NATIONAL QUALITY FORUM

National Voluntary Consensus Standards for Ambulatory Care: An Initial Physician-Focused Performance Measure Set

A CONSENSUS REPORT

A Note from the National Quality Forum

The science and public policy that suport healthcare performance measurement evolve swiftly, and quality measures must keep up with the times. This is especially true with ambulatory care performance measurement, which has been the subject of a significant amount of policy attention in recent months.

The National Quality Forum's (NQF's) 'Standardizing Ambulatory Care Performance Measures' project is a multiyear, multistage endeavor that seeks consensus on standardized measures of outpatient care performance measurement and reporting. The work comprises three phases:

Phase 1 (2004)

In May 2004, NQF convened a workshop of its Members to identify priority areas for ambulatory care quality measurement and reporting. The 10 areas identified through this process were heart disease, diabetes, hypertension, obesity, asthma, prevention, depression, medication management, patient experience with care, and coordination of care.[1]

Phase 2 (2005)

To address an urgent need for physician-focused ambulatory care consensus standards, the NQF Board of Directors approved a request from the Centers for Medicare and Medicaid Services (CMS) for expedited review[2] of a predefined set of "physician-focused" ambulatory care

[1] National Quality Forum (NQF), *Improving the Quality of Ambulatory Care Quality: Workgroup Meeting Summary*, Washington, DC: NQF; 2004. Available at www.qualityforum.org/members/ambulatoryCare_docs/txmtgsummaryambulatoryFINALcolor.pdf. Last accessed April 2006.

[2] An expedited process differs from a regular consensus process in that the measures for review are a predetermined set, and "competing" measures are not considered.

measures from CMS, the National Committee for Quality Assurance, and the American Medical Association's Physician Consortium for Performance Improvement. This initial set of ambulatory care consensus standards is the result of that work. Unlike other NQF consensus reports, this report is being published only in electronic format. **This report, and the measure specifications endorsed in it, will be superseded by subsequent sets that currently are being reviewed under the NQF Consensus Development Process in Phase 3. Some of these new measures will be available in May 2006.**

Phase 3 (2005-2008)

NQF is seeking consensus on a broad set of performance measures for ambulatory care in many priority areas. Phase 3 is proceeding in the following four cycles:[3]

Cycle 1 – Priority areas: asthma/respiratory illness; hypertension; medication management; obesity; prevention, immunization, and screening; and care coordination.

Cycle 2 – Priority areas: behavioral health; heart disease; diabetes; bone/joint conditions; and prenatal care.

Cycle 3 – Priority areas: specialty and subspecialty care and special settings of care; patient experience with care; and efficiency.

Cycle 4 – Development of composite measures.

[3]The disparities priority area, which was selected by the project's funder, the Robert Wood Johnson Foundation, will be applied across all cycles.

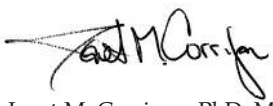
Foreword

Each year, more than a billion visits are made to physician offices and clinics of various types. The care delivered in these office and clinic settings—known as ambulatory or outpatient care—is central to health-care delivery. However, despite the importance of ambulatory care, there are few agreed-upon measures specifically aimed at measuring the quality of care in this setting.

This report details 42 standardized performance measures that should facilitate the evaluation and comparison of the quality of care provided in ambulatory care settings. These measures have been carefully reviewed and endorsed by a diverse group of stakeholders pursuant to the National Quality Forum's (NQF's) formal Consensus Development Process, giving them the special legal status of voluntary consensus standards.

The primary purpose of these NQF-endorsed™ voluntary consensus standards is to drive quality improvement via accountability and public reporting and to assist consumers and others in identifying providers who deliver high-quality ambulatory care. The standards also may be used by ambulatory care providers for internal quality improvement efforts and by purchasers, policymakers, researchers, and regulators for their various purposes.

We thank the Standardizing Ambulatory Care Performance Measures Review Committee and its Technical Advisory Panels, as well as NQF Member organizations, for their work with this project and for their collective commitment to improving the quality of ambulatory care in the United States.



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Executive Summary

More than a billion visits to physician offices and hospital outpatient and emergency departments take place each year. However, although ambulatory (outpatient) care embraces a wide range of health conditions, services, and care settings—and is the primary site in the United States where patients receive care—there are few agreed-upon quality measures specifically aimed at measuring the performance of outpatient care providers.

The top 10 priority areas for standardized performance measures for ambulatory care were identified by National Quality Forum (NQF) Members in a May 2004 NQF workshop. Following the workshop, the Centers for Medicare and Medicaid Services (CMS) requested that NQF consider for endorsement an initial set of national voluntary consensus standards for physician-focused ambulatory care quality, based on those priority areas and additional areas subsequently added by CMS, to address the huge lack of information about physician performance.

This NQF report details the 42 NQF-endorsed™ consensus standards for ambulatory care.[1] They are intended for physician-level accountability, including public reporting, in the following seven priority areas:

- asthma/respiratory illness;
- behavioral health;
- bone conditions;

[1] An additional nine ambulatory consensus standards for public reporting have been endorsed as part of *National Voluntary Consensus Standards for Adult Diabetes Care—2005 Update.* See appendix E for details.

- heart disease;
- hypertension;
- prenatal care; and
- prevention, immunization, and screening.

Consistent with other endorsed consensus standards, these measures were evaluated for importance, scientific evidence, usability, and feasibility, and they have been deliberated through the NQF Consensus Development Process. The measure set is derived from the national ambulatory care performance measurement activities of CMS, the National Committee for Quality Assurance, and the American Medical Association's Physician Consortium for Performance Improvement.

In addition to the NQF-endorsed consensus standards, two recommendations describing guiding principles and operational considerations for implementation were endorsed.

National Voluntary Consensus Standards for Ambulatory Care

PRIORITY AREA	MEASURE
Asthma/Respiratory Illness	■ Asthma assessment ■ Use of appropriate medications for people with asthma ■ Asthma: pharmacologic therapy ■ Appropriate treatment for children with upper respiratory infection ■ Appropriate testing for children with pharyngitis
Behavioral Health	■ Optimal practitioner contacts for medication management ■ Effective acute phase treatment ■ Effective continuation phase treatment
Bone Conditions	■ Osteoarthritis: assessment for use of anti-inflammatory or analgesic over-the-counter medications ■ Osteoarthritis: functional and pain assessment
Heart Disease (Coronary Artery Disease)	■ Symptoms and activity assessment ■ Cholesterol screen ■ Lipid profile ■ Drug therapy for lowering LDL cholesterol ■ Cholesterol control ■ LDL cholesterol level ■ Antiplatelet therapy ■ Beta blocker treatment after a heart attack ■ Beta blocker therapy – prior myocardial infarction ■ Angiotensin converting enzyme inhibitor (ACE inhibitor)/angiotensin receptor blocker (ARB) therapy ■ Smoking cessation and smoking cessation intervention
Heart Disease (Heart Failure)	■ Left ventricular function assessment ■ Weight measurement ■ Assessment of clinical symptoms of volume overload ■ Assessment of activity level ■ Beta blocker therapy ■ ACE inhibitor/ARB therapy ■ Warfarin therapy for patients with atrial fibrillation
Hypertension	■ Plan of care ■ Controlling high blood pressure
Prenatal Care	■ Anti-D immune globulin ■ Screening for human immunodeficiency virus
Prevention, Immunization, and Screening	■ Tobacco use and tobacco cessation ■ Advising smokers to quit, discussing smoking cessation medication, and discussing smoking cessation strategies ■ Discussing urinary incontinence and receiving urinary incontinence treatment ■ Flu shot for older adults and flu shot for adults ages 50-64 ■ Influenza vaccination ■ Pneumonia vaccination ■ Childhood immunization status ■ Breast cancer screening ■ Colorectal cancer screening ■ Cervical cancer screening

National Voluntary Consensus Standards for Ambulatory Care: An Initial Physician-Focused Performance Measure Set

Introduction

In the United States, patients receive care primarily in the ambulatory (outpatient) setting, with more than a billion visits to physician offices and hospital outpatient and emergency departments each year.[1] However, even though the ambulatory care setting is where most healthcare services are delivered, there are few agreed-upon quality measures specifically aimed at measuring the performance of outpatient care providers.

Ambulatory care embraces a wide range of health conditions, services, and care settings. In May 2004, the National Quality Forum (NQF) conducted a workshop with its Members to identify priority areas for which standardized performance measures for ambulatory care should be endorsed. The 10 priority areas identified at the workshop were patient experience with care; coordination of care; asthma; prevention (primary and secondary, including immunization); medication management; heart disease; diabetes; hypertension; depression; and obesity.[2]

As public reporting of hospital, nursing home, and home health care quality has been implemented nationally,[3] the lack of information about the quality of physician performance in the ambulatory care setting

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

[2] This workshop was supported by a grant from the Robert Wood Johnson Foundation. For details on the workshop's findings, visit www.qualityforum.org/members/ambulatoryCare_docs/txmtgsummaryambulatoryFINALcolor.pdf. Last accessed January 2006.

[3] See www.cms.hhs.gov/QualityInitiativesGenInfo. Last accessed January 2006.

has emerged as a huge gap that must be remedied. To address this need, the Centers for Medicare and Medicaid Services (CMS) requested that NQF endorse a set of national voluntary consensus standards for physician-focused ambulatory care quality.

National Voluntary Consensus Standards for Ambulatory Care

This report presents 42 national voluntary consensus standards for ambulatory care, including evidence-based performance measures in the following 7 priority areas:[4]

- asthma/respiratory illness;
- behavioral health;
- bone conditions;
- heart disease;
- hypertension;
- prenatal care; and
- prevention, immunization, and screening.

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 endorsed nine measures for public reporting in *National Voluntary Consensus Standards for Adult Diabetes Care—2005 Update*.[5] The specifications are included in appendix E. NQF has completed or is currently working on separate projects relevant to various healthcare settings, patient safety issues, and patient conditions. For example, *A National Framework*

[4] The National Quality Forum's (NQF's) activities in ambulatory care are proceeding in phases. The workshop constituted phase I of this work; this report represents the culmination of phase II. Additional work began in mid-2005 to address the remaining priority areas, which will become phase III.

[5] NQF's diabetes work has been conducted as a separate project, even though much diabetes care is performed in the outpatient setting. The full report on NQF's diabetes work will be made available at www.qualityforum.org.

for Healthcare Quality Measurement and Reporting,[6] provides a standardized framework for identifying voluntary consensus standards for healthcare quality and articulates guiding principles and priorities for healthcare quality improvement.

National Priorities for Healthcare Quality Measurement and Reporting[7] identifies priorities applicable to ambulatory care, including reducing disparities. Other priorities involve care coordination and communication; patient safety (including medication management); and healthcare conditions (asthma, depression, hypertension, ischemic heart disease, hypertension, obesity, tobacco dependence, and pregnancy, childbirth, and newborn care).

Serious Reportable Events in Healthcare identifies 27 serious adverse events (e.g., surgery performed on the wrong patient, infant discharged to the wrong person) that NQF believes should be reported by all licensed healthcare facilities.[8] Some of these reportable events are consistent with ambulatory consensus standards, such as "serious death or disability associated with a medication error" and "patient death associated with a fall while being cared for in a healthcare facility." Similarly, *Safe Practices for Better Healthcare* describes 30 healthcare "safe practices"[9] that should be universally used to reduce the risk of harm resulting from processes, systems, or environments of care. Among the practices are several relevant to outpatient care including "ensure that written documentation of the patient's preference for life-sustaining treatment is prominently displayed in his or her chart" and "standardize the methods for packaging, labeling and storing medications."

National Voluntary Consensus Standards for Hospital Care: An Initial Performance Measure Set[10] identifies several measures pertaining to the prescription of medications (aspirin, beta blockers, and angiotensin converting enzyme inhibitors or angiotensin receptor blockers) at discharge for acute myocardial infarction (AMI) and other follow-up strategies, including smoking cessation counseling for patients with AMI, heart failure, and pneumonia. The effectiveness of these care processes in improving the outcomes for patients requires coordination of care and follow-through in the outpatient setting.

The full constellation of consensus standards, along with those endorsed in this report, provide a growing number of NQF-endorsed™ voluntary consensus standards that directly and indirectly reflect the importance of measuring and improving quality of care in the outpatient setting. Organizations that adopt these consensus standards will promote the development of safer and higher-quality care for patients throughout the nation.

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

[7] NQF, *National Priorities for Healthcare Quality Measurement and Reporting: A Consensus Report,* Washington, DC: NQF; 2004.

[8] NQF, *Serious Reportable Events in Healthcare: A Consensus Report,* Washington, DC: NQF; 2002.

[9] NQF, *Safe Practices for Better Healthcare: A Consensus Report,* Washington, DC: NQF; 2003.

[10] NQF, *National Voluntary Consensus Standards for Hospital Care: An Initial Performance Measure Set,* Washington, DC: NQF; 2003.

Identifying the Set

An NQF Review Committee[11] (appendix C) established the initial approach to evaluating potential consensus standards. This approach included defining a specific purpose for the performance measures and screening candidate measures through the application of standardized measure evaluation criteria (appendix D). This report defines "physician-focused" measures as "measures of healthcare delivery system performance to which a physician makes a significant contribution."

Purpose

The purpose of this set of physician-focused, 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, and health centers.

Scope

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

- apply to individual physicians, physician offices, and physician groups;
- are suitable for physician-level accountability;
- reflect those aspects of care over which physicians have control;
- are derived from all data sources;
- are fully developed and precisely specified; and
- are fully open source.[12]

The intended scope of this initial set of "physician-focused" consensus standards is that it should be able to attribute performance at the individual practitioner level, and this should include non-physician practitioners. Specifically, the term "physician focused" is used to spotlight the traditional office practice setting, which may include a variety of practitioners. Furthermore, physicians are responsible for all the activities within an office practice, including group structure; members of the practice; collaboration with all practitioners in the practice; and concurrent care management.

Priority Areas for Measurement

As noted earlier, NQF convened a workshop of its Members to identify 10 priority areas for ambulatory care quality measurement and reporting. The consensus standards for this initial set do not include measures in all of the previously identified

[11] The set of ambulatory consensus standards was approved by the NQF Board of Directors under the expedited consensus process. The expedited consensus process adheres to the NQF's Consensus Development Process (version 1.7), but there is no "Call for Measures." Under expedited consensus, the body that evaluates a candidate measure(s) and makes recommendations to NQF Members is designated a Review Committee (rather than a Steering Committee).

[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, measurement algorithms), 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.

priority areas. Additionally, CMS requested that two more areas be included for consideration in the initial set (bone conditions and prenatal care). Future NQF work will address all priority areas for ambulatory care.

Criteria for Selection of Consensus Standards

Measures were evaluated based on the criteria endorsed by NQF, as derived from the work of the NQF Strategic Framework Board (box A).[13,14,15,16] These criteria were applied to candidate measures from the national ambulatory care performance measurement activities of CMS, the National Committee for Quality Assurance (NCQA), the American Medical Association's Physician Consortium for Performance Improvement (AMA PCPI), and a subset of the Prevention Quality Indicators (PQIs) from the Agency for Healthcare Research and Quality (AHRQ) that addresses "ambulatory care-sensitive conditions."

The NQF-Endorsed Voluntary Consensus Standards for Physician-Focused Ambulatory Care

The NQF-endorsed voluntary consensus standards for physician-focused ambulatory care encompass 42 measures[17] that will facilitate efforts to improve the quality of care delivered in the outpatient setting. These measures are intended for physician-level accountability, including public reporting. Table 1 presents brief descriptions of each measure. Because consensus standards must be consistently specified to meet the goal of standardization, detailed specifications are provided in appendix A.

[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] *A National Framework for Healthcare Quality Measurement and Reporting.*

[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,* Washington, DC; 2004.

[17] Of note, the 42 consensus standards include 4 "paired measures" (individual measures that theoretically could have been approved singly, but were recommended for NQF endorsement only if both were approved and used as a unit) and 1 "measure triad" (3 measures were approved and must be implemented as a unit).

Box A – Criteria for Evaluation and Selection

Proposed measures were evaluated for their suitability based on four sets of standardized criteria (e.g., 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 measure was 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, 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. 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 decision making.
   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.

Recommendations

In addition to the NQF-endorsed consensus standards, two recommendations to accompany the set were identified.

Guiding Principles for Implementation

To achieve uniform implementation of the consensus standards, the implementing organization or entity—for example, large purchasers, health plans, and accrediting and certifying bodies—should establish implementation rules that address the following:

- the data that are available to define the physician, physician-office, or physician group patient population;
- sampling techniques;
- attribution of responsibility for the care process or outcome being measured (individual or shared; single provider or multiple providers);
- data collection for providers that are unable to use the data source indicated in the measure specifications (e.g., administrative data specification for uninsured patients who do not have claims); and
- information that accompanies public reporting of the measure results.

Additional Implementation Considerations

NQF should pursue further discussion, analysis, and consideration of several implementation issues:

- the impact of measures using administrative data on physician practices that deal with large numbers of uninsured patients, who may not generate claims data, which includes a disproportionate number of minority patients and patients who are lower on the socio-economic scale;
- comparability of data from different data sources; and
- the burden of manual medical record review compared to review using automated data sources.

Acknowledgments

This work was conducted under a subcontract from CMS (subcontract NQF SS-MD-08) with the Delmarva Foundation for Medical Care.

Table 1 – National Voluntary Consensus Standards for Physician-Focused Ambulatory Care

TOPIC	MEASURE	IP OWNER
Asthma/Respiratory Illness		
Asthma Assessment	Percentage of patients who were evaluated during at least one office visit for the frequency (numeric) of daytime and nocturnal asthma symptoms[1]	AMA PCPI*
Use of Appropriate Medications for People with Asthma	Percentage of patients who were identified as having persistent asthma during the year prior to the measurement year and who were dispensed a prescription for either an inhaled corticosteroid or acceptable alternative medication during the measurement year[2]	NCQA#
Asthma: Pharmacologic Therapy	Percentage of all patients with mild, moderate, or severe persistent asthma who were prescribed either the preferred long-term control medication (inhaled corticosteroid) or an acceptable alternative treatment[1]	AMA PCPI*
Appropriate Treatment for Children with Upper Respiratory Infection (URI)	Percentage of patients who were given a diagnosis of URI and were not dispensed an antibiotic prescription on or three days after the episode date[2]	NCQA#
Appropriate Testing for Children with Pharyngitis	Percentage of patients who were diagnosed with pharyngitis, prescribed an antibiotic, and received a group A streptococcus test for the episode[2]	NCQA#
Behavioral Health		
Optimal Practitioner Contacts for Medication Management	Percentage of patients who were diagnosed with a new episode of depression and treated with antidepressant medication and had at least three follow-up contacts with a primary care practitioner or mental health practitioner coded with a mental health diagnosis during the 84-day (12-week) Acute Treatment Phase[2]	NCQA#
Effective Acute Phase Treatment	Percentage of patients who were diagnosed with a new episode of depression and treated with antidepressant medication and remained on an antidepressant drug during the entire 84-day (12-week) Acute Treatment Phase[2]	NCQA#
Effective Continuation Phase Treatment	Percentage of patients who were diagnosed with a new episode of depression and treated with antidepressant medication and remained on an antidepressant for at least 180 days (6 months)[2]	NCQA#
Bone Conditions		
Osteoarthritis: Assessment for Use of Anti-inflammatory or Analgesic Over-the-Counter (OTC) Medications	Percentage of patient visits with an assessment for use of anti-inflammatory or analgesic OTC medications[1]	AAOS/AMA PCPI*
Osteoarthritis: Functional and Pain Assessment	Percentage of patient visits with assessment for function and pain[1]	AAOS/AMA PCPI*
Heart Disease		
Coronary Artery Disease (CAD): Symptoms and Activity Assessment	Percentage of patients with CAD who were evaluated for both level of activity and anginal symptoms during one or more office visits[1]	AMA PCPI*/ ACC/AHA
CAD: Cholesterol Screen	Percentage of patients discharged from the hospital after acute myocardial infarction (AMI), coronary artery bypass graft (CABG), and percutaneous transluminal coronary angioplasty (PTCA), within the measurement year receiving at least one LDL-C screening[3]	NCQA#
CAD: Lipid Profile	Percentage of patients with CAD who received at least one lipid profile (or ALL component tests)[1]	AMA PCPI*/ ACC/AHA

