Steering Committee decided in February 2006 that the Healthcare Disparities TAP should not limit its review to measures that are suitable for physician practice-level accountability, but rather that the disparities-sensitive ambulatory set should encompass other levels of measurement (e.g., health plan). Because of this exception, the TAP re-examined measures that were previously excluded because of level of analysis to determine if they met the TAP's measure selection criteria. Those measures that met the selection criteria went through the standardized NQF measure evaluation process, unless the measure already had been evaluated by a TAP and been judged technically unsound.

Defining the Populations Addressed by the TAP

The TAP recognized that this project could not cover all of the possible populations that experience healthcare disparities. The populations that the TAP focused on were described as follows:

> For the purposes of the Healthcare Disparities TAP, as part of the "Ambulatory Care" project, the populations that will be addressed are healthcare disparities within: 1) gender, 2) race/ethnicity, 3) SES, 4) primary language barriers, and 5) health insurance status.

Numerous populations are affected by healthcare disparities. This does not mean to imply that it is more important to address one population over another. However, to complete the work that was tasked, it was necessary to limit the project's scope, and it was recognized that NQF should establish another project to address other populations that experience healthcare disparities. Some of these populations are rural populations, people with cognitive disabilities, people with physical disabilities, people with chronic or multiple conditions, and children, gay, lesbian, bisexual, and transgender persons.

The TAP discussed using the term "healthcare disparity populations" instead of "vulnerable populations." After a robust dialogue, the TAP decided on "healthcare disparity populations," believing that the word "vulnerable" had negative connotations and that not all populations that experience health disparities can be characterized as vulnerable. The TAP also discussed using the term "healthcare inequity." However, it was decided that this term was more applicable to issues of social justice than to issues involving healthcare.

Guiding Principles for Reviewing Candidate Consensus Standards

The TAP agreed to take the following criteria into consideration when reviewing the measures for inclusion into a set of disparities-sensitive measures.

1) Primary Criteria for Consideration

a. Prevalence

How prevalent is this disease or condition (targeted by the quality measures) in the disparity population?

b. Impact of the Condition

What is the impact of the condition (targeted by the quality measures) on the health of the disparity population—for example, mortality, quality of life, years of life lost, disability, stigma—relative to other conditions? Quality-adjusted life years is a useful metric (when available) for comparing the impact of different conditions. In addition, the strength of the evidence supporting the measure should be considered. For example, is it based on findings from several randomized controlled trials, on observational data, or simply on expert opinion? Measures backed by stronger evidence merit greater priority. What is the number needed to treat (NNT) for the intervention associated with the target condition and over what timeframe? The NNT or inverse of absolute risk reduction is a convenient way of comparing the overall impact of different interventions. Ideally, these data should be derived from studies involving members of the disparity population, but the TAP recognized that providers must rely on studies from the overall population.

c. **Impact of the Quality Process**
How strong is the evidence linking improvement in the measure to improved outcomes (e.g., mortality, quality of life, years of life lost, and disability stigma) for any group, but particularly for members of disparity populations when data are available? If the quality process is improved, what is the likely, relative impact on the healthcare outcomes for members of disparity populations? In other words, if the disparity gap were closed or quality reached a specified benchmark, how might the different measures compare in terms of impact on members of different disparity populations?

d. **Quality Gap**
How large is the gap in quality between the disparity population and the group with the highest quality for that measure? How large is the gap in quality between the disparity population and the benchmark? This is a key criterion, because it forms the justification for stratification of quality measures. Measures associated with larger gaps merit greater priority.

2) Secondary Criteria for Consideration

a. **Ease and Feasibility of Improving the Quality Process**
The NQF measure evaluation process considers whether a measure is actionable. When there is evidence that a quality process can beimproved for a healthcare disparity population at a reasonable cost, this should be taken into consideration. The evidence addresses whether a process is not being performed as frequently as necessary to improve healthcare outcomes or that an outcome can be affected positively by known processes (e.g., that all providers are not all performing in the 96 to 100 percent range and that an intervention exists to address the topic effectively).

The TAP recognized that research about disparities, and interventions to reduce them, is still in its infancy: Peer-reviewed research articles may not be available to fully address whether a disparity can be reduced at the specific measure's leverage point. Because the candidate consensus standard already has met the evidence threshold for being actionable, these criteria will merely build on the existing research, and it will be noted if there is any evidence that care can be improved for members of the healthcare disparity populations, whether an intervention exists to reduce a disparity, and whether gaps between different groups can be closed.