Table 1 – National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

TOPIC	MEASURE	IP OWNER
Heart Disease *(continued)*		
CAD: Drug Therapy for Lowering LDL Cholesterol	Percentage of patients with CAD who were prescribed a lipid-lowering therapy (based on current ACC/AHA guidelines)[1]	AMA PCPI*/ ACC/AHA
CAD: Cholesterol Control	Percentage of patients discharged from the hospital after AMI, CABG, and PTCA within the measurement year with LDL-C test results <130mg/dL and <100mg/dL[3]	NCQA #
CAD: LDL Cholesterol level	Percentage of patients with most recent LDL cholesterol <130mg/dl and <100 mg/dL[1]	CMS
CAD: Antiplatelet Therapy	Percentage of patients with CAD who were prescribed antiplatelet therapy[1]	AMA PCPI*/ ACC/AHA
CAD: Beta Blocker Treatment after a Heart Attack	Percentage of patients hospitalized with an AMI during the measurement year who were prescribed beta blocker therapy[3]	NCQA #
CAD: Beta Blocker Therapy-Prior Myocardial Infarction (MI)	Percentage of patients with prior MI at any time who were prescribed beta blocker therapy[1]	AMA PCPI*/ ACC/AHA
CAD: Angiotensin Converting Enzyme (ACE) Inhibitor/Angiotensin Receptor Blocker (ARB) Therapy	Percentage of patients with coronary artery disease who also have diabetes and/or LVSD who were prescribed ACE inhibitor or ARB therapy[1]	AMA PCPI*/ ACC/AHA
Measure Pair		
A CAD: Smoking Cessation	Percentage of patients with CAD disease who were queried one or more times about cigarette smoking[1]	AMA PCPI*/ ACC/AHA
B CAD: Smoking Cessation Intervention	Percentage of patients with CAD identified as cigarette smokers who received smoking cessation intervention[1]	AMA PCPI*/ ACC/AHA
Heart Failure (HF): Left Ventricular Failure (LVF) Assessment	Percentage of patients with HF with quantitative or qualitative results of LVF assessment recorded[1]	AMA PCPI*/ ACC/AHA
HF: Weight Measurement	Percentage of patient visits for patients with HF with weight measurement recorded[1]	AMA PCPI*/ ACC/AHA
HF: Assessment of Clinical Symptoms of Volume Overload	Percentage of patient visits or patients with HF with assessment of clinical symptoms of volume overload (excess)[1]	AMA PCPI*/ ACC/AHA
HF: Assessment of Activity Level	Percentage of patient visits or patients with HF with assessment of activity level[1]	AMA PCPI*/ ACC/AHA
HF: Beta Blocker Therapy	Percentage of patients with HF who also have left ventricular systolic dysfunction (LVSD) who were prescribed beta blocker therapy[1]	AMA PCPI*/ ACC/AHA
HF: ACE Inhibitor/ARB Therapy	Percentage of patients with HF who also have LVSD who were prescribed ACE inhibitor or ARB therapy[1]	AMA PCPI*/ ACC/AHA
HF: Warfarin Therapy for Patients with Atrial Fibrillation	Percentage of patients with HF who also have paroxysmal or chronic atrial fibrillation who were prescribed warfarin therapy[1]	AMA PCPI*/ ACC/AHA

Table 1 – National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

TOPIC	MEASURE	IP OWNER
Hypertension		
Plan of Care	Percentage of patient visits during which either systolic blood pressure (BP) ≥140 mm Hg or diastolic BP ≥90 mm Hg, with documented plan of care for hypertension[1]	AMA PCPI*/ ACC/AHA
Controlling High Blood Pressure (BP)	Percentage of patients with last BP <140/90 mm Hg[1]	CMS/NCQA#
Prenatal Care		
Anti-D Immune Globulin	Percentage of D (Rh) negative, unsensitized patients who received anti-D immune globulin at 26-30 weeks gestation[1]	AMA PCPI*
Screening for Human Immunodeficiency Virus (HIV)	Percentage of patients who were screened for HIV infection during the first or second prenatal care visit[1]	AMA PCPI*
Prevention, Immunization, and Screening		
Measure Pair		
A Tobacco Use	Percentage of patients who were queried about tobacco use one or more times during the two-year measurement period[1]	AMA PCPI*
B Tobacco Cessation	Percentage of patients identified as tobacco users who received cessation intervention during the two-year measurement period[1]	AMA PCPI*
Measure Triad		
A Advising Smokers to Quit	Percentage of patients who received advice to quit smoking[4]	NCQA#
B Discussing Smoking Cessation Medication	Percentage of patients whose practitioner recommended or discussed smoking cessation medications[4]	NCQA#
C Discussing Smoking Cessation Strategies	Percentage of patients whose practitioner recommended or discussed smoking cessation methods or strategies[4]	NCQA#
Measure Pair		
A Discussing Urinary Incontinence	Percentage of patients who reported having a problem with urine leakage in the last six months and who discussed their urine leakage problem with their current practitioner[4]	NCQA#
B Receiving Urinary Incontinence Treatment	Percentage of patients who reported having a problem with urine leakage in the last six months and discussed it with their current practitioner and who received treatment for their current urine leakage problem[4]	NCQA#
Measure Pair		
A Flu Shot for Older Adults	Percentage of patients age 65 and over who received an influenza vaccination[4]	CMS/NCQA#
B Flu Shot for Adults Ages 50-64	Percentage of patients age 50-64 who received an influenza vaccination[4]	
Influenza Vaccination	Percentage of patients who received an influenza vaccination[1]	AMA PCPI*
Pneumonia Vaccination	Percentage of patients who ever received a pneumococcal vaccination[1]	CMS/NCQA
Childhood Immunization Status	Percentage of patients who turned 2 years old during the measurement year who had four DTaP/DT, three IPV, one MMR, three H influenza type B, three hepatitis B and one chicken pox vaccine (VZV) by the time period specified and by the child's second birthday[3]	NCQA#

Table 1 – National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

TOPIC	MEASURE	IP OWNER
Prevention, Immunization, and Screening *(continued)*		
Breast Cancer Screening	Percentage of women who had a mammogram during the measurement year or year prior to the measurement year[3]	CMS/NCQA#
Colorectal Cancer Screening	Percentage of patients who had appropriate screening for colorectal cancer[3]	NCQA#
Cervical Cancer Screening	Percentage of women who received one or more Pap tests during the measurement year or the two years prior to the measurement year[3]	NCQA#

DATA SOURCE

[1] Electronic Health Record System, retrospective record review, or prospective flow sheet

[2] Administrative data

[3] Administrative data and/or administrative plus record review

[4] Patient survey

Appendix A

Specifications of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care

The following table summarizes the detailed specifications for each of the National Quality Forum (NQF)-endorsed™ physician-focused ambulatory care consensus standards. All information presented has been derived directly from measure sources/developers without modification or alteration (except when the measure developer agreed to such modification during the NQF Consensus Development Process) and is current as of October 2005.

All NQF-endorsed voluntary consensus standards are open source, meaning they are fully accessible and disclosed. References to related risk-adjustment methodologies and definitions are provided to assure openness and transparency.

Issues regarding any NQF-endorsed consensus standard (e.g., modifications to specifications, emerging evidence) may be submitted to NQF for review and consideration via the "Implementation Feedback Form" found at www.qualityforum.org/implementation_feedback.htm. NQF will transmit this information to the measure developers and/or compile it for consideration in updating the measure set.

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care

ASTHMA AND RESPIRATORY ILLNESS

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Asthma assessment	AMA PCPI*#	Patients who were evaluated during at least one office visit during the reporting year for the frequency (numeric) of daytime and nocturnal asthma symptoms* *To be counted in calculations of this measure, symptom frequency must be numerically quantified. Measure also may be met by physician documentation or patient completion of an asthma assessment tool/survey/ questionnaire. Assessment tools may include the QualityMetric Asthma Control Test™ NAEPP Asthma Symptoms and Peak Flow Diary	All patients ages 5-40 years with asthma Patient selection: ICD-9-CM Codes for asthma: 493.00-493.92; *and* CPT Codes for patient visit: 99201-99205, 99212-99215, 99241-99245, 99354-99355, 99383-99385, 99393-99395, 99401-99404; *and* Patient's age is between 5 and 40 years	None	Electronic Health Record System (EHRS), retrospective paper medical records, prospective flow sheet
Use of appropriate medications for people with asthma	NCQA+#	Dispensed at least one prescription for inhaled corticosteroids, nedocromil, cromolyn sodium, leukotriene modifiers or methylxanthines during the measurement year NCQA provides a list of NDC Codes on its web site, www.ncqa.org	All patients 5 to 56 years as of December 31 of the measurement year with persistent asthma. The measure should be reported in three age stratifications and as a combined rate: 5-to 9-year-olds, 10- to 17-year-olds, and 18- to 56-year-olds, and as a combined rate. The combined rate is the sum of the three numerators divided by the sum of the three denominators Step 1: Identify patients as having persistent asthma who met at least one of the four criteria below, during both the measurement year and the year prior to the measurement year (criteria need not be the same across years): ■ at least one emergency department (ED) visit based on CPT Codes: 99281-99285 and UB-92 Codes: 0450, 0451, 0452, 0459, 0981 with asthma ICD-9 Code 493 as the principal diagnosis	The following exclusions are mandatory: Exclude from the eligible population all patients diagnosed with emphysema or chronic obstructive pulmonary disease (COPD) any time prior to December 31 of the measurement year as identified by the following codes: Emphysema ICD-9 codes (492, 506.4, 518.1, 518.2) COPD ICD-9 codes (491.2, 493.2, 496, 506.4)	Visit and pharmacy encounter data or claims

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

ASTHMA AND RESPIRATORY ILLNESS (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Use of appropriate medications for people with asthma *continued*			■ at least one acute inpatient discharge based on CPT Codes (99221-99223, 99231-99233, 99239, 99251,99255, 99261-99263,99291, 99292, 99356, 99357) and UB-92 Revenue Codes (010X-016X,020X-022X, 072X, 080X, 0987) with asthma as the principal diagnosis ■ at least four outpatient asthma visits based on CPT Codes (99201-99205, 99211-99215, 99217-99220, 99241-99245, 99271-99275) UB-92 Revenue Codes (0456, 0510, 0515-0517, 0520, 0521, 0523, 0526, 076X, 0770, 0779, 0982, 0983, 0988) with asthma as one of the listed diagnoses and at least two asthma medication dispensing events. Meds: inhaled corticosteroids, nedocromil, cromolyn sodium, leukotriene modifiers or methylxanthines and long-acting, inhaled beta-2 agonists in combination with one of the previously named medications ■ at least four asthma medication dispensing events (i.e., an asthma medication was dispensed on four occasions). Meds: Cromolyn sodium, inhaled corticosteroids, leukotriene modifiers, methylxanthines, nedocromil, and long-acting, inhaled beta-2 agonists in combination with one of the previously named medications Step 2: For a patient identified as having persistent asthma because of at least four asthma medication-dispensing events, where leukotriene modifiers were the sole asthma medication dispensed, the patient must: meet any one of the other three		

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

ASTHMA AND RESPIRATORY ILLNESS (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Use of appropriate medications for people with asthma *continued*			criteria in Step 1, or have at least one diagnosis of asthma in any setting in the same year as the leukotriene modifier (i.e., measurement year or year prior to the measurement year)		
Asthma: pharmacologic therapy All patients ages 5-40 years with mild, moderate, or severe persistent asthma	AMA PCPI*#	Patients who were prescribed *either* the preferred long-term control medication (inhaled corticosteroid) or an acceptable alternative treatment (leukotriene modifiers, cromolyn sodium, nedocromil sodium, or sustained-released methylxanthines) (drug list available at www. ama-assn.org/ama/pub/category/4837.html)	All patients ages 5-40 years with mild, moderate, or severe *persistent* asthma Patient selection: ICD-9-CM Codes for asthma: 493.00-493.92; *and* Additional individual medical record review must be completed to identify those patients with mild, moderate, or severe *persistent* asthma; *and* Patient's age is between 5 and 40 years	Documentation of patient reason(s) for not prescribing either the preferred long-term control medication (inhaled corticosteroid) or an acceptable alternative treatment	EHRS, retrospective paper medical records, prospective flow sheet
Appropriate treatment for children with upper respiratory infection (URI)	NCQA+#	Dispensed prescription for antibiotic medication on or within three days after the episode date Antibiotic Medications/Prescriptions: drug list is available NCQA provides a list of NDC Codes on its web site, www.ncqa.org	Children age 3 months as of July 1 of the year prior to the measurement year to 18 years as of June 30 of the measurement year who had an outpatient visit with only a diagnosis of non-specific URI during the intake period Follow the steps below to identify the eligible population: Step 1: Identify all patients in the specified age range who during the 12-month intake period had a claim/encounter with only a diagnosis of URI and an outpatient visit code (see codes below) Step 2: Determine all URI episode dates. For each patient identified in step 1, determine all outpatient episode dates	None	Visit and pharmacy encounter data or claims

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

ASTHMA AND RESPIRATORY ILLNESS (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Appropriate treatment for children with URI *continued*			Step 3: Test for negative medication history. Exclude episode dates where a new or refill prescription for an antibiotic medication was filled 30 days prior to the episode date or was active on the episode date Step 4: Calculate the measure denominator. This measure examines one eligible episode per patient. Select the first eligible episode for each patient during the measurement intake period that meets all criteria for inclusion in the denominator Codes to identify URI: Acute nasopharyngitis (common cold): ICD-9: 460, and URI unspecified site: ICD-9: 465 Codes to identify outpatient visits: Evaluation and Management Codes—office or other outpatient service, CPT (99201-99205, 99211-99215, 99217-99220, 99241-99245, 99271-99275, 99381-99385, 99391-99395) After hours and non-emergency urgent care UB-92: 0456 Clinic UB-92: 51X Freestanding clinic UB-92: 52X Professional fees-outpatient services UB-92: 0982 Professional fees-clinic UB-92: 0983 Codes to identify ED visits UB-92 Type of Bill Codes: 13X, 43X AND UB-92 Revenue Codes: 0450, 0451, 0452, 0459, 0981 or CPT Code: 99281-99285		

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

ASTHMA AND RESPIRATORY ILLNESS (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Appropriate testing for children with pharyngitis	NCQA[+#]	A group A strep test (see below) administered in the seven-day period from three days prior to the first eligible episode date through three days after the first eligible episode date Codes to identify group A streptococcus tests antigen detection: by enzyme immunoassay: CPT Codes (87430); LOINC (6556-5, 6557-3, 6558-1, 6559-9, 18481-2, 31971-5) by nucleic acid: CPT Codes (87650-87652); LOINC (5036-9) by direct optical observation: CPT (87880) by throat culture: CPT Codes (87081, 87070-87071); LOINC (626-2, 11268-0, 11475-1, 17656-0)	Children age 2 years as of July 1 of the year prior to the measurement year to 18 years as of June 30 of the measurement year who had an outpatient visit with only a diagnosis of pharyngitis during the intake period and were prescribed an antibiotic for that episode of care Follow the steps below to identify the eligible population: Step 1: Identify all patients in the specified age range who during the 12-month intake period had an outpatient visit with only a diagnosis of pharyngitis. See codes below. Exclude claims/ encounters with more than one diagnosis Step 2: Determine all pharyngitis episode dates. For each member identified in step 1, determine all outpatient episode dates Step 3: Determine if antibiotics were prescribed for any of the episode dates. For each episode date with a qualifying diagnosis, determine if antibiotics were prescribed on or three days after the episode date. Exclude episode dates if the member did not receive antibiotics on or three days after the episode date Step 4: Test for negative medication history. Exclude episode dates where a new or refill prescription for an antibiotic medication was filled 30 days prior to the episode date, or where a prescription filled more than 30 days prior to the episode date was active on the episode date	None	Visit and pharmacy encounter data or claims

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

ASTHMA AND RESPIRATORY ILLNESS (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Appropriate testing for children with pharyngitis *continued*			Step 5: Calculate the measure denominator. This measure examines one eligible episode per patient. When calculating the final measure denominator, select the first eligible episode for each member during the measurement intake period that meets all criteria for inclusion in the denominator ICD-9-CM Codes to identify pharyngitis, acute or unspecified pharyngitis: 462 Acute tonsillitis: 463 Streptococcal tonsillitis: 034.0 CPT Codes to identify outpatient visits: Evaluation and Management Codes—office or other outpatient services: 99201-99205, 99211-99215, 99217-99220, 99241-99245, 99271-99275, 99381-99385, 99391-99395 UB-92 Codes to identify outpatient visits: After-hours non-emergency urgent care: 0456 Clinic: 051X Freestanding clinic: 052X Professional fees-outpatient services: 0982 Professional fees-clinic: 0983 Codes to identify ED visits: Type of Bill Codes: 13x, 43X AND UB-92, Revenue Codes: 0450, 0451, 0452, 0459, 0981, or CPT Codes 99281-99285 Antibiotic medication: NCQA provides a list of NDC Codes on its web site, www.ncqa.org		

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

BEHAVIORAL HEALTH

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Antidepressant medication management: optimal practitioner contacts for medication management	NCQA[+#]	Three or more outpatient follow-up visits or intermediate treatment with a practitioner (at least one of which is a prescribing practitioner) within 84 days (i.e., within the 12-week acute treatment phase) after a new diagnosis of major depression. All three follow-up visits are expected to be for mental health. Two of the three follow-up visits must be face to face. Case management services should not be counted toward this measure Identify all patients in the denominator population who had: ■ three face-to-face follow-up office visits or intermediate treatment with practitioner within 84 days (12 weeks) after the index episode start date, or ■ two face-to-face visits and one telephone visit with either a non-mental health or mental health practitioner within 84 days (12 weeks) after the index episode start date Do not count the Index Episode Start Date visit in cases in which the patient had two visits with a secondary diagnosis of depression. The second visit with a secondary diagnosis of depression may be included toward the optimal contacts rate. Emergency room visits do not count toward the numerator. To identify visits with mental health providers, use any of the codes below. To identify non-mental health providers, use the psychiatric codes below or the evaluation and management codes below in conjunction with a mental health diagnosis or telephone visit codes below in conjunction with a mental health diagnosis code	Patients 18 years and older as of April 30 of the measurement year diagnosed with a new episode of major depressive disorder during the intake period (i.e., during the 12 months ending the 120th day of the measurement year) and treated with antidepressant medication Follow the steps below to identify the eligible population: Step 1: Identify all patients with a diagnosis of depression who, during the 12-month intake period, had at least one principal diagnosis of major depression in any setting or at least two secondary diagnoses of major depression on different dates of service in any outpatient setting or at least one secondary diagnosis of major depression associated with any inpatient discharge Step 2: Determine the index episode start date and test for negative diagnosis history. For each patient identified in step 1, determine the Index episode start date by finding the date of patient's earliest encounter during the intake period with a qualifying major depression diagnosis. Identify patients who were diagnosed with a new episode of depression. Patients with a new episode of depression are those who have a negative diagnosis history. Patients with any diagnosis of depression within the previous 120 days of Index episode start date should be dropped from this denominator Step 3: Identify patients receiving antidepressant medication therapy. Among patients identified in step 2, find those who filled a prescription for an	None	Visit and pharmacy encounter data or claims

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

BEHAVIORAL HEALTH (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Antidepressant medication management: optimal practitioner contacts for medication management *continued*		Codes to identify follow-up visits: Psychiatric Visit Codes: CPT Codes (90801, 90802, 90804-90819, 90821-90824, 90826-90829, 90845, 90847, 90849, 90853, 90857, 90862, 90870, 90871, 90875, 90876) UB-92 (0513, 0900, 0901, 0905-0907, 0909-0916, 0961) Evaluation and Management Codes: CPT Codes (99201-99205, 99211-99215, 99241-99245, 99341-99345, 99347-99350, 99384-99387, 99394-99397, 99401-99404); *and* one of the following ICD9-CM Codes (290, 293-302, 306-316) Telephone visits: CPT Codes (99371-99373); *and* One of the following ICD9-CM Codes (290, 293-302, 306-316) There must be verification that at least one of the three follow-up visits was with a prescribing provider (this may be the telephone visit). Patients that did not receive a follow-up visit within the 12-week acute phase follow-up period with a prescribing practitioner are not counted in the numerator for optimal practitioner contact rate	antidepressant medication within 30 days before the Index episode start date to 14 days on or after the index episode start date Step 4: Identify the prescription date: Identify the earliest prescription up to 30 days before the index episode start date to 14 days on or after the index episode start date. Prescriptions may be up to 30 days before the index episode start date to account for patients having a recurrent episode who may be started on medication based on a phone encounter while awaiting a scheduled office visit. Similarly, prescriptions may be 14 days on or after the index episode start date to account for either clinical discretion in recommending a 2-week trial of self-help techniques prior to starting on medication or for patient delay in filling the initial prescription Step 5: From the resulting patients from step 4, confirm the new episode by testing for a negative medication history. Patients who have antidepressant prescriptions filled during the negative medication history period do not represent new treatment episodes and must be excluded Step 6: Exclude patients who had an acute mental health or substance abuse inpatient stay during the 245 days after the index episode start date treatment period using the following codes Codes to identify mental health inpatient services: DRGs 424-432 except discharges with ICD-9 principal diagnosis of 317-319 or ICD-9 Principal Diagnosis Codes 290, 293-302, 306-316		

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

BEHAVIORAL HEALTH (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Antidepressant medication management: optimal practitioner contacts for medication management *continued*			Codes to identify chemical dependency inpatient services: DRGs: 433, 521-523 or ICD-9 Principal Diagnosis Codes: 291-292, 303-305, 960-979 with a secondary diagnosis of chemical dependency Codes to identify major depressive disorder: ICD-9 Codes (296.2, 296.3, 298.0, 300.4, 309.1, 311) DRG (426) Prior Depressive Episodes ICD-9 Codes: (296.2-296.9, 298.0, 300.4, 309.0, 309.1, 309.28, 311) DRG (426)* Exclude patients with this code if the principle diagnosis is 301.12		
Antidepressant medication management: effective acute phase treatment	NCQA[+#]	An 84-day (12-week) acute treatment of antidepressant medication Identify all patients in the denominator population who filled a sufficient number of separate prescriptions/refills of antidepressant medication treatment to provide continuous treatment for at least 84 days The continuous treatment definition allows gaps in the medication treatment up to a total of 30 days during the 84-day period. Allowable medication changes or gaps include: "washout" period gaps to change medication, and "treatment" gaps to refill the same medication Regardless of the number of gaps, the total gap days may be no more than 30 days. Any combination of gaps may be counted. The total gap days may not exceed 30 days	Patients 18 years and older as of April 30 of the measurement year diagnosed with a new episode of major depressive disorder during the intake period (i.e., during the 12 months ending the 120th day of the measurement year) and treated with antidepressant medication Follow the steps below to identify the eligible population: Step 1: Identify all patients with a diagnosis of depression who, during the 12-month intake period, had: at least one principal diagnosis of major depression in any setting or at least two secondary diagnoses of major depression on different dates of service in any outpatient setting or at least one secondary diagnosis of major depression associated with any inpatient discharge	None	Visit and pharmacy encounter data or claims

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

BEHAVIORAL HEALTH (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Antidepressant medication management: effective acute phase treatment *continued*		To determine the continuity of treatment during the 84-day period, sum the number of gap days to the number of treatment days for a maximum of 114 days For all prescriptions filled within 114 days of the index prescription date, treatment days should be counted from the index prescription date and continue to count until a total of 84 treatment days has been established. Patients whose gap days exceed 30 or who do not have 84 treatment days within the 114 days after the index prescription date are not counted in the numerator The types of antidepressant medications included in this measure are: ■ Tricyclic antidepressants (TCAs) and other cyclic antidepressants ■ Selective serotonin reuptake inhibitors (SSRIs) ■ Monoamine oxidase inhibitors (MAOIs) ■ Serotonin-norepinepherine reuptake inhibitors (SNRIs) ■ Other antidepressants NCQA provides a list of NDC Codes on its web site, www.ncqa.org	Step 2: Determine the index episode start date and test for negative diagnosis history. For each patient identified in step 1, determine the index episode start date by finding the date of patient's earliest encounter during the intake period with a qualifying major depression diagnosis. Identify patients who were diagnosed with a new episode of depression. Patients with a new episode of depression are those who have a negative diagnosis history. Patients with any diagnosis of depression within the previous 120 days of index episode start date should be dropped from this denominator Step 3: Identify patients receiving antidepressant medication therapy. Among patients identified in step 2, find those who filled a prescription for an antidepressant medication within 30 days before the index episode start date to 14 days on or after the Index episode start date Step 4: Identify the prescription date: Identify the earliest prescription up to 30 days before the index episode start date to 14 days on or after the index episode start date. Prescriptions may be up to 30 days before the Index episode start date to account for patients having a recurrent episode who may be started on medication based on a phone encounter while awaiting a scheduled office visit. Similarly, prescriptions may be 14 days on or after the index episode start date to account for either clinical discretion in recommending a 2-week trial of self-help techniques prior to starting on medication or for member delay in filling the initial prescription		

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

BEHAVIORAL HEALTH (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Antidepressant medication management: effective acute phase treatment *continued*			Step 5: From the resulting patients from step 4, confirm the new episode by testing for a negative medication history. Patients who have anti-depressant prescriptions filled during the negative medication history period do not represent new treatment episodes and must be excluded Step 6: Exclude patients who had an acute mental health or substance abuse inpatient stay during the 245 days after the index episode start date treatment period using the following codes Codes to identify mental health inpatient services: DRGs 424-432 except discharges with ICD-9 principal diagnosis of 317-319 or ICD-9 Principal Diagnosis Codes 290, 293-302, 306-316 Codes to identify chemical dependency inpatient services: DRGs: 433, 521-523 or ICD-9 Principal Diagnosis Codes: 291-292, 303-305, 960-979 with a secondary diagnosis of chemical dependency Codes to identify major depression: ICD-9 Codes (296.2, 296.3, 298.0, 300.4, 309.1, 311) DRG (426) Prior Depressive Episodes ICD-9 Codes (296.2-296.9, 298.0, 300.4, 309.0, 309.1, 309.28, 311) DRG (426) Exclude patients with this code if the principle diagnosis is 301.12		

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

BEHAVIORAL HEALTH (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Antidepressant medication management: effective continuation phase treatment	NCQA[+#]	A 180-day treatment of antidepressant medication. Identify all patients in the denominator population who filled a sufficient number of separate prescriptions/refills of antidepressant medication treatment to provide continuous treatment for at least 180 days The continuous treatment definition allows gaps in medication treatment up to a total of 51 days during the 180-day period. Allowable changes or gaps include: a "washout" period gap to change medication and "treatment" gaps to refill the same medication Regardless of the number of gaps, the total gap days may be no more than 51 days. Any combination of gaps may be counted. Total gap days may not exceed 51 days To determine continuity of treatment during the 180-day period, sum the number of allowed gap days to the number of treatment days for a maximum of 231 days; identify all prescriptions filled within the 231 days of the index prescription date Treatment days from the Index Prescription Date should be counted and continue to count until a total of 180 treatment days has been established. Patients whose gap days exceed 51 days or who do not have 180 treatment days within 231 days after the index prescription date are not counted in the numerator	Patients 18 years and older as of April 30 of the measurement year diagnosed with a new episode of major depressive disorder during the intake period (i.e., during the 12 months ending the 120th day of the measurement year) and treated with antidepressant medication Follow the steps below to identify the eligible population: Step 1: Identify all patients with a diagnosis of depression who, during the 12-month intake period, had at least one principal diagnosis of major depression in any setting or at least two secondary diagnoses of major depression on different dates of service in any outpatient setting or at least one secondary diagnosis of major depression associated with any inpatient discharge Step 2: Determine the index episode start date and test for negative diagnosis history. For each patient identified in step 1, determine the Index episode start date by finding the date of member's earliest encounter during the intake period with a qualifying major depression diagnosis. Identify members who were diagnosed with a new episode of depression. Members with a new episode of depression are those who have a negative diagnosis history. Patients with any diagnosis of depression within the previous 120 days of index episode start date should be dropped from this denominator	None	Visit and pharmacy encounter data or claims

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

BEHAVIORAL HEALTH (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Antidepressant medication management: effective continuation phase treatment *continued*		The types of antidepressant medications included in this measure are: ■ Tricyclic antidepressants (TCAs) and other cyclic antidepressants ■ Selective serotonin reuptake inhibitors (SSRIs) ■ Monoamine oxidase inhibitors (MAOIs) ■ Serotonin-norepinepherine reuptake inhibitors (SNRIs) ■ Other antidepressants NCQA provides a list of NDC Codes on its web site, www.ncqa.org	Step 3: Identify patients receiving antidepressant medication therapy. Among patients identified in step 2, find those who filled a prescription for an antidepressant medication within 30 days before the index episode start date to 14 days on or after the index episode start date Step 4: Identify the prescription date. Identify the earliest prescription up to 30 days before the index episode start date to 14 days on or after the index episode start date. Prescriptions may be up to 30 days before the index episode start date to account for patients having a recurrent episode who may be started on medication based on a phone encounter while awaiting a scheduled office visit. Similarly, prescriptions may be 14 days on or after the index episode start date to account for either clinical discretion in recommending a two-week trial of self-help techniques prior to starting on medication or for member delay in filling the initial prescription Step 5: From the resulting patients from step 4, confirm the new episode by testing for a negative medication history. Patients who have anti-depressant prescriptions filled during the negative medication history period do not represent new treatment episodes and must be excluded Step 6: Exclude patients who had an acute mental health or substance abuse inpatient stay during the 245 days after the index episode start date treatment period using the following codes:		

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

BEHAVIORAL HEALTH (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Antidepressant medication management: effective continuation phase treatment *continued*			Codes to identify mental health inpatient services: DRGs 424-432 except discharges with ICD-9 principal diagnosis of 317-319 or ICD-9 Principal Diagnosis Codes 290, 293-302, 306-316 Codes to identify chemical dependency inpatient services: DRGs: 433, 521-523 or ICD-9 Principal Diagnosis Codes: 291-292, 303-305, 960-979 with a secondary diagnosis of chemical dependency Codes to identify major depressive disorder: ICD-9 Codes (296.2, 296.3, 298.0, 300.4, 309.1, 311) DRG (426) Prior Depressive Episodes ICD-9 Codes (296.2-296.9, 298.0, 300.4, 309.0, 309.1, 311) DRG (426) Prior Depressive Episodes ICD-9 Codes (296.2-296.9, 298.0, 300.4, 309.0, 309.1, 309.28, 311) DRG (426)* Exclude patients with this code if the principal diagnosis is 301.12		

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

BONE CONDITIONS/OSTEOARTHRITIS

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Osteoarthritis (OA): assessment for use of anti-inflammatory or analgesic over-the-counter (OTC) medications	CMS/AMA PCPI/AAOS*#	Patient visits with assessment for use of anti-inflammatory or analgesic OTC medications documented (drug list is available at www.ama-assn.org/ama/pub/category/4837.html)	All visits for patients with OA ≥21 years of age: Patient selection: ICD-9-CM Codes for OA: 715.00-715.98; *and* CPT Codes for patient visits: 99201-99205, 99212-99215, 99241-99245, 99354-99355, 99385-99387, 99395-99397, 99401-99404; *and* Patient's age is ≥21 years	None	EHRS, retrospective paper medical records, prospective flow sheet
OA: functional and pain assessment	CMS/AMA PCPI/AAOS*#	Patient visits with assessment for function and pain documented	All visits for patients with OA ≥21 years of age Patient selection: ICD-9-CM Codes for OA: 715.00-715.98; *and* CPT Codes for patient visits: 99201-99205, 99212-99215, 99241-99245, 99354-99355, 99385-99387, 99395-99397, 99401-99404; *and* Patient's age is ≥21 years	None	EHRS, retrospective paper medical records, prospective flow sheet

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

HEART DISEASE

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Coronary artery disease (CAD): symptom and activity assessment*	AMA PCPI/ ACC/AHA*#	Patients evaluated for both level of activity and anginal symptoms during one or more office visits Medical record must include documentation of the patient's level of activity and anginal symptoms *and/or* Grading of angina by the Canadian Cardiovascular Society Classification System *and/or* the patient completed a symptom and/or activity questionnaire (e.g., Seattle Angina Questionnaire)	All patients with CAD ≥18 years of age Patient selection: ICD-9-CM Codes for CAD: 414.00-414.07, 414.8, 414.9, 410.00-410.92, 412, 411.0-411.89, 413.0-413.9, V45.81, V45.82; *or* CPT Diagnosis Codes: 92980-92982, 92984, 92995, 92996, 33140, 33510-33514, 33516-33519, 33521-33523, 33533-33536; *and* CPT Codes for patient visit: 99201-99205, 99212-99215, 99241-99245, 99354-99355, 99385-99387, 99395-99397, 99401-99404; *and* Patient's age is ≥18 years	None	EHRS, retrospective paper medical records, prospective flow sheet
Cholesterol management for patients with cardiovascular conditions: screen	NCQA+#	An LDL-C screening performed any time during the measurement year as identified by claim/encounter or automated laboratory data Codes to identify LDL-C Screening: CPT Codes: 80061, 83715, 83716, 83721 LOINC Codes: 2089-1, 12773-8, 13457-7, 18261-8, 18262-6, 22748-8, 24331-1 Documentation in the medical record must include, at a minimum, a note indicating the date on which the screening was performed and the result or finding	Patients 18-75 years as of December 31 of the measurement year who either had a cardiovascular event or has a diagnosis of ischemic vascular disease (IVD). Both criteria must be used to identify the eligible population. Details as follows: *Event:* Discharged alive for acute myocardial infarction (AMI), coronary artery bypass graft (CABG), or percutaneous transluminal coronary angioplasty (PTCA) on or between January 1 and November 1 of the year prior to the measurement year (see codes below). All cases of PTCA should be included regardless of setting. AMI and CABG cases should be from inpatient claims only AMI (inpatient only): ICD-9-CM Codes: 410.x1 DRGs: 121, 122, 516	None	Visit and lab encounter data or claims. Electronic data may be supplemented with medical record data

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

HEART DISEASE (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Cholesterol management for patients with cardiovascular conditions: screen *continued*			PTCA: CPT Codes: 33140, 92980-92982, 92984, 92995, 92996; ICD-9-CM Codes: 36.01, 36.02, 36.05, 36.09; DRGs: 516-518; 526-527, 555-558 CABG (inpatient only): CPT Codes: 33510-33514, 33516-33519, 33521-33523, 33533-33536, 35600, 33572; ICD-9-CM Codes: 36.1, 36.2; DRGs: 106, 107, 109, 547-550 Diagnosis: At least one outpatient/nonacute inpatient or acute inpatient/ED visit with any diagnosis of IVD. IVD: CAD: CPT Codes: 414.0, 429.2 Stable angina: CPT Codes: 411, 413 DRG: 140 Lower extremity arterial disease/peripheral artery disease CPT Codes: 443.9, 440.20-440.24, 440.29 Ischemia: CPT Code: 435 DRG: 524 Stroke: CPT Codes: 433, 434, 437.0, 437.1, 438 DRG: 559 Atheroembolism: CPT Codes: 444, 445 Abdominal aortic aneurysm: CPT Code: 441		

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

HEART DISEASE (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Cholesterol management for patients with cardiovascular conditions: screen *continued*			Renal artery atherosclerosis CPT Code: 440.1; *and* Outpatient/nonacute inpatient: CPT Codes: 92002-92014, 99201-99205, 99211-99215, 99217-99220, 99241-99245, 99271-99275, 99301-99303, 99311-99313, 99321-99323, 99331-99333, 99341-99355, 99384-99387, 99394-99397, 99401-99404, 99411, 99412, 99420, 99429, 99499 UB-92 Revenue Codes: 019X, 0456, 049X-053X, 055X-059X, 065X, 066X, 076X, 077X, 082X-085X, 088X, 092X, 094X, 096X, 0972-0979, 0982-0986, 0988, 0989; *or* Acute inpatient/ED: CPT Codes: 99221-99223, 99231-99233, 99238-99239, 99251-99255, 99261-99263, 99281-99285, 99291-99292, 99356-99357 UB-92 Revenue Codes: 010X-016X, 020X-022X, 0450, 0451, 0452, 0459, 072X, 080X, 0981, 0987 For medical record collection: A systematic sample drawn from the denominator criteria		

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

HEART DISEASE (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
CAD: lipid profile	AMA PCPI/ ACC/AHA*#	Patients who received at least one lipid profile (or ALL component tests) during the reporting year CPT Laboratory Codes for lipid testing: 80061, 83721, 83716, 82465, 83718, 84478; *or* LOINC Codes for lipid testing: 24331-1, 13457-7, 18262-6, 18261-8, 22748-8, 2093-3, 14647-2, 2085-9, 14646-4, 18263-4, 2571-8, 14927-8, 1644-4, 3043-7, 3048-6, 30524-3	All patients with CAD ≥18 years of age Patient selection: ICD-9-CM Codes for CAD: 414.00-414.07, 414.8, 414.9, 410.00-410.92, 412, 411.0-411.89, 413.0-413.9, V45.81, V45.82; *or* CPT Diagnosis Codes: 92980-92982, 92984, 92995, 92996, 33140, 33510-33514, 33516-33519, 33521-33523, 33533-33536; *and* Patient's age is ≥18 years	None	EHRS, retrospective paper medical records, prospective flow sheet
CAD: drug therapy for lowering LDL cholesterol (LDL-C)	AMA PCPI/ ACC/AHA*#	Patients who were prescribed lipid-lowering therapy (based on current ACC/AHA guidelines) (drug list available at www.ama-assn.org/ama/pub/category/4837.html)	All patients with CAD ≥18 years of age Patient selection: ICD-9-CM Codes for CAD: 414.00-414.07, 414.8, 414.9, 410.00-410.92, 412, 411.0-411.89, 413.0-413.9, V45.81, V45.82; *or* CPT Codes: 92980-92982, 92984, 92995, 92996, 33140, 33510-33514, 33516-33519, 33521-33523, 33533-33536; *and* Patient's age is ≥18 years	■ Documentation that lipid-lowering therapy was not indicated (LDL-C <100); *or* ■ Other medical reason(s) documented by the practitioner for not prescribing lipid-lowering therapy; *or* ■ Patient reason(s) (e.g., economic, social, religious)	EHRS, retrospective paper medical records, prospective flow sheet
Cholesterol management for patients with cardiovascular conditions	NCQA+#	**LDL-C level <130 mg/dL** An LDL-C level of <130 mg/dL any time during the measurement year, as identified by automated laboratory data. If an automated result is not available, the patient is not compliant **LDL-C level <100 mg/dL** An LDL-C level of <100 mg/dL any time during the measurement year, as identified by automated	Patients 18-75 years as of December 31 of the measurement year who either had a cardiovascular event or has a diagnosis of IVD. Both criteria must be used to identify the eligible population. Details as follows: Event: Discharged alive for AMI, CABG, or PTCA on or between January 1 and November 1 of the year prior to the measurement year. All cases of PTCA should be included regardless of setting. AMI and	None	Visit and lab encounter data or claims. Electronic data may be supplemented with medical record data

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

HEART DISEASE (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Cholesterol management for patients with cardiovascular conditions *continued*		laboratory data. If an automated result is not available, the patient is not compliant For medical record collection: **LDL-C level <130 mg/dL** An LDL-C level of <130 mg/dL any time during the measurement year Documentation in the medical record must include, at a minimum, a note indicating the date on which the screening was performed and the result or finding of an LDL-C level of <130 mg/dL **LDL-C level <100mg/dL** An LDL-C level of <100 mg/dL any time during the measurement year Documentation in the medical record must include, at a minimum, a note indicating the date on which the screening was performed and the result or finding of an LDL-C level of <100 mg/dL LDL-C levels may be calculated from total cholesterol, HDL-C and triglycerides using the Freewald equation if the triglycerides are = 400 mgdL (LDL-C) = (total cholesterol) - (HDL) - (triglycerides/5) If lipoprotein (a) is measured, this calculation is: (LDL-C) = (total cholesterol) - (HDL) - (triglycerides/5) - 0.3[lipoprotein (a)] These formulae are used when all levels are expressed in mg/dL and cannot be used if triglycerides >400 mg/dL	CABG cases should be from inpatient claims only. All cases of PTCA should be included, regardless of setting AMI (inpatient only): ICD-9-CM Codes: 410.x1 DRGs: 121, 122, 516 PTCA: CPT Codes: 33140, 92980-92982, 92984, 92995, 92996; ICD-9-CM Codes: 36.01, 36.02, 36.05, 36.09; DRGs: 516-518; 526-527, 555-558 CABG (inpatient only): CPT Codes: 33510-33514, 33516-33519, 33521-33523, 33533-33536, 35600, 33572; ICD-9-CM Codes: 36.1, 36.2; DRGs: 106, 107, 109, 547-550 Diagnosis: At least one outpatient/nonacute inpatient or acute inpatient/emergency department visit with any diagnosis of IVD IVD: CAD: CPT Codes: 414.0, 429.2 Stable angina: CPT Codes: 411, 413 DRG: 140 Lower extremity arterial disease/peripheral artery disease: CPT Codes: 443.9, 440.20-440.24, 440.29 Ischemia: CPT Code: 435 DRG: 524		

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

HEART DISEASE (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Cholesterol management for patients with cardiovascular conditions *continued*			Stroke: CPT Codes: 433, 434, 437.0, 437.1, 438 DRG: 559 Atheroembolism: CPT Codes: 444, 445 Abdominal aortic aneurysm: CPT Code: 441 Renal artery atherosclerosis: CPT Code: 440.1; *and* Outpatient/nonacute inpatient: CPT Codes: 92002-92014, 99201-99205, 99211-99215, 99217-99220, 99241-99245, 99271-99275, 99301-99303, 99311-99313, 99321-99323, 99331-99333, 99341-99355, 99384-99387, 99394-99397, 99401-99404, 99411, 99412, 99420, 99429, 99499 UB-92 Revenue Codes: 019X, 0456, 049X-053X, 055X-059X, 065X, 066X, 076X, 077X, 082X-085X, 088X, 092X, 094X, 096X, 0972-0979, 0982-0986, 0988, 0989; *or* Acute inpatient/ED: CPT Codes: 99221-99223, 99231-99233, 99238-99239, 99251-99255, 99261-99263, 99281-99285, 99291-99292, 99356-99357 UB-92 Revenue Codes: 010X-016X, 020X-022X, 0450, 0451, 0452, 0459, 072X, 080X, 0981, 0987 For medical record collection: A systematic sample drawn from the denominator criteria		