Recommendations

The TAP formulated a series of recommendations to advance the field toward reducing and/or eliminating healthcare disparities.

Ambulatory healthcare providers should stratify the national set and a locally determined subset of NQF-endorsed ambulatory care consensus standards, including patient experience with care instruments, by gender, race, ethnicity, SES, primary language, and insurance status.

After applying the above guiding principles, the TAP believed strongly that every NQF-endorsed ambulatory care measure was appropriate for stratification. However, the TAP suggested that until electronic health records and other information technology systems are developed and in place that will allow for this, providers should apply the same guiding principles listed above (prevalence, impact of the condition, impact of the quality process, quality gap, ease and feasibility of improving the quality process) to their practice setting in order to determine which of these measures would allow them to capture information about disparities. For example, both the prevalence of various conditions and the gap in quality differs regionally and by provider. Thus, selection of appropriate quality measures should be governed in part by local or regional data.

Collecting these data is imperative to improving quality. Quality improvement efforts at all levels of the healthcare system have been implemented for years, resulting in a dramatic increase in the quality of care in the United States. Major accrediting bodies, public and private purchasers, and health plans are all implementing quality improvement and public reporting programs to drive quality. Although most of these programs address three of the six aims outlined in the Institute of Medicine's 2001 report *Crossing the Quality Chasm* (safety, effectiveness, timeliness), very few address efficiency, equity, and patient-centeredness.[3] Stratifying measures by gender, race, ethnicity, SES, primary language, and insurance status would go a long way toward addressing the aims of equity and patient-centeredness and would further drive the quality agenda.

At the June 4, 2007, Steering Committee meeting, the Steering Committee considered the TAP's recommendations. While some Committee members supported stratifying all process and outcome measures, others believed that it would be valuable to have a list of measures that would give providers a starting point. Concern was expressed that some practices would not be able to collect the information because there is no standard way of doing so. The TAP recommended stratification for all levels of analysis; ideally that data would "roll up" from the practice to higher aggregated levels of analysis.

The Committee reviewed the TAP's finding again during a conference call. NQF staff prepared a draft report of the disparities deliberations and recommendations based on the TAP and Committee discussions for the Committee's review. Additionally, the Committee was advised that the project funder, RWJF, was concerned with the lack of a smaller set of measures for focusing on disparities and that the creation of such a set had been its expectation for the project. As a result, it was determined that a two-pronged approach would be used—a national set of 32 measures and a local approach that involves identifying the disparities particular to the location of a provider.

Committee members noted that using these two approaches would involve the global approach of using principles to guide measurement to identify disparities, as well as the practical guidance of identifying the place to start through the use of a "starter set." Committee members noted that cholesterol management is an area in which disparities have been identified for both gender and race/ethnicity and should be included in the starter set. The Committee also agreed that the recently endorsed Clinician & Group CAHPS® patient experience with care instrument should be added to the starter set.

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[3] Institute of Medicine, *Crossing the Quality Chasm: A New Health System for the 21st Century,* Washington, DC: National Academy Press; 2001.

NQF should endorse the Agency for Healthcare Research and Quality (AHRQ) Prevention Quality Indicators (PQIs). The indicators should be stratified by gender, race, ethnicity, SES, primary language, and insurance status in order to obtain an accurate snapshot of the health status of a community.[4] The AHRQ PQIs should be used by healthcare providers to determine the health of the communities they serve and should be used to assist with determining what ambulatory care measures should be stratified by gender, race, ethnicity, SES, primary language, and insurance status to determine healthcare disparities in their practices.

The 14 AHRQ PQIs were initially determined to be unsuitable for the "Ambulatory Care" project because they are community-level measures and not designed for public reporting and accountability at the provider level. However, the AHRQ PQIs measure potentially avoidable hospitalizations for ambulatory care-sensitive conditions. The indicators rely on hospital discharge data and are intended to reflect issues of access to high-quality ambulatory care in a system of care. Because the indicators are meant to reflect access to high-quality ambulatory care, stratifying the data would allow providers to see disparities in the care their collective health systems are providing to the community and identify unmet needs. In particular, patients who are uninsured may not readily access care or be identified through performance measures based on health plan data. Thus, community-level measures will facilitate the inclusion of measures of uninsured patients' access to primary care.