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

HEART DISEASE (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
CAD: LDL cholesterol level	CMS	**Numerator 1** Patients with most recent LDL-C <130 mg/dl **Numerator 2** Patients with most recent LDL-C <100 mg/dl	All patients with CAD ≥18 years of age with at least one LDL-C test (ICD-9-CM Codes for CAD: 414.00-414.07, 414.8, 414.9, 410.00-410.92, 412, 411.0-411.89, 413.0-413.9, V45.81, V45.82) CPT Diagnosis Codes: 92980-92982, 92984, 92995, 92996, 33140, 33510-33514, 33516-33519, 33521-33523, 33533-33536) with at least one LDL cholesterol test (CPT Laboratory Codes for lipid testing: 80061, 83721, 83716, 82465, 83718, 84478)	None	EHRS, retrospective paper medical records, prospective flow sheet
CAD: antiplatelet therapy	CMS/AMA PCPI/ACC/ AHA*#	Patients who were prescribed antiplatelet therapy (aspirin, clopidogrel or combination of aspirin and dipyridamole) (drug list available at www.ama-assn.org/ama/pub/category/4837.html)	All patients with CAD ≥18 years of age Patient selection: ICD-9-CM Codes for CAD: 414.00-414.07, 414.8, 414.9, 410.00-410.92, 412, 411.0-411.89, 413.0-413.9, V45.81, V45.82; *or* CPT Codes: 92980-92982, 92984, 92995, 92996, 33140, 33510-33514, 33516-33519, 33521-33523, 33533-33536; *and* Patient's age is ≥18 years	■ Active bleeding in the previous six months which required hospitalization(s) or transfusion(s); *or* ■ Aspirin/clopidogrel allergy/intolerance ICD-9-CM Exclusion Codes: 995.0 and E935.3, 995.1 and E935.3, 995.2 and E935.3, 995.0,and E934.8, 995.1 and E934.8, 995.2 and E934.8; *or* ■ Patients prescribed ticlopidine or dipyridamole alone; *or* ■ Other medical reason(s) documented by the practitioner for not prescribing antiplatelet therapy; *or* ■ Patient reason(s) (e.g., economic, social, religious)	EHRS, retrospective paper medical records, prospective flow sheet

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

HEART DISEASE (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Coronary artery disease: beta blocker treatment after a heart attack	NCQA[+#]	Patients who have a claim indicating beta blocker therapy or who received an ambulatory prescription for beta blockers rendered within seven days (inclusive) after discharge An updated list of NDC Codes for beta blockers is posted to the NCQA web site, www.ncqa.org. Codes to identify beta blocker therapy prescribed include CPT Category II Code: 4006F Prescriptions rendered on an ambulatory basis any time while the patient is hospitalized for AMI through the seventh day after discharge count toward this measure. If unable to determine if the prescription was rendered on an inpatient or ambulatory basis, only count prescriptions rendered after discharge. Beta blockers active at the time of admission may be counted. A prescription is considered active if the "days supply" indicated on the date the member filled the prescription is the number of days or more between the date the prescription was filled and the relevant admission date For medical record collection: Documentation in medical record must include, at a minimum, a note indicating that the patient received a prescription for beta blockers within the time frame specified	Patients 35 years and older as of December 31 of the measurement year who are discharged alive from an inpatient setting with an AMI from January 1-December 24 of the measurement year. If a patient has more than one episode of AMI from January 1-December 24 of the measurement year, only include the first eligible discharge. Use the following codes to identify AMIs: ICD-9-CM Code: 410.x1; DRGs: 121, 122, 516, 526 Transfers to acute facilities. Include hospitalizations in which the patient was transferred directly to another acute care facility. The discharge date from the facility to which the patient was transferred must occur on or before December 24 of the measurement year Transfers to nonacute facilities. Exclude from the denominator hospitalizations when transferred directly to a non-acute care facility Readmissions. Exclude from the denominator hospitalizations when the member was readmitted to an acute or non-acute care facility for any diagnosis within seven days after discharge, because tracking the member between admissions is not deemed feasible For medical record collection: A systematic sample drawn from the denominator criteria	The following exclusions are mandatory: Exclude from the denominator patients who are identified as having a contraindication to beta blocker therapy or previous adverse reaction (i.e., intolerance) to beta blocker therapy and who did NOT receive beta blockers. Use the codes listed below for contraindications to beta-blocker therapy: Description and ICD-9-CM Codes: History of asthma (prescription: Inhaled corticosteroids): 493 Hypotension: 458 Heart block >1 degree: 426.0, 426.12, 426.13, 426.2, 426.3, 426.4, 426.51, 426.52, 426.53, 426.54, 426.7 Sinus bradycardia: 427.81 COPD: 491.2, 496, 506.4	Visit and pharmacy encounter data or claims. Electronic data may be supplemented with medical record data

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

HEART DISEASE (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
CAD: beta blocker therapy – prior myocardial infarction (MI)	AMA PCPI/ ACC/AHA*#	Patients who were prescribed beta blocker therapy (drug list available at www.ama-assn.org/ama/pub/category/4837.html)	All patients with CAD who also have prior MI at any time ≥18 years of age Patient selection: ICD-9-CM Codes for CAD: 414.00-414.07, 414.8, 414.9, 410.00-410.92, 412, 411.0-411.89, 413.0-413.9, V45.81, V45.82; *or* CPT Codes: 92980-92982, 92984, 92995, 92996, 33140, 33510-33514, 33516-33519, 33521-33523, 33533-33536; *and* ICD-9-CM Codes for MI: 410.00-410.92, 412; *and* Patient's age is ≥18 years	■ Documentation of bradycardia <50 bpm (without beta-blocker therapy) on two consecutive readings, history of Class IV (congestive) heart failure, history of second- or third-degree atrioventricular (AV) block without permanent pacemaker. ICD-9-CM Exclusion Codes: 493.xx, 458.xx, 426.0 without V45.01, 426.12 without V45.01, 426.13 without V45.01, 427.81, 427.89; *or* ■ Other medical reason(s) documented by the practitioner for not prescribing beta blocker therapy; *or* ■ Patient reason(s) (e.g., economic, social, religious)	EHRS, Retrospective paper medical records, Prospective flow sheet
CAD: angiotensin converting enzyme (ACE) inhibitor /angiotensin receptor blocker (ARB) therapy	AMA PCPI/ ACC/AHA*#	Patients who were prescribed ACE inhibitor or ARB therapy (drug list available at www.ama-assn.org/ama/pub/category/4837.html)	All patients with CAD ≥18 years of age who also have diabetes and/or left ventricular systolic dysfunction (LVSD) Patient selection: [ICD-9-CM Codes for CAD: 414.00-414.07, 414.8, 414.9, 410.00-410.92, 412, 411.0-411.89, 413.0-413.9, V45.81, V45.82; *or* CPT Codes: 92980-92982, 92984, 92995, 92996, 33140, 33510-33514, 33516-33519, 33521-33523, 33533-33536]; *and* [ICD-9-CM Codes for diabetes: 250.xx, 357.2, 362.01, 362.02, 366.41, 648.0x]; *or*	■ Allergy or intolerance to ACE inhibitor or ARB; *or* ■ ACE inhibitor contraindications including angioedema, anuric renal failure, moderate or severe aortic stenosis or pregnancy ICD-9-CM Exclusion Codes: 440.1, V56.0, V56.8, 39.95, 54.98, 788.5, 586, 403.01, 403.11, 403.91, 404.02, 404.03, 404.12, 404.13, 404.92, 404.93, 584.x, 585, 395.0, 395.2, 396.0, 396.2, 396.8, 425.1, 747.22, V22.0-V23.9, 277.6; *or*	EHRS, retrospective paper medical records, prospective flow sheet

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

HEART DISEASE (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
CAD: ACE inhibitor/ ACB therapy *continued*			[CPT Procedure Codes for testing LVSD: 78414, 78468, 78472, 78473, 78480, 78481, 78483, 78494, 93303, 93304, 93307, 93308, 93312, 93314, 93315, 93317, 93350, 93543; *and* Additional individual medical record review must be completed to identify patients who had documentation of an ejection fraction <40% (use most recent value)]; *and* Patient's age is ≥18 years	■ Other medical reason documented by the practitioner for not prescribing ACE inhibitor or ARB therapy; *or* ■ Patient reason (e.g., economic, social, religious)	
CAD: smoking cessation (Paired with CAD: Smoking Cessation Intervention below)	AMA PCPI/ ACC/AHA*#	Patients who were queried one or more times about cigarette smoking	All patients with CAD ≥18 years of age Patient selection: ICD-9-CM Codes for CAD: 414.00-414.07, 414.8, 414.9, 410.00-410.92, 412, 411.0-411.89, 413.0-413.9, V45.81, V45.82; *or* CPT Diagnosis Codes: 92980-92982, 92984, 92995, 92996, 33140, 33510-33514, 33516-33519, 33521-33523, 33533-33536; *and* CPT Codes for patient visit: 99201-99205, 99212-99215, 99241-99245, 99354-99355, 99385-99387, 99395-99397, 99401-99404; *and* Patient's age is ≥18 years	None	EHRS, retrospective paper medical records, prospective flow sheet

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

HEART DISEASE (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
CAD: smoking cessation intervention (Paired with CAD: smoking cessation above)	AMA PCPI/ ACC/AHA*#	Patients identified as cigarette smokers who received cessation intervention *Cessation intervention may include smoking cessation counseling (e.g., advise to quit, referral for counseling) and/or pharmacologic therapy*	All patients with CAD ≥18 years of age identified as cigarette smokers Patient selection: ICD-9-CM Codes for CAD: 414.00-414.07, 414.8, 414.9, 410.00-410.92, 412, 411.0-411.89, 413.0-413.9, V45.81, V45.82; *or* CPT Diagnosis Codes: 92980-92982, 92984, 92995, 92996, 33140, 33510-33514, 33516-33519, 33521-33523, 33533-33536; *and* CPT Codes for patient visit: 99201-99205, 99212-99215, 99241-99245, 99354-99355, 99385-99387, 99395-99397, 99401-99404; *and* Additional individual medical record review must be completed to identify the patient as a cigarette smoker; *and* Patient's age is ≥18 years	None	EHRS, retrospective paper medical records, prospective flow sheet
Heart failure (HF): left ventricular function (LVF) assessment	AMA PCPI/ ACC/AHA*#	Patients with quantitative or qualitative results of LVF assessment recorded CPT Procedure Codes for LVF assessment testing: 78414, 78468, 78472, 78473, 78480, 78481, 78483, 78494, 93303, 93304, 93307, 93308, 93312, 93314, 93315, 93317, 93350, 93543, 93555; *and* Medical record must include documentation of quantitative or qualitative results of LVF assessment	All patients with HF ≥18 years of age Patient selection: ICD-9-CM Codes for HF: 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 428.0, 428.1, 428.20-428.23, 428.30-428.33, 428.40-428.43, 428.9; *and* Patient's age is ≥18 years	None	EHRS, retrospective paper medical records, prospective flow sheet

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

HEART DISEASE (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
HF: weight measurement	AMA PCPI/ ACC/AHA*#	Patient visits with weight measurement recorded	All visits for patients with HF ≥18 years of age Patient selection: ICD-9-CM Codes for HF: 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 428.0, 428.1, 428.20-428.23, 428.30-428.33, 428.40-428.43, 428.9; *and* Patient's age is >18 years	Patient visits in which practitioner was unable to weigh patient	EHRS, retrospective paper medical records, prospective flow sheet
HF: assessment of clinical symptoms of volume overload	AMA PCPI/ ACC/AHA*#	Patient visits with assessment of clinical symptoms of volume overload (excess) or documentation of standardized scale or completion of assessment tool* Medical record must include: Assessment for the absence or presence of symptoms of volume overload – Dyspnea or orthopnea; *or* Documentation of standardized scale or completion of assessment tool *Standardized scale or assessment tools may include the New York Heart Association Functional Classification of Congestive Heart Failure (level of activity only); Kansas City Cardiomyopathy Questionnaire; Minnesota Living with Heart Failure™ Questionnaire; or Chronic Heart Failure Questionnaire (Guyatt)	All patient visits for patients aged ≥18 years with HF Patient selection: ICD-9-CM Codes for HF: 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 428.0, 428.1, 428.20-428.23, 428.30-428.33, 428.40-428.43, 428.9; *and* CPT Codes for patient visit: 99201-99205, 99212-99s215, 99241-99245, 99354, 99355, 99385-99387, 99395-99397, 99401-99404; *and* Patient's age is ≥18 years	None	EHRS, retrospective paper medical records, prospective flow sheet

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

HEART DISEASE (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
HF: assessment of activity level	AMA PCPI/ ACC/AHA*#	Patient visits with assessment of current level of activity OR documentation of standardized scale or completion of assessment tool* Medical record must include: Documentation of the current level of activity; *or* Documentation that a standardized scale or assessment tool was used *Standardized scale or assessment tools may include the New York Heart Association Functional Classification of Congestive Heart Failure (level of activity only); Kansas City Cardiomyopathy Questionnaire; Minnesota Living with Heart Failure™ Questionnaire; or Chronic Heart Failure Questionnaire (Guyatt)	All patient visits for patients aged ≥18 years with HF Patient selection: ICD-9-CM Codes for HF: 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91-404.93, 428.0, 428.1, 428.20-428.23, 428.30-428.33, 428.40-428.43, 428.9; *and* CPT Codes for patient visit: 99201-99205, 99212-99215, 99241-99245, 99354-99355, 99385-99387, 99395-99397, 99401-99404; *and* Patient's age is ≥18 years	None	EHRS, retrospective paper medical records, prospective flow sheet
HF: beta blocker therapy	AMA PCPI/ ACC/AHA*#	Patients who were prescribed beta blocker therapy (drug list available at www.ama-assn.org/ama/pub/category/4837.html)	All HF patients ≥18 years of age with LVEF <40% or with moderately or severely depressed left ventricular systolic function Patient selection: ICD-9-CM Codes for HF: 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 428.0, 428.1, 428.20-428.23, 428.30-428.33, 428.40-428.43, 428.9; *and* CPT Procedure Codes for LVF assessment testing: 78414, 78468, 78472, 78473, 78480, 78481, 78483, 78494, 93303, 93304, 93307, 93308, 93312, 93314, 93315, 93317, 93350, 93543; *and*	■ Documentation of bradycardia < 50 bpm (without beta blocker therapy) on two consecutive readings, history of Class IV (congestive) HF, history of second- or third-degree AV block without permanent pacemaker ICD-9-CM Exclusion Codes: 493.xx, 458.xx, 426.0 without V45.01, 426.12 without V45.01, 426.13 without V45.01, 427.81, 427.89; *or* ■ Other medical reason(s) documented by the practitioner for not prescribing beta blocker therapy; *or* ■ Patient reason(s) (e.g., economic, social, religious)	EHRS, retrospective paper medical records, prospective flow sheet

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

HEART DISEASE (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
HF: beta blocker therapy *continued*			Additional individual medical record review must be completed to identify patients who had documentation of an ejection fraction <40% (use most recent value) or moderately or severely depressed left ventricular systolic function; *and* Patient's age is ≥18 years		
HF: ACE inhibitor/ ARB therapy	AMA PCPI/ ACC/AHA*#	Patients who were prescribed ACE inhibitor or ARB therapy (drug list available at www. ama-assn.org/ama/pub/category/4837.html)	All HF patients ≥18 years of age with LVEF <40% or with moderately or severely depressed left ventricular systolic function Patient selection: ICD-9-CM Codes for HF: 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 428.0, 428.1, 428.20-428.23, 428.30-428.33, 428.40-428.43, 428.9; *and* CPT Procedure Codes for LVF assessment testing: 78414, 78468, 78472, 78473, 78480, 78481, 78483, 78494, 93303, 93304, 93307, 93308, 93312, 93314, 93315, 93317, 93350, 93543; *and* Additional individual medical record review must be completed to identify for those patients who were tested had documentation of an ejection fraction <40% (use most recent value) or moderately or severely depressed left ventricular systolic function; *and* Patient's age is ≥18 years	■ Allergy or intolerance to ACE inhibitor or ARB; *or* ■ ACE inhibitor contraindications including angioedema, anuric renal failure, moderate or severe aortic stenosis or pregnancy ICD-9-CM Exclusion Codes: 440.1, V56.0, V56.8, 39.95, 54.98, 788.5, 586, 403.01, 403.11, 403.91, 404.02, 404.03, 404.12, 404.13, 404.92, 404.93, 584.x, 585, 395.0, 395.2, 396.0, 396.2, 396.8, 425.1, 747.22, V22.0-V23.9, 277.6; *or* ■ Other medical reason(s) documented by the practitioner for not prescribing ACE inhibitor or ARB therapy; *or* ■ Patient reason(s) (e.g., economic, social, religious)	EHRS, retrospective paper medical records, prospective flow sheet

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

HEART DISEASE (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
HF: warfarin therapy for patients with atrial fibrillation	AMA PCPI/ ACC/AHA*#	Patients who were prescribed warfarin therapy (drug list available at www.ama-assn.org/ama/pub/category/4837.html)	All HF patients ≥18 years of age with paroxysmal or chronic atrial fibrillation Patient selection: ICD-9-CM Codes for HF: 402.01, 402.11, 402.91, 404.01, 404.03, 404.11, 404.13, 404.91, 404.93, 428.0, 428.1, 428.20-428.23, 428.30-428.33, 428.40-428.43, 428.9; *and* ICD-9-CM Code for Atrial Fibrillation: 427.31; *and* Patient's age is ≥18 years	■ Allergy/intolerance 995.0 and E934.2, 995.1 and E934.2, 995.2 and E934.2; *or* ■ Risk of bleeding or bleeding disorder ICD-9-CM Exclusion Codes: 203.00-208.91, 280.0, 280.9, 285.1, 286.0-286.9, 287.3-287.5, 430, 431, 432.0, 432.1, 432.9, 437.3, 459, 530.7, 531.00-531.01, 531.20-531.21, 531.40-531.41, 531.60-531.61, 532.00-532.01, 532.20-532.21, 532.40-532.41, 532.60-532.61, 533.00-533.01, 533.20-533.21, 533.40-533.41, 533.60-533.61, 534.00- 534.01, 534.20-534.21, 534.40-534.41, 534.60-534.61, 569.3, 570, 571.2, 571.5, 578.0, 578.1, 578.9, 599.7, 786.3; *or* ■ Other medical reason(s) documented by the practitioner for not prescribing warfarin therapy; *or* ■ Patient reason(s) (e.g., economic, social, religious)	EHRS, retrospective paper medical records, prospective flow sheet

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

HYPERTENSION

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Plan of care	CMS/ AMA PCPI/ ACC/AHA*#	Patient visits with a documented plan of care for hypertension Examples of plan of care include follow-up visit scheduled, addition or change to antihypertensive pharmacologic therapy, or addition or change to non-pharmacological therapy such as weight loss, exercise, decrease sodium or alcohol intake	All visits for patients with hypertension ≥18 years of age with either systolic blood pressure (BP) ≥140 mm Hg or diastolic BP ≥90 mm Hg Patient selection: ICD-9-CM Codes for hypertension: 401.0, 401.1, 401.9, 402.xx, 403.xx, 404.xx; *and* CPT Codes for patient visits: 99201-99205, 99212-99215, 99241-99245, 99354-99355, 99385-99387, 99395-99397, 99401-99404; *and* Additional individual medical record review must be completed to identify patient visits with a systolic BP ≥140 mm Hg or a diastolic BP ≥90 mm Hg; *and* Patient's age is ≥18 years	None	EHRS, retrospective paper medical records, prospective flow sheet
Controlling high blood pressure (BP)	CMS/NCQA+#	Patients with last systolic blood pressure measurement <140 mm Hg *and* a diastolic BP <90 mm Hg	All patients with hypertension ≥8 years of age who had a BP measurement during the last office visit (ICD-9-CM Codes for hypertension: 401.0, 401.1, 401.9, 402.xx, 403.xx, 404.xx)	None	EHRS, retrospective paper medical records

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

PRENATAL

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Anti-D immune globulin	AMA PCPI*#	Patients receiving anti-D immune globulin at 26-30 weeks gestation Rho(D) immune globulin: CPT Codes: 90384, 90385, 90386	All patients who are D (Rh) negative and unsensitized who gave birth during a 12-month period, seen for continuing prenatal care Patient selection: ICD Codes for pregnancy: V22.0-V23.9; *or* Delivery of a stillborn after 28 weeks	None	EHRS, retrospective paper medical records, prospective flow sheet
Screening for human immuno-deficiency virus (HIV)	AMA PCPI*#	Patients who are screened for HIV infection during the first or second prenatal care visit HIV Screening: CPT Codes: HIV-1 87390, 87534-87539 HIV-2 87391 LOINC Codes: 14092-1, 24012-7, 29893-5, 31201-7, 5221-7, 5222-5, 7917-8, 7918-6	All patients who gave birth during a 12-month period, seen for continuing prenatal care Patient selection: ICD Codes for pregnancy: V22.0-V23.9); *or* Delivery of a stillborn after 28 weeks	■ Patient with known HIV infection *or* ■ Documentation of patient reason(s) for not screening for HIV (e.g., economic, social, religious)	EHRS, retrospective paper medical records, prospective flow sheet

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

PREVENTION, IMMUNIZATION, AND SCREENING

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Tobacco use (Paired with tobacco cessation below)	AMA PCPI*#	Patients who were queried about tobacco use one or more times	All patients ≥18 years of age at the beginning of the two-year measurement period Patient selection: CPT Codes for patient visits: 99201-99205, 99212-99215, 99241-99245, 99354-99355, 99385-99387, 99395-99397, 99401-99404; *and* Patient's age is ≥18 years	None	EHRS, retrospective paper medical records, prospective flow sheet
Tobacco cessation (Paired with tobacco use above)	AMA PCPI*#	Patients identified as tobacco users who received cessation intervention **Cessation intervention may include smoking cessation counseling (e.g., advice to quit, referral for counseling) and/or pharmacologic therapy**	All patients ≥18 years of age identified as tobacco users at the beginning of the 2-year measurement period Patient selection: [CPT Codes for patient visits: 99201-99205, 99212-99215, 99241-99245, 99354-99355, 99385-99387, 99395-99397, 99401-99404]; *and* [ICD-9-CM Codes for tobacco user: 305.1; *or* Individual medical record review must be completed to identify those patients who are tobacco users]; *and* Patient's age is ≥18 years	None	EHRS, retrospective paper medical records, prospective flow sheet

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

PREVENTION, IMMUNIZATION, AND SCREENING (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Survey questions for the three smoking measures below	NCQA[+#]	The survey items comprising the measures are as follows: 1. Do you now smoke cigarettes every day, some days, or not at all? ☐ Every day ☐ Some days ☐ Not at all ☐ Don't know (Those answering "every day" or "some days" are classified as current smokers and would go to question 4; those answering "not at all" are classified as former smokers and would go to question 3; those answering "don't know" would be done with the smoking portion of the survey) 2. In the last 12 months, on how many visits were you advised to quit smoking by a doctor or other healthcare provider in the plan? ☐ None ☐ 1 visit ☐ 2-4 visits ☐ 5-9 visits ☐ 10 or more visits ☐ I had no visits in the last 12 months Responses of "1 visit or more" are classified as smokers who received medical advice to quit smoking 3. On how many of these visits was medication recommended to assist you with quitting smoking (for example, nicotine gum, patch, nasal spray, inhaler, prescription medication)? ☐ None ☐ 1 visit ☐ 2-4 visits ☐ 5-9 visits ☐ 10 or more visits ☐ I had no visits in the last 12 months Responses of "1 visit or more" are classified as smokers who received medication assistance with smoking cessation 4. On how many of these visits did your doctor or health provider discuss methods and strategies (other than medication) to assist you with quitting smoking? ☐ None ☐ 1 visit ☐ 2-4 visits ☐ 5-9 visits ☐ 10 or more visits ☐ I had no visits in the last 12 months Responses of "1 visit or more" or more are classified as smokers who received referral to counseling			
Advising smokers to quit	NCQA[+#]	The number of patients in the denominator who responded to the survey and indicated that they had received advice to quit smoking from a doctor or other health provider during the measurement year	The number of patients 18 and older who responded to the survey, had one or more visits during the measurement year, and indicated that they were current smokers	None	Patient survey
Discussing smoking cessation medication	NCQA[+#]	The number of patients in the denominator who responded to the survey and indicated that medication to assist with quitting smoking was recommended or discussed	The number of patients 18 and older who responded to the survey, had one or more visits during the measurement year, and indicated that they were current smokers	None	Patient survey
Discussing smoking cessation strategies	NCQA[+#]	The number of patients in the denominator who responded to the survey and indicated that their doctor or health provider recommended or discussed methods and strategies other than medication to assist with quitting smoking	The number of patients 18 and older who responded to the survey, had one or more visits during the measurement year, and indicated that they were current smokers	None	Patient survey

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

PREVENTION, IMMUNIZATION, AND SCREENING (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Survey questions for the two paired urinary incontinence measures below	NCQA[+#]	The survey items comprising the measures are as follows: 1. Many people experience problems with urinary incontinence, the leakage of urine. In the last 6 months, have you accidentally leaked urine? Yes → Go to next Question No → Go to Question X 2. How much of a problem, if any, was the urine leakage for you? A big problem → Go to next Question A small problem → Go to next Question Not a problem → Go to Question X 3. Have you talked with your current doctor or other health care provider about your urine leakage problem? Yes → Go to next Question No → Go to Question X 4. There are many ways to treat urinary incontinence, including bladder training, exercises, medication, and surgery. Have you received these or any other treatments for your current leakage problem? ☐ Yes ☐ No		Patients who had urine leakage but did not consider it a problem and patients who did not have a doctor's visit in the year	
Discussing urinary incontinence	NCQA[+#]	The number of patients in the denominator who indicated they discussed their urine leakage problem with their current provider	The number of patients 65 years and older who responded to the survey, had one or more visits during the measurement year, and indicated they had a urine leakage problem in the last 6 months		Patient survey
Receiving urinary incontinence treatment	NCQA[+#]	The number of patients in the denominator who indicated they received treatment for their current urine leakage problem	The number of patients 65 years and older who responded to the survey, indicating they had a urine leakage had one or more visits during the measurement year and indicated they had a problem in the last 6 months and discussed their urine leakage problem with their current provider		Patient survey
Flu shots for older adults (paired with flu shots for adults ages 50-64, below)	CMS/NCQA[+#]	The number of patients in the denominator who responded, "Yes" to the question "Have you had a flu shot since September 1, YYYY?"	The number of patients 65 years or older who responded "Yes" or "No" to the question "Have you had a flu shot since September 1, YYYY?"	None	Patient survey

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

PREVENTION, IMMUNIZATION, AND SCREENING (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Flu shots for adults ages 50-64 (paired with flu shots for older adults, above)	NCQA[+#]	The number of patients in the denominator who responded, "Yes" to the question "Have you had a flu shot since September 1, YYYY?"	The number of patients 50-64 years who responded "Yes" or "No' to the question "Have you had a flu shot since September 1, YYYY?"	None	Patient survey
Influenza vaccination	AMA PCPI[*#]	Patients who received influenza vaccination from September through February of the year prior to the measurement period ICD-9-CM Codes for need vaccine: V04.8 and V04.81; *or* CPT Procedure Codes for adult influenza vaccine: 90656, 90658, 90659, 90660; *or* HCDCS Code: G0008; *or* Medical record includes documentation of patient report of having received the vaccination	All patients ≥50 years of age at the beginning of the 1-year measurement period Patient selection: CPT Codes for patient visits: 99201-99205, 99212-99215, 99241-99245, 99354-99355, 99386-99387, 99396-99397, 99401-99404, 90471-90474; *and* Patient's age is ≥50 years at the beginning of the one-year measurement period	■ Egg allergy ICD-9-CM Exclusion Codes: V15.03, 995.68; *or* ■ Adverse reaction to influenza vaccine ICD-9-CM Exclusion Codes: 693.1, 995.0 and E949.6, 995.1 and E949.6, 995.2 and E949.6; *or* ■ Other medical reason(s) documented by the practitioner for not receiving an influenza vaccination; *or* ■ Patient reason(s) (e.g., economic, social, religious)	EHRS, retrospective paper medical records, prospective flow sheet
Pneumonia vaccination	CMS/NCQA[+#]	Patients who have ever received a pneumococcal vaccination: (CPT Procedure Code for adult pneumococcal vaccination: 90732) (HCDCS Code: G0009)	All patients ≥65 years of age	■ Previous anaphylactic reaction to the vaccine /components ■ Other medical reason(s) documented by the practitioner for not receiving a pneumococcal vaccination: (ICD-9-CM Exclusion Codes for PC-8 pneumonia vaccination: 995.0 and E949.6, 995.1 and E949.6, 995.2 and E949.6 ■ Patient reason(s) (e.g., economic, social, religious)	EHRS, retrospective paper medical records

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

PREVENTION, IMMUNIZATION, AND SCREENING (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Childhood immunization status	NCQA[+#]	For all antigens, count evidence of any of the following: ■ evidence of the antigen, *or* ■ documented history of the illness, *or* ■ a seropositive test result For combination vaccinations that require more than one antigen (i.e., DtaP and MMR), find evidence of all of the antigens **DtaP/DT.** An initial DtaP vaccination followed by at least three DtaP, DT or individual diphtheria and tetanus shots, with at least one diphtheria and one tetanus falling on or between the child's first and second birthdays. Any vaccination administered prior to 42 days after birth cannot be counted. (DTP vaccinations are no longer manufactured; however, notations of DTP in medical records count toward the numerator.) In states where the law allows an exception to a child who receives a pertussis vaccination, a child who has four diphtheria and four tetanus vaccinations is compliant **IPV.** At least three polio vaccinations (IPV) with different dates of service on or before the child's second birthday. IPV administered prior to 42 days after birth cannot be counted **MMR.** At least one measles, mumps and rubella (MMR) vaccination, with a date of service falling on or before the child's first and second birthday **HiB.** Three H influenza type B (HiB) vaccinations, with different dates of service on or before the child's second birthday. HiB administered prior to 42 days after birth cannot be counted	Children who turn 2 years of age during the measurement year For medical record collection: A systematic sample drawn from the denominator criteria.	The following exclusions are mandatory: Children who had a contraindication for a specific vaccine should be excluded from the denominator for all antigen rates and the combination rates. The denominator for all rates must be the same. If contraindicated children are excluded, it can only be for those children where the administrative data does not indicate that the contraindicated immunization was rendered. The exclusion must have occurred by the patient's second birthday. Look for contraindications as far back as possible in the patient's history, and use the following contraindications and ICD-9-CM codes below to identify allowable exclusions: *Any particular vaccine* Contraindication: Anaphylactic reaction to the vaccine or its components, ICD-9: 999.4 *DtaP* Contraindication: Encephalopathy, ICD-9: 323.5 (must include E948.4 or E948.5 or E948.6 to identify the vaccine) *VZV and MMR:* Contraindication: Immunodeficiency, including genetic (congenital) immunodeficiency syndromes, ICD-9: 279	Visit encounter data or claims. Electronic data may be supplemented with medical record data

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

PREVENTION, IMMUNIZATION, AND SCREENING (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Childhood immunization status *continued*		Note: Because use of one particular type of HiB vaccine requires only three doses, the measure requires meeting the minimum possible standard of three doses, rather than the recommended four doses **Hepatitis B.** Three hepatitis B vaccinations, with different dates of service on or before the child's second birthday **VZV.** At least one chicken pox vaccination (VZV), with a date of service falling on or before the child's second birthday **Pneumococcal conjugate.** At least four pneumococcal conjugate vaccinations on or before the child's second birthday **Combination A.** Children who received four DtaP/DT vaccinations; three IPV vaccinations; one MMR vaccination; three HiB vaccinations; three hepatitis B vaccinations; and one VZV vaccination **Combination B.** Children who received all antigens listed in combination A and four pneumococcal conjugate vaccinations DtaP CPT (90698, 90700, 90701, 90720, 90721, 90723) ICD-9-CM (99.39) Diphtheria and tetanus CPT (90702) Diphtheria CPT (90719) ICD-9-CM (V02.4*, 032*, 99.36) Tetanus CPT (90703) ICD-9-CM (037*, 99.38)		Contraindication: HIV-infected or household contact with HIV infection, ICD-9: Infection V08, symptomatic 042 Contraindication: Cancer of lymphoreticular or histiocytic tissue, ICD-9: 200-202 Contraindication: Multiple myeloma, ICD-9: 203 Contraindication: Leukemia, ICD-9: 204-208 *IPV* Contraindication: Anaphylactic reaction to streptomycin, polymyxin B or neomycin *HiB* Contraindication: None *Hepatitis B* Contraindication: Anaphylactic reaction to common baker's yeast *VZV and MMR* Contraindication: Anaphylactic reaction to neomycin *Pneumococcal conjugate* Contraindication: None	

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

PREVENTION, IMMUNIZATION, AND SCREENING (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Childhood immunization status *continued*		Pertussis ICD-9-CM (033*, 99.37) IPV CPT (90698, 90713, 90723) ICD-9-CM (V12.02*, 045*, 99.41) MMR CPT (90707, 90710) ICD-9-CM (99.48) Measles CPT (90705, 90708) ICD-9-CM (055*, 99.45) Mumps CPT (90704, 90709) ICD-9-CM (072*, 99.46) Rubella CPT (90706, 90708, 90709) ICD-9-CM (056*, 99.47) HiB CPT (90645, 90646, 90647, 90648, 90720, 90721, 90748) ICD-9-CM (041.5*, 038.41*, 320.0*, 482.2*) Hepatitis B** CPT (90723, 90740, 90744, 90747, 90748) ICD-9-CM (V02.61*, 070.2*, 070.3*) VZV CPT (90710, 90716) ICD-9-CM (052*, 053*) Pneumococcal conjugate CPT (90669) *Indicates evidence of the disease. A patient who has evidence of the disease during the numerator event time is compliant for the antigen.			

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

PREVENTION, IMMUNIZATION, AND SCREENING (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Childhood immunization status *continued*		** The 2-dose hepatitis B antigen Recombivax is recommended for children between the ages of 11 and 14 years only For medical record collection: For immunization information obtained from the medical record, count patients where there is evidence that the antigen was rendered from: ■ a note indicating the name of the specific antigen and the date of the immunization, or· ■ a certificate of immunization prepared by an authorized health care provider or agency including the specific dates and types of immunizations administered For documented history of illness or a seropositive test result, find a note indicating the date of the event. The event must have occurred by the patient's second birthday Notes in the medical record indicating that the patient received the immunization "at delivery" or "in the hospital" may be counted toward the numerator. This applies only to immunizations that do not have minimum age restrictions (e.g., prior to 42 days after birth). A note that the "patient is up-to-date" with all immunizations that does not list the dates of all immunizations and the names of the immunization agents does not constitute sufficient evidence of immunization for this measure			

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

PREVENTION, IMMUNIZATION, AND SCREENING (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Breast cancer screening	CMS/NCQA[+#]	One or more mammograms during the measurement year or the year prior to the measurement year. A woman had a mammogram if a submitted claim/encounter contains any one of the following codes: CPT Codes: 76090-76092; ICD-9-CM Codes 87.36, 87.37; V-Codes: V76.11, V76.12; UB-92 Codes; 0401, 0403) For medical record collection: Documentation in the medical record must include both of the following: a note indicating the date the mammogram was performed and the result or finding	Women 52 to 69 years of as of December 31 of the measurement year Note: Given the measurement look back period, women 50 to 69 years of age will be captured in this measure For medical record collection: A systematic sample drawn from the denominator criteria	The following exclusions are mandatory: Exclude women who had a bilateral mastectomy. Look for evidence of a bilateral mastectomy as far back as possible in the patient's history. If evidence of two separate mastectomies is found, the patient should be excluded from the measure. The following codes should be used to identify exclusions: (Bilateral mastectomy surgical codes: ICD-9-CM Codes: 85.42, 85.44, 85.46, 85.48; CPT Codes: 19180.50 or 19180 w/modifier 09950*, 19200.50 or 19200 w/modifier code 09950*, 19220.50 or 19220 w/modifier 09950*, 19240.50 or 19240 w/ modifier 09950*. Unilateral codes [need two separate occurrences on 2 different dates of service]: ICD-9-CM Codes: 85.41, 85.43, 85.45, 85.47; CPT Codes 19180, 19200, 19220, 19240) *.50 and 09950 modifier codes indicate the procedure was bilateral and performed during the same operative session For medical record collection: Exclusionary evidence in the medical record must include a note indicating a bilateral mastectomy	Visit and encounter data or claims. Electronic data may be supplemented with medical record data

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

PREVENTION, IMMUNIZATION, AND SCREENING (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Colorectal cancer screening	NCQA[+#]	One or more screenings for colorectal cancer. Appropriate screenings are defined by any one of the four criteria below: ■ fecal occult blood test (FOBT) during the measurement year ■ flexible sigmoidoscopy during the measurement year or the four years prior to the measurement year ■ double contrast barium enema (DCBE) during the measurement year or the four years prior to the measurement year ■ colonoscopy during the measurement year or the nine years prior to the measurement year A patient had an appropriate screening if a submitted claim/encounter contains any one of the following codes: FOBT CPT Codes: (82270,82274); LOINC (2335-8, 12503-9, 12504-7, 14563-1, 14564-9, 14565-6, 27396-1, 27401-9, 27925-7, 27926-5, 29771-3) Flexible sigmoidoscopy CPT Codes: (45330, 45331, 45332, 45333, 45334, 45335, 45337, 45338, 45339, 45340, 45341, 45342, 45345) ICD-9-CM (45.24, 45.42) DCBE CPT Codes: (74280) Colonoscopy CPT Codes: (44388, 44389, 44390, 44391, 44392, 44393, 44394, 44397, 45355, 45378, 45379, 45380, 45381, 45382, 45383, 45384, 45385, 45386, 45387, 45391, 45392)	Patients 51 to 80 years of age as of December 31 of the measurement year Note: Given the measurement look back period, adults 50 to 80 years of age will be captured in this measure For medical record collection: A systematic sample from the eligible population	The following exclusions are mandatory: Patients with a diagnosis of colorectal cancer or total colectomy. Look for evidence of colorectal cancer or total colectomy as far back as possible in the patient's history, through either administrative data or medical record review. Use the following codes to identify allowable exclusions: Malignant neoplasm of colon and other specified sites of colon and large intestine ICD-9-CM Codes: (153.X, 154.0, 154.1, 197.5, V10.05) Total colectomy: CPT Codes: 44150-44153, 44155-44156, 44210-44212, ICD-9: 45.8 For medical record collection: Exclusionary evidence in the medical record must include a note indicating a diagnosis of colorectal cancer or total colectomy. The description of the codes listed above may be used as synonyms for a diagnosis of colorectal cancer	Visit and encounter data or claims. Electronic data may be supplemented with medical record data

Appendix A – Specifications[†‡] of the National Voluntary Consensus Standards for Physician-Focused Ambulatory Care (continued)

PREVENTION, IMMUNIZATION, AND SCREENING (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Colorectal cancer screening *continued*		For medical record collection: Documentation in the medical record must include both of the following: ■ a note indicating the date the colorectal cancer screening was performed, and· ■ for a notation in the progress notes, the result or finding (this ensures the screening was performed and not merely ordered) For a notation in the medical history, a result is not required. Documentation in the medical history pertains to screenings that happened in the past and it is assumed that the result was negative (a positive result would have been noted as such). A notation in the medical history must include a date reference that meets the timeline outlined in the specifications			
Cervical cancer screening	NCQA[+#]	One or more Pap tests during the measurement year or the two years prior to the measurement year. A woman had a Pap test if a submitted claim/encounter contains any one of the following codes: CPT: (88141-88145, 88147, 88148, 88150, 88152-88155, 88164-88167, 88174-88175) LOINC: (10524-7, 18500-9, 19762-4, 19764-0, 19765-7, 19766-5, 19774-9, 33717-0) ICD-9-CM: (91.46) V Codes: V72.32, V76.2) UB-92 (0923) For medical record collection: One or more Pap tests during the measurement year or the two years prior to the measurement year. Documentation in the medical record must include a note indicating the date the test was performed, and the result or finding	Women 21 to 64 years of age as of December 31 of the measurement year Note: Given the measurement look back period, women 18 to 64 years of age will be captured in this measure For medical record collection: A systematic sample drawn from the eligible population	The following exclusions are mandatory: Women who had a hysterectomy and who have no residual cervix and for whom the administrative data does not indicate that a Pap test was performed. Look for evidence of a hysterectomy as far back as possible in the patient's history. Use any of the following codes listed below to identify allowable exclusions: Surgical codes for hysterectomy CPT: (51925, 56308, 58150, 58152, 58200, 58210, 58240, 58260, 58262, 58263, 58267, 58270, 58275, 58280, 58285, 58290-58294, 58550, 58551, 58552-58554, 58951, 58953-58954, 58956, 59135)	Visit and encounter data or claims. Electronic data may be supplemented with medical record data

PREVENTION, IMMUNIZATION, AND SCREENING (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Cervical cancer screening *continued*				ICD-9-CM: (68.4-68.8, 618.5) V-codes: V67.01, V76.47 For medical record collection: Exclusionary evidence in the medical record must include a note indicating a hysterectomy with no residual cervix. The hysterectomy must have occurred by December 31 of the measurement year. Use the descriptions of the codes listed above as synonyms for a hysterectomy with no residual cervix. Documentation of "complete hysterectomy," "total hysterectomy," "total abdominal hysterectomy," or "radical hysterectomy" meets the criteria for hysterectomy with no residual cervix	

† For the most up to date measure specification, please refer to the measure maintenance owner web sites, www.ama-assn.org/ama/pub/catgory/4837.html and www.ncqa.org/Main/NQF_Posting_Table.pdf.

‡ Technical specifications for Electronic Health Record Systems (EHRSs), which include clinical and standard code sets, algorithms, and HL7 messaging to facilitate the exchange of information and integration of the measures into EHRSs, may be accessed at the Centers for Medicare and Medicaid Services' web site, www.doqit.org/doqit/jsp/index.jsp, and the American Medical Association (AMA) web site, www.ama-assn.org/ama.