The TAP believed that PQIs would create a needed link between healthcare providers and overall community health. Providers could use community-level measures to assess the health of the areas in which they practice and obtain regional health information from the areas in which their patients reside. This information should be used to help determine which performance measures should be stratified by gender, race, ethnicity, SES, primary language, and insurance status.

The TAP believed strongly that NQF should pursue endorsement around community-level measures aimed at the pediatric population. Unfortunately, only one of the AHRQ Pediatric Indicators (PDIs) is applicable to pediatric populations (Low Birth Weight, 0 to 28 days). However, there are five area-level AHRQ PDIs that the TAP believed should be considered for endorsement by NQF in a future consensus project:[5]

- Asthma admission rate (PDI 14)
- Diabetes short-term complication rate (PDI 15)
- Gastroenteritis admission rate (PDI 16)
- Perforated appendix admission rate (PDI 17)
- Urinary tract infection admission rate (PDI 18)

During the Steering Committee deliberations, members noted that these community-level measures had not been previously endorsed. Additionally, the Committee suggested that the recommendation be amended to state that all clinicians should be aware of the performance on these measures in their community and use the information to evaluate their own practices. The Committee questioned why these measures do not include children or adolescents and suggested going back to AHRQ to ask for comparable pediatrics measures.

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[4] Agency for Healthcare Research and Quality (AHRQ), *Prevention Quality Indicators Overview.* AHRQ Quality Indicators; July 2004.

[5] Ibid.

Ambulatory healthcare providers should stratify NQF-endorsed patient experience with care surveys by gender, race, ethnicity, SES, primary language, and insurance status.

The TAP agreed with the current literature that indicates that both the concepts of healthcare disparities and patient experience and satisfaction with care contribute to the domain of patient-centered care.[6] The degree to which these areas overlap is still debated, but it is clear that vulnerable populations are disproportionately affected by problems in receiving patient-centered, culturally competent care. Using existing patient experience with care instruments (e.g., the NQF-endorsed HCAHPS measure) and either enhancing them with specific questions and/or analyzing the data by special population could provide a way to assess patients' perspectives on what constitutes culturally competent care. Alternatively (or additionally), separate standardized patient (and organizational) instruments may be needed. Patient experience with care surveys are important tools for quality improvement for healthcare organizations because they can identify relative strengths and weaknesses in a provider's performance from the patient's perspective to determine where improvement is needed. If this information is stratified by race, ethnicity, SES, primary language, and health literacy, it could provide a way to assess how patients' perspectives differ about the same provider based on their gender, race, ethnicity, SES, primary language, and insurance status. It would allow providers to implement targeted interventions to improve performance. The TAP noted that currently, not all of the surveys contain questions to capture the needed information. Although the provider can collect this information on his or her own and link it to the survey data, the questions need to be incorporated into the existing surveys for easier implementation. The section that follows on best practices for the stratification and implementation of consensus standards provides additional information on what variables should be collected and how to collect the information.

The Steering Committee agreed that patient experience with care is an important area in which to measure disparities. The Committee noted that many surveys do not include the needed questions for capturing the information and that providers will have to collect that information at intake and link it to the survey.

To drive improvement, addressing healthcare disparities must be fully integrated into the overarching national quality agenda. National and local healthcare quality efforts and activities should adopt the specific goal of eliminating disparities in healthcare quality.[7] Measure developers, NQF, government agencies, health plans, and healthcare providers all play important roles in reducing healthcare disparities.

Although the need for quality improvement and performance measurement is no longer questioned, the TAP believed strongly that the elimination of healthcare quality disparities must move in concert with the national quality movement or risk becoming marginalized. Efforts to improve healthcare quality must be aimed at not only reducing medical errors and improving patient safety, but also at ensuring equitable treatment for all. Thus, healthcare quality measurement and reporting strategies that do not address the health needs of

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[6] Ngo-Metzger Q, Telfair J, Sorkin DH, et al., *Cultural Competency and Quality of Care: Obtaining the Patient's Perspective,* The Commonwealth Fund; October 2006.

[7] This recommendation is from NQF's 2002 publication *Improving Healthcare Quality for Minority Patients.*

disparate patient populations neglect a significant and growing portion of the U.S. population and ignore one of the main domains of quality outlined by IOM.[8]

The TAP discussed the potential roles many participants striving to improve healthcare quality could play:

Healthcare providers and practitioners. Providers and practitioners should become aware of the national and local issues regarding the various disparity populations they serve. Providers and practitioners should stratify appropriate consensus standards by gender, race, ethnicity, SES, primary language, and insurance status. This information can be used for internal quality improvement and to implement targeted interventions to close any gaps in their practices.