Appendix B
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American Heart Association
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American Medical Association
American Medical Group Association
American Nurses Association
American Optometric Association
American Osteopathic Association
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American Society for Therapeutic Radiology and Oncology
American Society of Clinical Oncology
American Society of Health-System Pharmacists
America's Health Insurance Plans
Ascension Health
Association of Professors of Medicine
Aurora Health Care
Bayhealth Medical Center
Baylor Health Care System
Beacon Health Strategies
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* When voting under the NQF Consensus Development Process occurred for this report.

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Blue Cross Blue Shield of Michigan
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Bronson Healthcare Group
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Catholic Healthcare Partners
Catholic Health Initiatives
Centura Health
Child Health Corporation of America
CHRISTUS Health
CIGNA Healthcare
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Detroit Medical Center
Empire BlueCross/BlueShield
Exempla Healthcare
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Healthcare Leadership Council
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HealthPartners
Health Plus
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Hudson Health Plan
Illinois Hospital Association
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Los Angeles County–Department of Health Services
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National Association Medical Staff Services
National Association of Chain Drug Stores
National Association of Children's Hospitals and Related Institutions
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National Hospice and Palliative Care Organization
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PacifiCare Behavioral Health
Parkview Community Hospital and Medical Center
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Loyola University Health System-Center for Clinical Effectiveness
Lumetra
Maine Quality Forum
Medical Review of North Carolina
Medstat

National Academy for State Health Policy
National Association for Healthcare Quality
National Committee for Quality Assurance
National Committee for Quality Health Care
National Institutes of Health
National Patient Safety Foundation
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Northeast Health Care Quality Foundation
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OmniCare
Partnership for Prevention
Pennsylvania Health Care Cost Containment Council
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ProHealth Care
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** During project period
[1] Appointed to Board of Directors and named Chair-Elect in May 2005
[2] Since February 2005
[3] Through December 2004
[4] Through February 2005
[5] Through January 2005
[6] Since January 2005
[7] Since August 2005
[8] Through May 2005

Appendix C
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Appendix D
Commentary

Introduction

In December 2004, the National Quality Forum (NQF) initiated a project to achieve consensus on an initial set of physician-focused ambulatory care measures at the request of the Centers for Medicare and Medicaid Services (CMS). As with other NQF consensus projects, a Review Committee[1] (appendix C) representing key healthcare constituencies—including consumers, providers, purchasers, and research and quality improvement organizations—was convened. In March 2005, the Review Committee recommended a set of physician-focused, ambulatory care measures. Seven Technical Advisory Panels (TAPs) (appendix C) also were formed to assist NQF staff with measure evaluations, advise the Review Committee on the technical aspects of the measures, and make recommendations to the Review Committee. This appendix summarizes the deliberations of the Review Committee and the TAPs.

Approach to Measure Evaluation

In May 2004, NQF convened a workshop of its Members to identify 10 priority areas for ambulatory care quality measurement and reporting.[2] The 10 areas identified through this process were heart

[1] The set of ambulatory consensus standards was approved by the National Quality Forum (NQF) Board of Directors under the expedited consensus process. The expedited consensus process adheres to the NQF's Consensus Development Process (version 1.7), but there is no "Call for Measures." Under expedited consensus, the body that evaluates a candidate measure(s) and makes recommendations to NQF Members is designated a Review Committee (rather than a Steering Committee).

[2] National Quality Forum (NQF), *Improving the Quality of Ambulatory Care Quality: Workgroup Meeting Summary*, Washington, DC: NQF; August 2004.

disease, diabetes, hypertension, obesity, asthma, prevention, depression, medication management, patient experience with care, and coordination of care. The NQF consensus project sought to identify standards within those 10 areas. The 100 candidate measures that were submitted for consideration were assigned to 5 of the identified priority areas (asthma/respiratory illness, behavioral health/depression, heart disease, hypertension, and prevention) and 2 additional areas (bone conditions and prenatal care).

Purpose of the Measure Set

The Committee agreed that the principal focus of the measure set should be to stimulate quality improvement through physician-level accountability, including public reporting. It generally agreed on a definition of *physician-focused* as "measures of healthcare delivery system performance to which a physician makes a significant contribution." Committee members disagreed with reviewer comments that physician-focused measures should include only aspects of care solely under the control of the physician or measures that are self-reported by physicians.

The Committee considered alternative terminology to physician-focused, such as provider- or practitioner-focused. But, some members thought that a change might diminish the responsibility of the physician. Additionally, Committee members felt strongly that physicians are responsible for all the activities within an office practice, including group structure; members of the practice; collaboration with all practitioners in the practice; and concurrent care management. Moreover, the Committee supported the concept that the competencies of physicians include taking responsibility for practice performance, even if other factors or inputs (e.g., other practitioners and staff in the practice, fostering patient compliance with taking medications and undergoing screening tests) also contribute to performance.

With respect to the level of analysis implied by the term physician-focused, the Committee generally agreed that the practice level would likely be the most useful, but that it also should be possible to drill down to individual practitioners; it was noted that it is possible to aggregate measurement at higher levels (practice, group) if the individual data are collected, but not the reverse. The Committee consistently supported the importance of focusing on the physician role in fostering compliance and influencing patient behavior as an important aspect of performance that should be measured.

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] Information for the measure evaluations was obtained from the measure developers, from a literature review, and from independent research. A TAP for each priority area was established to provide a preliminary review of the measure

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

evaluations prepared by NQF staff and make recommendations to the Review Committee based on the perceived strengths and weaknesses of each measure and the technical reasons why a measure should not be recommended. The seven TAPs met by conference call to review the measures in each priority area. The Review Committee requested that the TAPs also provide a recommendation regarding whether the measure was suitable for accountability, including public reporting. The TAP comments and recommendations were included in each measure evaluation. Summary tables were prepared to facilitate the Review Committee's consideration of the TAP comments and recommendations.

Recommendation of Individual Measures

The Review Committee considered the measures in each priority area during a two-day meeting in Washington, DC. Comments and recommendations from the TAPs formed the basis of the initial deliberations, although the Review Committee noted some inconsistencies among the various TAP comments. Representatives of the measure developers were present to answer technical questions about the measure specifications.

Criteria for Recommending Measures

Prior to the discussion of individual measures, the Review Committee considered several potential inclusion criteria in addition to the standardized measure evaluation criteria (importance, scientific acceptability, usability, and feasibility).

Community- Versus Physician-Level Measures

TAP members generally supported the value of community-level measures, but did not recommend including them with the physician-level measures because the two types of measures have very different loci of accountability. Members of the Review Committee agreed that measures for this initial ambulatory care set should focus on measures relevant to the individual physician and physician practices or groups. The Committee supported the use of community-level measures for public health purposes as important measures of healthcare quality, but it deferred consideration of community-level measures for this set.

Data Source

The measures use one or more of six different data sources: Electronic Health Record Systems (EHRSs); retrospective medical record review; prospective flow sheets; administrative data; administrative plus medical record review; and survey. Committee members agreed that no measure should be eliminated from consideration solely on the basis of the data source. However, the data source for each measure was considered in the Committee's deliberations.

The Committee repeatedly discussed the burden of manual chart review (either paper or electronic data that cannot be analyzed). Data collection would be considerably less burdensome with automated data, such as are found in an EHRS. The Committee noted that the use of measures relying on the manual review of medical records is likely to stimulate the use of automated, electronic data systems, which

would be beneficial. The Committee recommended the use of prospective data collection when these measures are implemented.

Opportunity for Improvement and Relative Differentiation

Some of the measures assess a very basic, minimal level of performance (e.g., evaluation of the heart in heart failure [HF] patients, measuring blood pressure [BP] in hypertensive patients). The opportunity for improvement appears to be limited, and such measures can provide only relative differentiation at the very low end—that is, identifying very poor performance from everyone else. Review Committee members considered the opportunity for improvement in its recommendations.

Field or Pilot Testing

The degree of prior testing or use of the candidate measures varies widely. Some measures are being tested in CMS's Doctor's Office Quality (DOQ) and DOQ-IT (information technology) projects, as well as in pay-for-performance demonstration projects. According to the National Committee on Quality Assurance (NCQA), its measures have been used by individual plans to measure physician-level performance. The American Medical Association-Physician Consortium for Performance Improvement (AMA-PCPI) measures have not been tested for use in external reporting. Committee members generally agreed that the focus of their recommendations should be on the evidence behind the measure and its perceived feasibility, and less on formal testing for validity and the reliability of the measure itself. The Committee agreed not to eliminate any measures from discussion on the basis of the degree of formal testing the measure has undergone; however, the Committee did consider both formal testing and "face" validity (i.e., the likelihood that the information could be obtained from the data source specified) of the measure in its deliberations.

The Committee agreed with a reviewer who suggested that "the measures are intended to be [a] first step toward the development of a more comprehensive measure set," but it did not agree with reviewers who suggested that the report should acknowledge that the measures as currently specified have not been tested directly by physicians using physician-acquired data. Committee members noted that many of the measures have been tested and used in CMS's DOQ and DOQ-IT projects and the Bridges to Excellence[4] programs. The Committee acknowledged the variability of the state of development of the measures, but believed that these measures are the best available at this time.

[4]See www.bridgestoexcellence.org/bte/.

Priority Area: Asthma/Respiratory Illness

Asthma is a chronic respiratory disease that poses a considerable burden to those affected and results in substantial morbidity and healthcare service utilization.

- More than 30 million individuals in the United States are diagnosed with asthma during their lifetime.[5]
- In 2001, 12 million Americans had experienced an asthma attack in the previous year.[6]
- In 2000, asthma accounted for 10.4 million outpatient visits, 1.8 million emergency department visits, 465,000 hospitalizations, and 4,487 deaths.[7]
- The total direct and indirect costs of asthma in the United States are estimated at more than $14 billion annually.[8]

Five of 10 candidate measures reviewed were recommended for the set:

Asthma Assessment: Percentage of patients who were evaluated during at least one office visit for the frequency (numeric) of daytime and nocturnal asthma symptoms (AMA PCPI)

Data source: EHRS, retrospective record review, prospective flow sheet

The Review Committee discussed the performance gap arising from physicians not asking about nocturnal symptoms of asthma and acknowledged that this measure might not go far enough because it focuses on documentation (which may be administered by office staff), rather than on measuring physician involvement in the assessment of symptoms.

Use of Appropriate Medications for People with Asthma: Percentage of patients who were identified as having persistent asthma during the year prior to the measurement year and who were dispensed a prescription for either an inhaled corticosteroid or an acceptable alternative medication during the measurement year (NCQA)

Data source: Administrative

This measure, using administrative data, captures prescriptions dispensed, but this is not the same as capturing those that are written. The quality problem is underuse of medications, and compliance with prescribed medications is a factor. Committee members noted that although the cost of the inhaled corticosteroids is a real issue that affects patient compliance, the physician has a responsibility to not just prescribe medication, but to influence the ability of patients to follow through on shared treatment plans.

Asthma-Pharmacologic Therapy: Percentage of all patients with mild, moderate, or severe persistent asthma who were prescribed either the preferred long-term control medication (inhaled corticosteroid) or an acceptable alternative treatment (AMA PCPI)

Data source: EHRS, retrospective record review, prospective flow sheet

This measure, based on chart review, evaluates the physician's documented assessment of the severity of asthma

[5] National Center for Health Statistics (NCHS), Centers for Disease Control and Prevention (CDC), *Asthma Prevalence, Health Care Use and Mortality, 2000-2001.* Available at www.cdc.gov/nchs/products/pubs/pubd/hestats/asthma/asthma.htm. Last accessed March 2005.
[6] National Institutes of Health (NIH), National Heart, Lung, and Blood Institute, *Morbidity and Mortality: 2002 Chart Book on Cardiovascular, Lung, and Blood Diseases.* Available at www.nhlbi.nih.gov/resources/docs/02_chtbk.pdf. Last accessed March 2005.
[7] NCHS, CDC, *Asthma Prevalence, Health Care Use and Mortality, 2000-2001.* Available at www.cdc.gov/nchs/products/pubs/pubd/hestats/asthma/asthma.htm. Last accessed March 2005.
[8] Ibid.

symptoms (which is often missing) and appropriate treatment. Review Committee members noted that both measures of pharmacologic therapy for asthma look at different aspects of the treatment of asthma—prescribing versus dispensing—and that using both measures allows for more specific identification of the performance gaps.

Appropriate Treatment for Children with Upper Respiratory Infection (URI): Percentage of patients who were given a diagnosis of URI and were not dispensed an antibiotic prescription on or three days after the episode date (NCQA)

Data source: Administrative data

In 1997-1998, URIs represented 8.7 percent of all antibiotic prescriptions for infectious respiratory diseases in children under 15 years of age. For U.S. children in this age group, antibiotics for infectious respiratory disease accounted for 74 percent of the total antibiotics prescribed in 1997-1998. Additionally, in 1999-2000, data showed that nationally antibiotics were prescribed during 22 percent of pediatric URI visits.[9] Inappropriate antibiotic use is of great public health concern, both nationally and globally, because of its association with increased antibiotic resistance in the community.[10,11]

This measure evaluates the inappropriate use of antibiotics in children with colds. The Committee believed this measure to be a good driver of quality improvement that would assess the ability of the physician to educate parents and families in the appropriate use of antibiotics. The Committee acknowledged that some inappropriate coding for a bacterial infection might occur and that the measure would not capture antibiotic prescriptions given without a patient visit. The Committee also recommended that a similar measure for the adult population should be developed.

Appropriate Testing for Children with Pharyngitis: Percentage of patients who were diagnosed with pharyngitis, prescribed an antibiotic and who received a group A streptococcus test for the episode (NCQA)

Data source: Administrative data

The prevalence of pharyngitis in children between the ages of 1 and 18 ranges between 31 and 36 percent.[12,13] A study based on data from the National Ambulatory Medical Care Survey estimated that antibiotics were prescribed for 53 percent of the 7.3 million annual visits for sore throat. For sore throat visits when antibiotics were prescribed, only 51 percent of clinicians tested for group A beta-hemolytic streptococci.[14]

The Committee noted that this measure promotes the use of testing for streptococcal pharyngitis prior to prescribing antibiotics and helps discourage unnecessary antibiotic therapy. Overuse of antibiotics for viral URIs has been demonstrated in the United States, and the emergence of

[9] McCaig, LF, Besser, RE, Hughes JM. Trend in antimicrobial prescribing rates for children and adolescents, *JAMA.* 2002;287(23):3096-3102.

[10] Austin DJ, Kristinsson KG, Anderson RM. The relationship between the volume of antimicrobial consumption in human communities and the frequency of resistance, *Proceedings of the National Academy of Science, USA.* 1999;96:1152-1156.

[11] Patterson JE. Antibiotic utilization: is there an effect on antimicrobial resistance? *Chest.* 2001;119(suppl 2):426S-430S.

[12] Tsevat J, Kotagal UR. Management of sore throats in children: a cost-effectiveness analysis, *Archives of Pediatric and Adolescent Medicine.* 1999;153:681-688.

[13] Webb KH, Does culture confirmation of high-sensitivity rapid streptococcal tests make sense? a medical decision analysis. *Pediatrics.* 1998;101(2):E2.

[14] Linder JA, Bates DW, Lee GM, et al. Antibiotic treatment of children with sore throat. *JAMA.* 2005;294:2315-2322.

resistant bacteria is worrisome. Members of the Committee reported that the current performance on this measure demonstrates that 30 to 40 percent of prescriptions are inappropriate. The Committee considered concerns with inappropriate coding—that is, coding for some type of bacterial infection whenever an antibiotic is prescribed—but ultimately recommended the measure to highlight the important issue of antibiotic overuse. The Committee also discussed the common practice of conducting clinical evaluation rather than laboratory testing prior to the initiation of antibiotic therapy, but believed that the best evidence based on practice guidelines indicates that laboratory testing should be performed prior to antibiotic therapy.

Measure Not Recommended

Both the TAP and the Committee declined to recommend a measure of the "distribution of long-term control therapy by medication, severity classification, and age range" for asthma patients for accountability.

Priority Area: Behavioral Health

Major Depressive Disorder (MDD) is a highly prevalent disorder that has a significant impact on both the affected individual and on society as a whole. It is estimated that as many as one in six Americans will suffer from MDD at some point in their lives.[15] MDD is currently thought to be the leading cause of disability in the United States,[16] and total direct and indirect costs of depression are estimated at more than $43 billion annually.[17]

Three of 11 candidate measures were recommended for the set.

Optimal Practitioner Contacts for Medication Management: Percentage of patients who were diagnosed with a new episode of depression and treated with antidepressant medication and had at least 3 follow-up contacts with a primary care practitioner or mental health practitioner coded with a mental health diagnosis during the 84-day (12-week) acute treatment phase (NCQA)

Data source: Administrative data

Effective Acute Phase Treatment: Percentage of patients who were diagnosed with a new episode of depression and treated with antidepressant medication and remained on an antidepressant drug during the entire 84-day (12-week) acute treatment phase (NCQA)

Data source: Administrative data

Effective Continuation Phase Treatment: Percentage of patients who were diagnosed with a new episode of depression and treated with antidepressant medication and remained on an antidepressant for at least 180 days (6 months) (NCQA)

Data source: Administrative data

The Review Committee agreed with the TAP that these three measures provide only a beginning for the assessment of quality of care for patients with depression, that even with these three measures there is room for improvement, and that there

[15] Davidson JR, Meltzer-Brody SE, The underrecognition and undertreatment of depression: what is the breadth and depth of the problem? *J Clin Psychiatry*. 1999;60(suppl 7):4-9.

[16] The Robert Wood Johnson Foundation, *Chronic Care in America: A 21st Century Challenge,* Princeton, NJ: The Robert Wood Johnson Foundation; 1996.

[17] U.S. Department of Health and Human Services (DHHS). *Mental Health: A Report of the Surgeon General,* Rockville, MD: DHHS, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health; 1999. Available at www.mentalhealth.org/features/surgeongeneralreport/home.asp. Last accessed January 2006.

is a need for more refined measures of care in depression.

Measures Not Recommended

In general, the Review Committee agreed with the TAP and did not recommend two screening measures, "percentage of patients who were screened annually for depression in primary care setting" and "percentage of patients with a positive screen for depression with a follow-up assessment or referral." Both also were not recommended because of preliminary results in the DOQ project noting low reliability. A measure of "patients with major depressive disorder who were continued on medication for a minimum of 16 weeks following remission of symptoms" was not recommended because of difficulty in determining who is in remission. Three measures of assessment were not recommended because data collection would not be feasible from retrospective record review.

Priority Area: Bone Conditions

Three of eight candidate measures for patients with bone conditions were recommended for the set.

Osteoporosis Management in Women Who Had a Fracture: Percentage of women who suffered a fracture, and who had either a bone mineral density test or prescription for a drug to treat or prevent osteoporosis in the six months after date of fracture (NCQA)

Data source: Administrative data

In 2004, the U.S. Surgeon General reported that osteoporosis and bone health were a major public health priority. Osteoporosis and other bone diseases affect 10 million individuals and cause approximately 1.5 million fractures annually. The public health impact is expected to become more significant as the number of individuals in the at-risk age range increases. A significant portion of osteoporosis related injuries are considered to be preventable.[18] The U.S. Preventive Services Task Force found that 12 percent to 28 percent of women 65 years of age and older have osteoporosis.

The Review Committee noted that this measure depends on coordination of care between the hospital, the specialist, and the primary care physician. Attribution for this measure could be the primary care physician or a specialist physician or both. This measure has been used widely at the plan level, although sample size may be an issue at the physician level. Several reviewers expressed concern with the codes for fracture that are included and the codes for conditions for osteoporosis that are excluded. The measure developer has indicated that these issues will be considered during its next internal review of the measure. This measure was not approved during member vote.

Osteoarthritis—Assessment for Use of Anti-inflammatory or Analgesic Over-the-Counter (OTC) Medications: Percentage of patient visits with an assessment for use of anti-inflammatory or analgesic OTC medications (American Academy of Orthopaedic Surgeons [AAOS]/AMA PCPI)

Data source: EHRS, retrospective record review, prospective flow sheet

According to the U.S. Centers for Disease Control and Prevention (CDC), arthritis and chronic joint symptoms are one of the most prevalent diseases in the United States. Prevalence of arthritis is expected to increase as the population ages. AAOS reports that osteoarthritis is a leading cause

[18] U.S. DHHS, *Bone Health and Osteoporosis: A Report of the Surgeon General (2004).* Released January 14, 2004. Available at www.surgeongeneral.gov/library/bonehealth/content.html. Last accessed January 2005.

of disability.[19] CDC reports the following annual burden of disease:

- 9,500 deaths;
- 750,000 hospitalizations;
- 8 million people with limitations;
- 36 million ambulatory care visits;
- 49 million people with self-reported, doctor-diagnosed arthritis; and
- $51 billion in medical costs and $86 billion in total costs.[20]

Initially, both the TAP and the Review Committee noted a concern with capturing data regarding OTC medications, but decided that the patient safety issue of documenting all medications taken by the patient, including OTC medications, in considering a treatment course was more compelling.

Osteoarthritis—Functional and Pain Assessment: Percentage of patient visits with assessment for function and pain (AAOS/AMA PCPI)

Data source: EHRS, retrospective record review, prospective flow sheet

The Review Committee supported this patient-centered measure because it gauges whether patients have been assessed for two critical aspects of care—pain and function.

Measures Not Recommended

The Committee did not recommend five other measures pertaining to osteoporosis (gastrointestinal prophylaxis, non-steroidal anti-inflammatory drugs risk assessment, physical examination, drug therapy, and therapeutic exercise) because of a weak evidence base and imprecise specifications. Additionally, the Committee noted that the measures were developed for prospective data collection and that much of the data are not recorded in the chart and would not be available for retrospective data abstraction.

Priority Area: Heart Disease

Coronary Artery Disease

Chronic stable coronary artery disease (CAD) is the leading cause of mortality in the United States, accounting for one in five deaths in 2001. In 2004, the estimated direct and indirect cost of CAD was $133.2 billion.[21]

Twelve of 16 candidate measures for patients with CAD were recommended for the set.

CAD—Symptoms and Activity Assessment: Percentage of patients with CAD who were evaluated for both level of activity and anginal symptoms during one or more office visits (AMA PCPI/American College of Cardiology [ACC]/American Heart Association [AHA])

Data source: EHRS, retrospective record review, prospective flow sheet

The Review Committee agreed with the TAP recommendation for this patient-centered measure. The ACC/AHA *Guidelines for the Management of Patients with Chronic Stable Angina* recommends regular assessment of patients' anginal symptoms and level of activity. Assessing a patient's perception of his or her symptoms is a cornerstone of effective chronic disease

[19] American Academy of Orthopaedic Surgeons, *Improving Musculoskeletal Care in America (IMCA) Project: Osteoarthritis of the Knee;* September 2002.

[20] CDC, National Center for Chronic Disease Prevention and Health Promotion, *Targeting Arthritis: Reducing Disability for 43 Million Americans: At a Glance 2005.* Available at www.cdc.gov/nccdphp/aag/aag_arthritis.htm. Last accessed January 2005.

[21] American Heart Association (AHA), *Heart Disease and Stroke Statistics – 2004 Update,* Dallas, TX: AHA; 2003.

management, and this assessment should be conducted and documented at every visit.

CAD—Cholesterol Screen: Percentage of patients discharged from the hospital after acute myocardial infarction (AMI), coronary artery bypass graft (CABG), percutaneous transluminal coronary angioplasty (PTCA) within the measurement year receiving at least one LDL-C screening (NCQA)

Data source: Administrative data or administrative plus record review

CAD—Lipid Profile: Percentage of patients with CAD who received at least one lipid profile (or ALL component tests) (AMA PCPI/ACC/AHA)

Data source: EHRS, retrospective record review, prospective flow sheet

The TAP recommended both measures of lipid screening. The NCQA measure looks at post-hospitalization patients, which is a subset of the chronic care population captured in the second measure. A similar measure, "lipid screening at discharge for coronary artery bypass graft patients," is included in NQF's set of cardiac surgery consensus standards[22] but not in NQF's initial set of hospital consensus standards.[23]

CAD—Drug Therapy for Lowering LDL Cholesterol: Percentage of patients with CAD who were prescribed a lipid-lowering therapy (based on current ACC/AHA guidelines) (AMA PCPI/ACC/AHA)

Data source: EHRS, retrospective record review, prospective flow sheet

The TAP and Review Committee recommended this measure as consistent with current evidence-based, therapeutic guidelines that promote statin use for managing cholesterol.

CAD—Cholesterol Control: Percentage of patients discharged from the hospital after AMI, CABG, PTCA within the measurement year with LDL-C test results <130mg/dL and <100mg/dL (NCQA)

Data source: Administrative data or administrative plus record review

Both the TAP and the Review Committee agreed that this is an important intermediate outcome measure and noted that the therapeutic targets for LDL-C are constantly changing and that the <130 is outdated and the <100 target may be reduced in the near future.

CAD—LDL Cholesterol level: Percentage of patients with most recent LDL cholesterol <130 mg/dl and <100mg/dl (CMS)

Data source: EHRS, retrospective record review, prospective flow sheet

CAD—Antiplatelet Therapy: Percentage of patients with CAD who were prescribed antiplatelet therapy (AMA PCPI/ACC/AHA)

Data source: EHRS, retrospective record review, prospective flow sheet

The TAP and the Review Committee recommended this measure as an important care process that has shown much improvement over the past few years, but there are areas that are lagging. NQF's initial hospital set[24] has a similar measure for aspirin prescribed at discharge for AMI patients, and the cardiac surgery set has a measure "antiplatelet medications prescribed at discharge for CABG patients."

[22] NQF, *National Voluntary Consensus Standards for Cardiac Surgery: A Consensus Report,* Washington, DC: NQF; 2004.

[23] NQF, *National Voluntary Consensus Standards for Hospital Care: An Initial Performance Measure Set,* Washington, DC: NQF; 2003.

[24] Ibid.

CAD—Beta Blocker Treatment After a Heart Attack: Percentage of patients hospitalized with an AMI during the measurement year who were prescribed beta blocker therapy (NCQA)

Data source: Administrative data or administrative plus record review

CAD—Beta Blocker Therapy-Prior MI: Percentage of patients with prior MI at any time who were prescribed beta blocker therapy (AMA PCPI/ACC/AHA)

Data source: EHRS, retrospective record review, prospective flow sheet

The Review Committee recommended both measures of beta blocker use as complementary in addressing different aspects of patient care. Dispensing of medications, from pharmacy data, is not the same as prescribing. Two different data sources must be used to identify the performance gap between prescribing and dispensing. The dispensing measure is tied to a hospitalization for AMI within the year, which is a smaller group than all patients with CAD and addresses an important timeframe for treatment. A similar measure "beta blocker prescribed at discharge for AMI" is included in NQF's hospital standards set.

CAD—Angiotensin Converting Enzyme (ACE) Inhibitor or Angiotensin Receptor Blocker (ARB) Therapy: Percentage of patients with CAD who also have diabetes and/or left ventricular systolic dysfunction (LVSD) who were prescribed ACE inhibitor or ARB therapy (AMA PCPI/ACC/AHA)

Data source: EHRS, retrospective record review, prospective flow sheet

The TAP and the Review Committee recommended this measure as an important care process that is aligned with a similar hospital measure. The measure has been updated to include ARB therapy consistent with new ACC/AHA guidelines.

Measure Pair: Smoking Cessation[25]

CAD—Smoking Cessation: Percentage of patients with CAD who were queried one or more times about cigarette smoking (AMA PCPI/ACC/AHA)

AND

CAD—Smoking Cessation Intervention: Percentage of patients with CAD identified as cigarette smokers who received smoking cessation intervention (AMA PCPI/ACC/AHA)

Data source: EHRS, retrospective record review, prospective flow sheet

The TAP and the Review Committee recommended both measures as important care processes based on medical record review. Both measures are important together to 1) assess which patients are smokers and 2) institute an intervention in those identified as smokers; thus, the Committee recommended them as a pair.

Measures Not Recommended

The Review Committee did not recommend measures of "BP measurement," because of the limited opportunity for improvement and because "distribution of BP measurement" and "distribution of cholesterol values" are not suitable for accountability.

HF

In 2002, 550,000 new cases of HF were diagnosed, 52,828 patients died, and 4.9 million Americans lived with it. Hospital discharges for HF rose from 377,000 in 1979 to 970,000 in 2002, an increase of 157 percent. The estimated direct and indirect cost of HF in the United States for 2005 was $27.9 billion.[26]

Eight of 15 candidate measures for patients with HF were recommended for the set.

[25] The measures are specifically linked together, and one should not be used without the other.

[26] AHA, *Heart Disease and Stroke Statistics--2005 Update,* Dallas, TX: AHA; 2005.

HF—Left Ventricular Function (LVF) Assessment: Percentage of patients with HF with quantitative or qualitative results of LVF assessment recorded (AMA PCPI/ACC/AHA)

Data source: EHRS, retrospective record review, prospective flow sheet

The Review Committee and the TAP recommended this measure. It evaluates physician awareness of an important functional assessment, namely the measure of LVF in patients with HF.

HF—Weight Measurement: Percentage of patient visits for patients with HF with weight measurement recorded (AMA PCPI/ACC/AHA)

Data source: EHRS, retrospective record review, prospective flow sheet

The TAP and the Review Committee recommended this measure to evaluate an important "vital sign" in the management of HF. The baseline performance is unknown and should be established.

HF—Assessment of Clinical Symptoms of Volume Overload: Percentage of patient visits or patients with HF with assessment of clinical symptoms of volume overload (excess) (AMA PCPI/ACC/AHA)

Data source: EHRS, retrospective record review, prospective flow sheet

The Committee discussed the ACC/AHA guidelines, which state that it is critically important for physicians to evaluate the fluid or volume status of patients with HF during the initial visit and during each subsequent evaluation. Even though the term *assessment* seems open to interpretation, the Review Committee and the TAP recommended this patient-centered measure as an important process of care.

HF—Assessment of Activity Level: Percentage of patient visits or patients with HF with assessment of activity level (AMA PCPI/ACC/AHA)

Data source: EHRS, retrospective record review, prospective flow sheet

Both the Review Committee and the TAP strongly recommended this patient-centered measure of the assessment of an important outcome of the treatment plan for HF, namely the benefit to the patient's quality of life.

HF—Patient Education: Percentage of patients with HF who were provided with patient education on disease management and health behavior changes during one or more visit(s) within a six-month period (AMA PCPI/ACC/AHA)

Data source: EHRS, retrospective record review, prospective flow sheet

Both the TAP and the Review Committee recommended this patient-centered measure. The Review Committee noted that this measure may capture disease management programs and evaluate the coordination of care for HF patients and is synergistic with the hospital measure "detailed discharge instructions for patients with HF." Reviewers noted that the elements of education for this measure differ from the NQF-endorsed™ hospital measure and recommended that the specifications should be aligned. This measure was not approved during member vote.

HF—Beta Blocker Therapy: Percentage of patients with HF who also have LVSD who were prescribed beta blocker therapy (AMA PCPI/ACC/AHA)

Data source: EHRS, retrospective record review, prospective flow sheet

HF—ACE Inhibitor/ARB Therapy: Percentage of patients with HF who also have LVSD who were prescribed ACE inhibitor or ARB therapy (AMA PCPI/ACC/AHA)

Data source: EHRS, retrospective record review, prospective flow sheet

HF—Warfarin Therapy for Patients with Atrial Fibrillation: Percentage of patients with HF who also have paroxysmal or chronic atrial fibrillation who were prescribed warfarin therapy (AMA PCPI/ACC/AHA)

Data source: EHRS, retrospective record review, prospective flow sheet

The Review Committee agreed with the TAP recommendation regarding these three measures of drug therapy in HF patients as important care processes with a strong evidence base.

Measures Not Recommended

Neither the TAP nor the Review Committee recommended another measure of LVSD in patients who have been hospitalized because it is the same as the measure in the hospital set. The TAP and the Review Committee did not recommend several measures because of imprecise specifications (assessment of clinical signs of fluid overload; visits with examination of the heart and initial laboratory testing).

Priority Area: Hypertension

Data from the National Health and Nutrition Examination Survey have indicated that 50 million or more Americans have high BP that warrants some form of treatment. According to the Joint National Committee on Prevention, Detection, Evaluation and Treatment of High Blood Pressure, more than 40 percent of individuals with hypertension, or approximately 20 million Americans, still are not on treatment and are at significant risk for increased morbidity and mortality from hypertension-related diseases and reduced quality of life. The condition also contributes to increased healthcare costs.[27]

Two of six candidate measures were recommended for the set.

Plan of Care: Percentage of patient visits during which either systolic blood pressure >140 mm Hg or diastolic blood pressure >90 mm Hg, with documented plan of care for hypertension (AMA PCPI/ACC/AHA)

Data source: EHRS, retrospective record review, prospective flow sheet

Both the TAP and the Review Committee members agreed that this is an important measure of quality care in hypertension, specifically regarding the physician noting an abnormal BP value and responding to it. Despite the lack of specificity about the types of responses that are captured, neither the TAP nor the Review Committee had any reservations in recommending this measure.

Controlling High BP: Percentage of patients with last BP <140/90 mm Hg (CMS/NCQA)

Data source: EHRS, retrospective record review, prospective flow sheet

This outcome measure for hypertension is an essential measure of quality of care. Review Committee members preferred the specifications that include a target BP <140/90 and includes everyone ≥18 years old. Committee members felt that the lack of exclusions is not problematic for the general population.

Measures Not Recommended

The Review Committee did not recommend "BP measurement" for hypertensive patients because it is unlikely to provide an opportunity for improvement. The Committee also did not recommend an alternative measure of BP control because the measure's target BP was ≤140/90, which is not consistent with current guidelines, and it was limited to those 46 to 85 years of age.

[27] Chobanian AV, Bakris GL, et al., Seventh report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure, *Hypertension*. 2003;42:1206.

Priority Area: Prenatal Care

Maternal medical risk factors can contribute to serious pregnancy complications and infant deaths, particularly if risk factors are not assessed or are not treated properly.[28,29]

Two of 11 candidate measures were recommended for the set. Both the TAP and the Review Committee members noted that the candidate measures did not address many important areas of prenatal care and recommended the development of measures that are tied to evidence that shows that an improvement in use would be expected to lead to an improvement in outcome (e.g., the use of folate to reduce major malformations; the use of progesterone in women with prior preterm birth to decrease the risk of subsequent preterm birth; screening for Group B streptococcus infection; and the availability of the prenatal record at the hospital at the time of delivery to provide more complete information about the quality of prenatal care).

Anti-D Immune Globulin: Percentage of D (Rh) negative, unsensitized patients who received anti-D immune globulin at 26-30 weeks gestation (AMA PCPI)

Data source: EHRS, retrospective record review, prospective flow sheet

The TAP and the Review Committee members noted that this measure represents an important prenatal care process that is sometimes overlooked, and that the consequences of a woman becoming sensitized are disastrous for future pregnancies.

Screening for Human Immunodeficiency Virus (HIV): Percentage of patients who were screened for HIV infection during the first or second prenatal care visit (AMA PCPI)

Data source: EHRS, retrospective record review, prospective flow sheet

Both the TAP and the Review Committee members supported this measure to stimulate greater HIV screening during pregnancy by using the "opt-out" strategy (all patients will be tested except for those who specifically decline).

Measures Not Recommended

The TAP and the Review Committee did not recommend the measures "use of a prenatal flow sheet," "blood group and antibody testing," and "screening for asymptomatic bacteriuria" because they are very basic care processes in widespread use, and the opportunity for improvement is limited. Neither the TAP nor the Review Committee recommended the measure "screening for gestational diabetes," because current guidelines do not support universal laboratory screening for gestational diabetes.

The TAP and Review Committee members did not recommend "PAP smear screening in pregnancy" as a measure separate from PAP smear screening in the general female population. If necessary, the obstetrical population could be extracted as a subset of the general PAP smear screening measure.

The Review Committee was divided on the measures for screening for congenital anomalies, noting concerns about legal requirements for screening in some states and overlap with liability issues. Ultimately, the Committee did not recommend the measures.

[28] American College of Obstetricians and Gynecologists (ACOG) Practice Bulletin, Prevention of Rh D alloimmunization. No. 4. May 1999. Clinical Management Guidelines for Obstetrician-Gynecologists, *Int J Gynaecol Obstet.* 1999;66(1):63-70.

[29] ACOG Committee Opinion No. 304, Prenatal and perinatal human immunodeficiency virus testing: expanded recommendations, *Obstet Gyneco,* 2004;104:1119-1124.

Priority Area: Prevention, Immunization, and Screening

Prevention

Seven of 11 candidate measures pertaining to prevention were recommended for the set, including two measure pairs and one measure triad.

Measure Pair: Tobacco Use

Tobacco Use: Percentage of patients who were queried about tobacco use one or more times during the two-year measurement period

AND

Tobacco Cessation: Percentage of patients identified as tobacco users who received cessation intervention during the two-year measurement period

Data source: EHRS, retrospective record review, prospective flow sheet

CDC states that "cigarette smoking is the single most preventable cause of premature death in the United States," and each year one in every five deaths in the United States is smoking related.[30] Overall, there are 442,398 U.S. deaths attributable each year to cigarette smoking, resulting in more than $75 billion in direct medical costs annually.[31,32]

These two measures of smoking cessation counseling and intervention assess the physician documentation of an important evidence-based prevention strategy. The Committee recommended that these two measures be paired.

Measure Triad - Smoking

Advising Smokers to Quit: Percentage of patients who received advice to quit smoking

AND

Discussing Smoking Cessation Medication: Percentage of patients whose practitioner recommended or discussed smoking cessation medications

AND

Discussing Smoking Cessation Strategies: Percentage of patients whose practitioner recommended or discussed smoking cessation methods or strategies (NCQA)

Data source: Patient survey

These three measures are derived from a patient questionnaire that assesses the patient's perception of smoking cessation counseling and intervention. The Review Committee recommended these measures along with the smoking cessation measure abstracted from the chart to evaluate the potential gap between physician and patient perception of interventions for stopping smoking. The Committee recommended that the three measures from the same patient survey be grouped together as a triad.

Measure Pair - Urinary Incontinence (UI)

Discussing UI: Percentage of patients who reported having a problem with urine leakage in the last six months and who discussed their urine leakage problem with their current practitioner (NCQA)

AND

Receiving UI Treatment: Percentage of patients who reported having a problem with urine leakage in the last six months and discussed it with their current practitioner and who received treatment (pharmacologic and non-pharmacologic) for their current urine leakage problem (NCQA)

[30] CDC, *Cigarette Smoking Mortality.* Available at www.cdc.gov/tobacco/research_data/health_consequences/mortali.htm. Last accessed December 2004.

[31] CDC, *Cigarette Smoking-Related Mortality, Tobacco Information and Prevention Source (TIPS);* June 2001. Available at www.cdc.gov/tobacco/research_data/health_consequences/mortali.htm. Last accessed January 2005.

[32] CDC Smoking-Attributable Mortality, Morbidity, & Economic Costs, *MMWR,* 2002;51(14):300-303.

Data source: Patient survey

An estimated 15 to 50 percent of community-living women are affected by UI. A recent report from the National Institutes of Health indicated that women with incontinence reported changing lifestyles and that many experience depression and isolation; the report recommended additional research to quantify these effects.[33] The total cost of UI is estimated at $19.5 billion (in year 2000 dollars). Of this, $14.2 billion was borne by community residents and $5.3 billion by institutional residents.[34]

The Review Committee discussed the important prevention issue of high prevalence in older women. Treatment options include non-pharmacologic interventions such as Kegel exercises as well as medications. Consumers on the Review Committee strongly supported this measure, and the Review Committee recommended pairing the two survey measures.

Measures Not Recommended

Neither the TAP nor the Review Committee recommended a measure of screening for problem drinking. Even though problem drinking is of great importance, the measure needs additional testing and would benefit from the use of a standardized assessment tool.

Immunization

Four of six candidate measures for vaccination were recommended for the set.

Measure Pair: Flu Shot

Flu Shot for Older Adults: Percentage of patients age 65 and over who received an influenza vaccination (CMS/NCQA)

Data source: Patient survey

AND

Flu Shot for Adults Age 50-64: Percentage of patients age 50-64 who received an influenza vaccination (CMS/NCQA)

Data source: Patient survey

Influenza Vaccination: Percentage of patients who received an influenza vaccination (AMA PCPI)

Data source: EHRS, retrospective record review, prospective flow sheet

Influenza-related deaths can result from pneumonia as well as from exacerbations of cardiopulmonary conditions and other chronic diseases. Older adults account for more than 90 percent of deaths attributed to pneumonia and influenza. In a recent study of influenza epidemics, approximately 19,000 influenza-associated pulmonary and circulatory deaths per influenza season occurred from 1976 to 1990, compared with approximately 36,000 deaths from 1990 to 1999.

Estimated rates of influenza-associated pulmonary and circulatory deaths per 100,000 were 0.4 to 0.6 among persons 49 years old or younger, 7.5 among persons aged 50 to 64 years, and 98.3 among persons 65 or older.[35] The annual direct medical

[33] Litwin MS, Saigal CS, eds. *Urologic Diseases in America,* NIH Publication No. 04-5512, Washington, DC: U.S. Government Publishing Office; 2004. Available at http://kidney.niddk.nih.gov/statistics/uda. Last accessed February 2005.

[34] Hu TW, Wagner TH, Bentkover JD, et al., Costs of urinary incontinence and overactive bladder in the United States: a comparative study, *Urology.* 2004;63(3):461-465.

[35] CDC. Prevention and control of influenza: recommendations of the Advisory Committee on Immunization Practices (ACIP), *MMWR* (serial online). 2004;53(RR-06):1-34.

costs (e.g., hospitalization, doctor's office visits, medications) of influenza are estimated at up to $4.6 billion. The total direct and indirect costs (e.g., work days lost, school days lost) of a severe flu epidemic are at least $12 billion.[36]

The TAP and the Review Committee recommended both the patient survey and chart review influenza measures. Each measure will provide a different picture of influenza vaccination prevalence, although there is evidence that patient recall is more accurate than chart review, because many patients receive their flu shot from community locations and public health programs rather than from a physician's office. The Review Committee members also noted that the use of these measures should take into account issues of seasonality and vaccine availability. The Committee did not recommend the use of the measure during years in which there is a shortage of vaccine.