Health plans and health systems. Health plans and health systems can provide incentives for practitioners and providers within their organizations to identify and target performance for disparities populations without penalizing safety net providers. Health plans and systems should gather data on gender, race, ethnicity, SES, primary language, and insurance status to better understand the populations they serve and assess whether their members are being treated equitably.

Federal government agencies. Agencies such as the Centers for Medicare & Medicaid Services (CMS), AHRQ, and the Health Resources and Services Administration (HRSA), should continue to fund new research and measure development focusing on ways to close the healthcare disparities gap and provide leadership in reporting national performance through the lens of addressing disparities.

Measure developers.[9] Although these measures and recommendations are important as an initial step, alone they will not eliminate healthcare quality disparities. New measures should be developed for the express purpose of identifying and reducing healthcare quality disparities, and the data should be stratified to collect and track this information. By and large, these measures also would be applicable to all patients and could therefore be integrated into the broader measure sets that are applied to the general population. In fact, isolating new, disparities-specific measures from the mainstream measure sets would make successful implementation of any new measures unlikely and also would undermine efforts to unify the general and healthcare disparities quality movements.

Additionally, measure developers should stratify the measures they develop during the testing phase by gender, race, ethnicity, SES, primary language, and insurance status. The results should be analyzed so that it can be determined if a measure captures disparate care at a leverage point. Stratification should be part of the routine process of measure development.

Health information technology community. In *Crossing the Quality Chasm*, IOM linked automated information management as a fundamental need for achieving a healthcare system that is recentered to focus on the patient. Likewise, the healthcare quality community has long recognized that such electronic information systems are a critical factor in providing data for measures of healthcare quality. Additionally, the systems should be designed to capture specific demographic data that can be linked to the clinical data. The following recommendations regarding integrating demographic

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[8] IOM, *Crossing the Quality Chasm: A New Health System for the 21st Century,* Washington, DC: National Academy Press; 2001.

[9] This recommendation is from NQF's *Improving Healthcare Quality for Minority Patients.*

information into electronic information systems should be pursued:

- Engage the health information technology community and encourage collaboration with those conducting research on how to collect data on gender, race, ethnicity, SES, primary language, and insurance status electronically.
- Mandate that the collection of these data be incorporated into electronic health record vendor certification to ensure they can be collected when systems are implemented.
- Ensure that clinical data and related performance measures can be linked to the demographic information and reported as stratified by those variables.
- Employ innovative strategies to support healthcare providers who serve large numbers of members of healthcare disparity populations in acquiring health information technology that supports quality improvement. A notable example is the decision by New York City to assist community providers and Medicaid managed care companies in better sharing patient health information to improve the quality of care.[10]

The National Quality Forum—NQF can better integrate the reduction of healthcare disparities into its priority areas by taking the following steps:

Disparities-sensitive criteria - At the onset of future NQF projects in which quality measures are reviewed, the disparities-sensitive criteria should be considered and applied when reviewing all candidate consensus standards.

NQF measure submission - Measure developers should provide the following information when submitting their measures to NQF:

- whether the measure can be used to detect disparities;
- whether the measure *has not been used* to detect disparities to date; and
- any current research that indicates that a healthcare disparity is present in that measurement domain, disease/condition.

Measure developers also should report findings, when available, stratified by gender, race, ethnicity, SES, primary language, and insurance status.

Stratifying measures by gender, race, ethnicity, SES, primary language, and insurance status requires additional data collection variables and methodologies that are reliable, valid, and patient centered and that ensures the privacy and confidentiality of the patient. IOM's report *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care* found that racial and ethnic minorities often receive lower quality of care than their white counterparts, even after controlling for factors such as insurance, SES, comorbidities, and stage of presentation.[11] The TAP was presented with a large body of evidence that documents the finding that disparities persist in the services delivered to racial and ethnic minority patients throughout the healthcare system. TAP members discussed the fact that there is no consensus around a methodology to collect the data necessary to stratify by gender, race, ethnicity, SES, primary language, and insurance status. Although collecting any personal health information is sensitive,

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[10] *Community Health Electronic Health Record Exchange (CHEX): A HEAL NY Proposal by PCIP.* Available at www.nyc.gov/html/doh/html/pcip/pcip-ehr.shtml. Last accessed September 2007.

[11] IOM, *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care,* Washington, DC: National Academies Press; 2003.

unique challenges exist when that information is linked with extensive demographic information.

The following are practices that should be used when collecting this information:

Potential Best Practices for Preparing the Patients for the Questions

- After hearing presentations by various experts in the field, the TAP concluded that when collecting data to stratify consensus standards by gender, race, ethnicity, SES, primary language, and insurance status, primary data collection is the preferred method. When this method is not available, indirect collection through geocoding, surname analysis, and Bayesian estimation can be used for many of these measures. The indirect methodology is best applied to population-based assessments of quality of care and should not be used to target interventions for individual patients.[12]
- Provide adequate training for all staff involved in the collection of demographic data to ensure that the collection process is respectful, patient centered, and culturally competent.
- Provide assurances to the patients about the use and release of their demographic information. The provider must take the appropriate precautions between balancing the ease of access to and interoperability of the data across quality reporting entities with the need to ensure patient confidentiality throughout the process of the de-identification of the data and reporting. Providers also must fully inform the patients that their demographic information will be released only on a "need-to-know" basis, and that the information will be used at the organizational level to ensure high-quality care for all patients. Individual providers, provider groups, hospitals, and health plans may transfer the de-identified data to accomplish this goal.
- Provide a rationale at the time of collection (before asking a patient to provide his or her racial and ethnic background) that explains why gender, race, ethnicity, SES, primary language, and insurance status information are being collected and that emphasizes that data are being collected to monitor the quality of care that everyone receives.[13,14,15]

Potential Best Practices for Asking a Patient About His or Her Race and Ethnicity[16]

Consensus still needs to be developed around precisely how best to collect data on gender, race, ethnicity, SES, primary

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[12] Fiscella K, Fremont AM. Use of geocoding and surname analysis to estimate race and ethnicity, *Health Serv Res,* 2006;41(4):1482-1500.

[13] The HRET Disparities Initiative conducted focus groups to determine the best way to explain to patients why the data were being collected. They found that explaining the rationale to patients before asking them to provide information about their racial and ethnic backgrounds proved to be the most effective method. The HRET project found the following phrasing to be most effective: "We want to make sure that all our patients get the best care possible, regardless of their race or ethnic background. We would like you to tell us your race or ethnic background so that we can review the treatment that all patients receive and make sure that everyone gets the highest quality of care."

[14] Baker DW, Cameron KA, Feinglass J, et al., Patients' attitudes toward health care providers collecting information about their race and ethnicity, *J Gen Intern Med*, 2005;20(10):895-900.

[15] Hasnain-Wynia R, Baker DW, Obtaining data on patient race, ethnicity, and primary language in health care organizations: current challenges and proposed solutions. *Health Serv Res,* 2006;41(4 Pt 1):1501-1518.

[16] Collecting and reporting race, ethnicity, and primary language data are legal and permitted under Title VI of the Civil Rights Act of 1964.

language, and insurance status. The TAP recommended more research and the development of consensus regarding the best methods for collecting these measures, with particular emphasis on measures of Latino ethnicity combined with methods for racial identification among Latino respondents. There is a large body of research available to draw upon to inform the consensus process, but until consensus is reached the following preferred practices should be endorsed by NQF as preferred practices:[17,18]

- Data on race and ethnicity should be collected at the most granular level possible, based on an assessment of the local population served by healthcare providers. Those granular categories should be designed to allow for aggregation to the broader Office of Management and Budget (OMB) categories, which facilitates national comparisons of performance and promotes adherence to several reporting requirements.
- Data on race and ethnicity should be collected using two questions, adhering to OMB standards—one for ethnicity and another for race—with as many response categories as dictated by local circumstances, while allowing for aggregation to the OMB categories.[19] The minimum OMB categories for race are American Indian or Alaska Native; Asian; Black or African American; Native Hawaiian or Other Pacific Islander; and White. The minimum OMB categories for ethnicity are Hispanic or Latino and Not Hispanic or Latino. Hispanics and Latinos may be of any race.
- When only a single question or response category is available that does not allow for the collection of ethnicity and race as separate questions, data can be collected with one question using the following categories:
  - African American/Black
  - Asian
  - Caucasian/White
  - Hispanic/Latino/White
  - Hispanic/Latino/Black
  - Hispanic/Latino/Declined
  - Native American
  - Native Hawaiian/Pacific Islander
  - Multiracial
  - Declined
  - Unavailable/Unknown

Potential Best Practices for Asking a Patient About His or Her SES

SES is a good predictor of access to healthcare and should be assessed by providers. Some examples of how this currently is being collected can be found by looking at the California Health Interview Survey (CHIS),[20] the Current Population Survey (CPS),[21] or the National Health and

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[17] HRET, A *Toolkit for Collecting Race, Ethnicity, and Primary Language Information from Patients.* Available at www.hretdisparities.org/. Last accessed December 2007.

[18] The HRET Disparities Initiative conducted multiple studies to determine the best way to explain the collection of these data from patients. They found the categories listed to be the most reliable and valid.

[19] U.S. Census Bureau, Population Division, Special Population Staff, *Racial and Ethnic Classifications Used in Census 2000 and Beyond.* Available at www.census.gov/population/www/socdemo/race/racefactcb.html. Last accessed July 2007.

[20] UCLA Center for Health Policy Research. *California Health Interview Survey.* Available at www.chis.ucla.edu/. Last accessed December 2007.

[21] U.S Census Bureau. *Current Population Survey.* Available at www.bls.census.gov/cps/tp/tp63.htm. Last accessed May 2007.

Nutrition Examination Survey (NHANES).[22] At a minimum, the following questions should be asked:

- What is your best estimate of your household's total annual income from all sources before taxes last year?
- Including yourself, how many people living in your household are supported by your total household income?
- How many of these people are children under the age of 18?

Health literacy is difficult to assess without administering a Test of Functional Health Literacy in Adults (TOFHLA) or a Rapid Estimate of Adult Literacy (REALM). The TOFHLA assesses not only reading comprehension, but also how well patients comprehend real healthcare situations presented to them as examples. In its original form, it has 50 items; a shortened version contains 17 items. However, even the shortened version could prove to be too time consuming. It is not practical to administer the TOFHLA at intake; it should be administered at other points during care. However, although health literacy is more than education level, assessing the highest level of school completed in addition to other SES and language assessments can prove to be an adequate proxy. Therefore, if implementing the TOFHLA is not possible, at a minimum, providers should collect the highest level of school completed from patients as a proxy for health literacy.

Primary language should be collected by using the following series of questions:[23]

- What language would you feel most comfortable speaking with your doctor or nurse (Patient's Primary Language)?
- How would you rate your ability to speak and understand English?
- In which language would you feel most comfortable reading medical or healthcare instruction?
- How satisfied are you with your ability to read English?
- Would you like to have a professional interpreter present for your doctor's visit?

Potential Best Practices for Asking a Patient About His or Her Insurance Status

Insurance status should be collected by using a series of questions asking about the patient's health insurance coverage in the past calendar year, the type of insurance, and the amount of coverage. An example of how this information currently is being collected is found in the Annual Social and Economic Supplement (ASEC) to the U.S. Census Bureau Current Population Survey.[24] The following questions should be used when assessing a patient's insurance status:

- At any time in <year>, (were you/was anyone in this household) covered by a health insurance plan provided through (your/their) current or former employer or union?
- Who in this household were policyholders?

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- Did (your/names) former or current employer or union pay for all, part, or none of the health insurance premium?
- At anytime during <year>, (were you/was anyone in this household) covered by a health insurance plan that (you/they) purchased directly from an insurance company, that is, not related to current or past employment?
- At any time in <year>, (were you/was anyone in this household) covered by the health plan of someone who does not live in this household?
- At any time in <year>, (were you/was anyone in this household) covered by Medicare?
- At any time in <year>, (were you/was anyone in this household) covered by Medicaid/(enter state name)?
- If applicable, how many months during <year>, (were/was) (you/name) covered by Medicaid/(enter local name)?
- In (state), the (enter state CHIP program name) program (also) helps families get health insurance for children. (Just to be sure) Were any of the children in this household covered by that program?
- I have recorded that (you/name) (were/was) | (person 1) not covered by a health plan at any time during | (person 2) <year>. Is that correct?

Additional Implementation Considerations and Unintended or Adverse Consequences

The TAP recognized that collecting sensitive information such as gender, race, ethnicity, SES, primary language, and insurance status can lead to unintended or adverse consequences and increases the data collection burden for providers. Examples include measures that might penalize safety net providers based on factors that are beyond their control or based on measures that are potentially confounded by patient characteristics. The use of such measures could promote the practice of providers selecting and/or deselecting patients to improve performance on quality measures. Steps also should be taken to monitor changes in enrollment/disenrollment for health plans and health systems by members of healthcare disparity populations. Additionally, a risk-adjustment methodology should not be applied to structure and process measures that are entirely within the healthcare provider's control. However, risk-adjustment may be necessary for outcome measures that are not always within providers' control, such as re-admission rates and length of stay. Any disparity for outcome measures will become apparent after the measure is stratified.

The TAP also noted the clear statistical and methodological limitations involved in assessing individual physician or practice performance. In some cases, physician offices with electronic health records may not even have the data variables available to them to collect the information. These limitations are magnified when small samples are stratified by membership in a healthcare disparity population. The use of disparity measures at the physician or practice level should be encouraged for the purposes of internal quality improvement, and when appropriate, public reporting. Additionally, data collection burden will be added at intake to collect the information needed to stratify the data. Although some of the data will need to be collected only once (e.g., race/ethnicity, gender), some of the information will need to be collected every year (e.g., SES, health literacy, insurance status).

The TAP also encouraged the use of pay-for-performance measures that take into account the need for greater resources for practices or healthcare systems that care for members of healthcare disparity populations with greater needs. Examples of these resources include the urgent need for adequate health information technology, the need for reimbursement schemes that account for the increased amount of time needed to serve many members of these populations, and the need for language translation and outreach services.

Appendix I

Selected References

The following list of references summarizes the evidence considered and reviewed during the screening, evaluation, and selection of measures for the National Quality Forum-endorsed™ voluntary consensus standards. Evidence includes literature that supports a measure's responsiveness to the evaluation criteria (importance, scientific acceptability, usability, and feasibility).

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Appendix J

Consensus Development Process: Summary

The National Quality Forum (NQF), a voluntary consensus standards setting organization, brings together diverse healthcare stakeholders to endorse performance measures and other standards to improve healthcare quality. Because of its broad stakeholder representation and formal Consensus Development Process (CDP), NQF-endorsed™ products have special legal standing as voluntary consensus standards. The primary participants in the NQF CDP are NQF member organizations, which include:

- consumer and patient groups;
- healthcare purchasers;
- healthcare providers, professionals, and health plans; and
- research and quality improvement organizations.

Any organization interested in healthcare quality measurement and improvement may apply to be a member of NQF. Membership information is available on the NQF web site, www.qualityforum.org.

Members of the public with particular expertise in a given topic also may be invited to participate in the early identification of draft consensus standards, either as technical advisors or as Steering Committee members. In addition, the NQF process explicitly recognizes a role for the general public to comment on proposed consensus standards and to appeal healthcare quality consensus standards endorsed by NQF. Information on NQF projects, including information on NQF meetings open to the public, is posted at www.qualityforum.org.

Each project NQF undertakes is guided by a Steering Committee (or Review Committee) composed of individuals from each of the four critical stakeholder perspectives. With the assistance of NQF staff and technical advisory panels and with the ongoing input of NQF Members, a Steering Committee conducts an overall assessment of the state of the field in the particular topic area and recommends a set of draft measures, indicators, or practices for review, along with the rationale for proposing them. The proposed consensus standards are distributed for review and comment by NQF Members and non-members.

Following the comment period, a revised product is distributed to NQF Members for voting. The vote need not be unanimous, either within or across all Member Councils, for consensus to be achieved. If a majority of Members within each Council do not vote approval, staff attempts to reconcile differences among Members to maximize agreement, and a second round of voting is conducted. Proposed consensus standards that have undergone this process and that have been approved by all four Member Councils on the first ballot or by at least two Member Councils after the second round of voting are forwarded to the Board of Directors for consideration. All products must be endorsed by a vote of the NQF Board of Directors.

Affected parties may appeal voluntary consensus standards endorsed by the NQF Board of Directors. Once a set of voluntary consensus standards has been approved, the federal government may utilize it for standardization purposes in accordance with the provisions of the National Technology Transfer and Advancement Act of 1995 (P.L. 104-113) and the Office of Management and Budget Circular A-119. Consensus standards are updated as warranted.

For this report, the NQF CDP, version 1.7, was in effect. The complete process can be found at www.qualityforum.org.

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