Pneumonia Vaccination: Percentage of patients who ever received a pneumococcal vaccination (CMS/NCQA)

Data source: EHRS, retrospective record review, prospective flow sheet

Each year, pneumococcal infection causes an estimated 40,000 deaths among adults in the United States. Pneumococcal infection accounts for more deaths than any other vaccine-preventable bacterial disease.[37] Approximately half of these deaths potentially could be prevented through the use of vaccine.[38]

The Review Committee recommended one of two candidate pneumococcal vaccination measures. It selected the measure that uses record review or administrative data, rather than patient survey. It noted sensitivity and specificity problems in patient recall for a vaccination given once in 10 years. The long look-back period is challenging, but it is important for the ongoing care of the patient that the information is clearly documented in the chart.

Childhood Immunization Status: Percentage of patients who turned 2 years old during the measurement year who had four DTaP/DT, three IPV, one MMR, three H influenza type B, three hepatitis B and one chicken pox vaccine (VZV) by the time period specified and by the child's second birthday (NCQA)

Data source: Administrative data or administrative plus record review

Largely because of the development and use of vaccines, the prevalence of some infectious diseases has been dramatically reduced. For example, in 1995 301 cases of measles but no cases of diphtheria or wild polio were reported. However, the viruses and bacteria that cause vaccine-preventable disease and death still exist and can be spread to people who are not protected by vaccines. Vaccine-preventable diseases have a costly impact, resulting in doctor's visits, hospitalizations, and premature deaths.[39]

The Review Committee recommended this measure, which has been widely used at the health plan level and which has performed well for many years. The

[36] National Coalition for Adult Immunization, *Facts about Influenza for Adults.* Available at www.nfid.org/factsheets/influadult.html. Last accessed January 2005.

[37] CDC, Prevention of pneumococcal disease: recommendations of the Advisory Committee on Immunization Practices (ACIP), *MMWR.* 1997;46(RR-08):1-24. Last accessed February 2005.

[38] Ibid.

[39] Fenner F, Henderson DA, Arita I, et al., *Smallpox and Its Eradication,* Geneva, Switzerland: World Health Organization; 1988. Available at www.who.int/emc/diseases/smallpox/Smallpoxeradication.html. Last accessed February 2005.

measure requires maintenance to keep the specifications consistent with current vaccination guidelines, which change frequently. Many plans and providers are linked to patient registries that enable them to gather data when the immunizations are given by a clinic or other public provider. Influenza immunization is not yet included in the measure.

Measures Not Recommended

The TAP and the Review Committee did not recommend a measure of adolescent immunization, which is a "catch-up" measure for those who did not get vaccinated according to the childhood recommendations. Adolescents have infrequent healthcare visits, which makes it difficult to hold providers accountable for delivering vaccines within a specific window of opportunity. A patient survey measure of pneumococcal vaccination also was not recommended because of concerns about patient recall.

Screening

Three of six candidate measures for screening were recommended for the set.

Breast Cancer Screening: Percentage of women who had a mammogram during the measurement year or year prior to the measurement year (CMS/NCQA)

Data source: Administrative data or administrative plus record review

Breast cancer is the second most common type of cancer among American women, with approximately 175,000 new invasive breast cancer cases and 43,000 deaths estimated for 1999. Breast cancer accounts for 32 percent of all cancers in women and 18 percent of female cancer deaths. Mammography screening has been shown to reduce mortality from breast cancer by 20 percent to 40 percent among women 50 years of age and older.[40]

The Review Committee recommended this measure based on its use of administrative data as well as its greater precision in specifications.

Colorectal Cancer Screening: Percentage of patients who had appropriate screening for colorectal cancer (NCQA)

Data source: Administrative data or administrative plus record review

Colorectal cancer is the second leading cause of cancer-related death in the United States. There were an estimated 135,400 new cases and 56,700 deaths from the disease in 2001. Colorectal cancer places significant economic burden on the society as well, with treatment costing more than $6.5 billion per year. Among malignancies, colorectal cancer costs are second only to those of breast cancer at $6.6 billion per year.[41]

The Review Committee recommended this measure based on administrative data, which allows for medical record supplementation to take patient preferences into account.

Cervical Cancer Screening: Percentage of women who received one or more Pap tests during the measurement year or during the two years prior to the measurement year

An estimated 13,000 new cervical cancer diagnoses and 4,100 cervical cancer deaths occurred in the United States in 2002.[42] In countries without established cervical

[40] Smith RA, Saslow D, Sawyer KA, et al. American Cancer Society guidelines for breast cancer screening; update 2003, *CA Cancer Journal for Clinicians.* 2003;53:141-169.

[41] See www.cancer.org/downloads/STT/F&F2001.pdf. Last accessed January 2006.

[42] National Cancer Institute (NCI), *Cervical Cancer (PDQ®): Prevention.* Updated May 2002.

cancer screening programs, cervical cancer is the second or third most common cancer. The five-year survival rate for cervical cancer is 67 percent. About 50 percent of cervical cancer cases are currently diagnosed at the localized stage, and five-year survival rate is about 90 percent.[43]

The Review Committee and the TAP recommended this measure, which has been widely used for several years at the health plan level. Review Committee members noted that a Pap test may be done by a gynecologist or a primary care physician.

Measures Not Recommended

The Review Committee did not recommend measures of mammography screening and colorectal cancer screening based on medical record review data. The Review Committee also did not recommend a measure of chlamydia screening and recommended further testing at the physician level to capture the various data elements administratively.

The Recommended Set of Measures

Several reviewers commented on the overarching characteristics of the set, a topic that was not addressed per se by the Committee during its deliberations. Accordingly, following the review phase, the Committee also discussed these issues.

Number of Measures

Several reviewers criticized the set as too large and as lacking focus, but the Committee continued to support all of the measures recommended for accountability and noted that it does not expect that everyone will implement all of the measures. The Committee viewed the set as a menu from which users can choose the measures they need.

Redundancy Among Measures

The Committee disagreed with reviewers who suggested that some measures are redundant. The Committee reiterated its strong belief that the measures are "complementary" (such as when prescribing versus dispensing is specified) and noted that although the measures may be "overlapping," such an approach allows users to choose among them as needed. For example, smoking cessation for the general population and for those with CAD would not capture the same denominator population, and the evidence is stronger for smoking cessation impact on outcomes for CAD patients compared with the general population. In addition, the CAD smoking measure could be used in a cardiology practice, but the general population measure would not be useful for such a practice.

Measure Specifications

In response to reviewers who suggested that the measures cannot be implemented as specified, Review Committee members acknowledged that some details remain undefined, but believed that issues of clarity in the microspecifications should be addressed by the measure owner/developer (see appendix A).

[43] Ries LAG, BA Miller, BF Hankey, eds., *SEER Cancer Statistics Review* 1973-1991: *Tables and Graphs,* NCI, NIH Publication No. 94-2789; 1994.

Burden and/or Accuracy of Data Collection

Many reviewers noted concerns regarding the burden of data collection, given the large number of measures that are based on medical record data. The Review Committee recommended the use of prospective flow sheets, rather than retrospective chart review, as a less burdensome method for collecting clinical data.

The Review Committee also noted that during the initial implementation of the ambulatory care consensus standards, poor documentation likely would impact results. This may not be the same as poor performance. It also emphasized, however, that appropriate documentation is an important aspect of physician performance; documentation deficiencies should rapidly improve with the implementation of the measures.

Implementation Issues

Unlike the relatively "closed system" of hospitals and nursing homes, ambulatory care is diffuse, with no coordinated infrastructure for collecting information. Clinical and economic data (claims, billing, and utilization) are collected in a broad range of paper and electronic formats. The many providers within the healthcare system (including all types of practitioners) and the various settings (including small, private offices, large groups, community health centers, urgent care centers, emergency departments, ambulatory surgery centers, independent pharmacies, imaging centers, and laboratories) lack a common format or infrastructure for collecting and sharing data for performance measurement. Additionally, no compatible systems exist to feed data to the various users of the information. The large number of uninsured patients also must be considered and included in the measurement of ambulatory care performance; the availability of automated/electronic data for uninsured patients is uncertain. Furthermore, claims data are not collected or aggregated by an insurer.

During discussions of the Review Committee and the TAP, implementation issues were frequently raised. Additionally, concerns or issues were often mentioned during the review period. This section summarizes the Committee's discussion and recommendations related to implementation, as well as the deliberations of the Implementation of Ambulatory Care Consensus Standards TAP.

Recommendations to Accompany the Set

During its deliberations, both the Review Committee and the TAPs highlighted several considerations that should be addressed for successful implementation of the set:

1. Implementation rules that address several issues are necessary to ensure uniform measurement for comparison purposes. The Review Committee noted that the rules may be different for each program depending on the purpose of measurement. Potential rules regarding the following were discussed:
   - how the physician, physician-office, or physician group patient population is defined;

- sampling techniques and sample sizes;
- attribution of responsibility for the care process or outcome being measured (individual or shared; single provider or multiple providers);
- data collection for providers that are unable to use the data source indicated in the measure specifications (e.g., administrative data specification for uninsured patients who do not have claims); and
- information that accompanies public reporting of the measure results.

The implementation TAP agreed that the elements of a performance measurement program may vary among implementers, depending on the purpose and goals of the program. Furthermore, the TAP noted that implementation is easier if everyone knows the rules up front. Although the TAP recognized that users who are implementing a performance measurement program will determine the level of accountability, its members agreed that clear rules of attribution will allow office practices to build processes that will accommodate the rules. For example, 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 measure specifications are from clinical data, the larger the sample size should be.

2. The Review Committee discussions also highlighted other implementation issues and concerns that it recommended warrant further discussion, analysis, and consideration:

- the impact of measures using administrative data on physician practices that deal with large numbers of uninsured patients (who do not generate claims data), which includes a disproportionate number of minority patients and patients with a lower socioeconomic status;
- the comparability of data from different data sources;
- the burden of medical record review as compared with other data sources;
- the uniformity of measure construct—the candidate measures vary in construct for identifying the unit of measurement—for example, "percentage of patients" and "percentage of patient visits." Uniformity in construct among the measures in the set would improve clarity for those being measured and those interpreting the results;
- the efficiency of data collection—a patient may qualify in the denominator for CAD, HF, and hypertension, and data collection should be accomplished for all measures with a single chart review; and
- the prioritization of measures for implementation if it is not feasible to implement the entire set immediately.

The implementation TAP recommended that stakeholders should start measuring and should learn and build on experience: Implementing the measure set may require a "leap of faith," and waiting for the perfect set of measures will not diminish the challenges that will be involved. The TAP noted that it is only by using the measures that all stakeholders will be able to learn and share their experiences. It also subscribed to the view that measurement will encourage

the building of processes that will push the evolution of new systems and that data quality will improve with measurement.

Additional Considerations Discussed by the Implementation TAP

As noted, the implementation TAP met to consider some of the issues raised by the Committee, the TAPs, and reviewers. During its deliberations, the implementation TAP outlined a roadmap to move from the current chaotic, dysfunctional performance measurement system to a healthcare delivery system that manages information and data in an accurate and efficient manner, enabling all users to access and use information when they need it. The following are some of the characteristics of such an ideal system:

- Clinical data are generated during the patient encounter within an integrated, electronic system that includes flexible EHRS, seamless data flow avenues, and Regional Health Information Organizations (RHIOs). The system is supported by a flexible and compatible information infrastructure, including vendor participation in system development.
- Data elements, formats, and definitions are standardized to facilitate electronic compatibility.
- Data extracted for performance measurement are verifiable and auditable.
- Physician and provider attribution includes all team members who care for a patient. Performance measurement encourages coordination of care—not competition—to develop patient-centered delivery systems.
- Accountability and performance incentives foster improvement in quality of care for all patients.

The implementation TAP also considered recommending a smaller, "starter set" to facilitate implementation, but, like the Review Committee, it ultimately decided that selecting a subset would not facilitate implementation and could hinder it—for example, some office practices may have many heart disease patients and few asthmatic patients in their patient population, which means that the asthma measures would be less useful than the heart disease measures. For some practices, the measures that seem easiest to implement may actually be more difficult to implement because of unique practice characteristics. Anticipating the specific implementation challenges for various types of office practices was viewed as impossible by the implementation TAP at this time, leading to its reluctance to prioritize the measures or to identify a starter set.

Finally, the implementation TAP recommended that new performance measurement programs strongly consider prospective data collection, particularly if they are using medical records as the data source. Prospective programs establish the rules up front and allow office practices to establish new data collection processes that may be more efficient for exporting or abstracting; the TAP did not recommend the retrospective review of paper charts.

Appendix E

Specifications of the National Voluntary Consensus Standards for Diabetes—2005 Update

In 2005, the National Quality Forum (NQF) updated its national voluntary consensus standards for adult diabetes care by endorsing a set of 9 measures for public reporting at the ambulatory provider/health plan level, 26 measures for internal quality improvement, and 3 community-level measures. This activity was undertaken separately from NQF's ambulatory care consensus standards project; however, the diabetes standards are relevant to the overall scope of ambulatory care performance measurement, because much of diabetes care is provided at the outpatient level and because diabetes was identified at an NQF workshop in March 2004 as one of the 10 priority areas for which standardized performance measures for ambulatory care should be endorsed.[1] However, unlike the ambulatory care standards presented in appendix A, the diabetes consensus standards are not purely physician focused. Thus, the diabetes standards intended for public reporting are presented in the following table.

The specifications that follow are current as of August 2, 2005. The measure specifications are maintained by the National Committee for Quality Assurance (NCQA).[2] For the most current technical specifications, please refer to the measure maintenance entity's web site

[1] This workshop was supported by a grant from the Robert Wood Johnson Foundation. For details on the workshop's findings, visit www.qualityforum.org/members/ambulatoryCare_docs/txmtgsummaryambulatoryFINALcolor.pdf. Last accessed January 2006.

[2] This performance measure was developed by and is owned by and the National Committee for Quality Assurance (NCQA). This performance measure is not a clinical guideline and does not establish a standard of medical care. NCQA makes no representations, warranties, or endorsement about the quality of any organization or physician that uses or reports performance measures, and NCQA has no liability to anyone who relies on such measures. NCQA holds a copyright in this measure and can rescind or alter the measure at any time. This measure may not be modified by anyone other than NCQA. Anyone desiring to use or reproduce the measure without modification for a noncommercial purpose may do so without obtaining any approval from NCQA. All commercial uses must be approved by NCQA and are subject to a license at the discretion of NCQA.

(www.ncqa.org). Additional information and tools to assist in collecting, analyzing, and reporting data are also available on the measure maintenance entity's web site. All exclusions are required unless otherwise noted.

The approach used for data collection, analysis, and reporting on these measures will vary based on the use of these measures within a specific organization or initiative—for example, health plan reporting for NCQA accreditation through HEDIS® measurement should follow the NCQA standards. Issues such as how the population should be sampled (e.g., counting all patients, a random sample of patients, or some other subgroup) will differ based on the use of the measures. Entities using these measures should define and use a standardized approach for data collection, analysis, and reporting that is statistically sound and consistent for all providers/plans represented.

Appendix E – Specifications of the National Voluntary Consensus Standards for Diabetes—2005 Update

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Percentage of patients with one or more A1c test(s)	NCQA	One or more HbA1c tests conducted during the measurement year identified through either CPT Code 83036 or LOINC Codes 4548-4, 4549-2, 17855-8, 17856-6, or an automated laboratory record with a service date, or, at minimum, documentation in the medical record must include a note indicating the date on which the HbA1c test was performed and the result. Notation of the following may be counted in the medical record: ■ A1c ■ HbA1c ■ hemoglobin A1c ■ glycohemoglobin A1c ■ HgbA1c Presentation of Codes Unless otherwise noted, codes are stated to the minimum specificity required. For example, if a three-digit code is listed, it is valid as a three-, four-, or five-digit code. When necessary, a code may be specified with an "x" which represents a required digit. For example, ICD-9 CM Diagnosis Code 640.0x means that a fifth digit is required, but the fifth digit could be any number allowed by the coding manual	A systematic sample of patients 18-75 years old who had a diagnosis of diabetes (type 1 and type 2) Two methods are provided to identify patients with diabetes during the measurement year, or year prior: pharmacy data and claims/encounter data: ■ Pharmacy data: Patients who were dispensed insulin or oral hypoglycemics/antihyperglycemics during the measurement year or year prior to the measurement year on an ambulatory basis. Prescriptions to identify patients with diabetes include insulin prescriptions (drug list is available) and oral hypoglycemics/antihyperglycemics prescriptions (drug list is available) ■ Claim/encounter data: Patients with a diagnosis of diabetes who had two face-to-face encounters with different dates of service in an ambulatory setting or non-acute inpatient setting or one face-to-face encounter in an acute inpatient or emergency room setting during the measurement year or year prior to the measurement year with a diagnosis of diabetes Codes to identify patients with diabetes include: ■ Diabetes diagnosis: ICD-9-CM Codes 250, 357.2, 362.0, 366.41, 648.0; DRGs 294, 295 ■ Outpatient/non-acute inpatient: CPT Codes 92002-92014, 99201-99205, 99211-99215, 99217-99220, 99241-99245, 99271-99275, 99301-99303, 99311-99313, 99321-99323, 99331-99333, 99341-99355, 99384-99387, 99394-99397, 99401-99404, 99411, 99412,	Exclude patients with a diagnosis of polycystic ovaries (ICD-9-CM Code 256.4) who did not have any face-to-face encounters with the diagnosis of diabetes, in any setting, during the measurement year or year prior to the measurement year. Exclude patients with gestational diabetes (ICD-9-CM Code 648.8) or steroid-induced diabetes (ICD-9-CM Code 962.0, 251.8) during the measurement year	Visit, lab, and pharmacy encounter data or claims. Electronic data may be supplemented by medical record data

Appendix E – Specifications of the National Voluntary Consensus Standards for Diabetes—2005 Update (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Percentage of patients with one or more A1c test(s) *continued*			99420, 99429, 99499; UB-92 Revenue Codes 019X, 0456, 049X-053X, 055X-059X, 065X, 066X, 076X, 077X, 082X-085X, 088X, 092X, 094X, 096X, 0972-0979, 0982-0986, 0988, 0989 Acute inpatient/emergency department: CPT Codes 99221-99223, 99231-99233, 99238-99239, 99251-99255, 99261-99263, 99281-99285, 99291-99292, 99356-99357; UB-92 Revenue Codes 010X-016X, 020X-022X, 0450, 0451, 0452, 0459, 072X, 080X, 0981, 0987		
Percentage of patients with most recent A1c level >9.0% (poor control)	NCQA	The most recent HbA1c level (performed during the measurement year) is >9.0%, as documented through automated laboratory data or medical record review. If there is no HbA1c level during the measurement year, the level is considered to be >9.0% (i.e., no test is counted as poor HbA1c control). At a minimum, documentation in the medical record must include a note indicating the date on which the HbA1c test was performed and the result	Same denominator as measure "Percentage of patients with one or more A1c test(s)"	Same exclusions as measure "Percentage of patients with one or more A1c test(s)"	Visit, lab, and pharmacy encounter data or claims. Electronic data may be supplemented by medical record data
Percentage of patients with at least one LDL-C test	NCQA	An LDL-C test done during the measurement year as determined by claim/encounter or automated laboratory data or medical record review. To identify an LDL-C test using claim/encounter or automated laboratory data, the LDL-C test must have a service date during the measurement year. Codes to identify LDL-C Screening: CPT Codes 80061, 83715, 83716, 83721; LOINC Codes 2089-1, 12773-8, 13457-7, 18261-8, 18262-6, 22748-7, 24331-1. Documentation in the medical record must include, at a minimum, a note indicating the date on which the LDL-C test was performed and the result.	Same denominator as measure "Percentage of patients with one or more A1c test(s)"	Same exclusions as measure "Percentage of patients with one or more A1c test(s)"	Visit, lab, and pharmacy encounter data or claims. Electronic data may be supplemented by medical record data

Appendix E – Specifications of the National Voluntary Consensus Standards for Diabetes—2005 Update (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Percentage of patients with most recent LDL-C <130 mg/dl	NCQA	The most recent LDL-C level (performed during the measurement year) is <130 mg/dL, as documented through automated laboratory data or medical record review. Using automated laboratory data, identify the most recent LDL-C test during the measurement year. The patient is numerator compliant if the most recent automated LDL-C level is < 130 mg/dl. If the automated result for the most recent LDL-C test during the measurement year is = to 130 mg/dl or is missing, or if an LDL-C test was not done in the measurement year, the patient is not numerator compliant. Documentation in the medical record must include, at a minimum, a note indicating the date on which the LDL-C test was performed and the result LDL-C levels may be calculated from total cholesterol, HDL-C and triglycerides using the Friedewald equation if triglycerides are = 400 mg/dl (LDL-C) = (total cholesterol) - (HDL)-(triglycerides/5) If lipoprotein (a) is measured, this calculation is: (LDL-C) = (total cholesterol) - (HDL)-(triglycerides/5) - 0.3[lipoprotein(a)] These formulae are used when all levels are expressed in mg/dl and cannot be used if triglycerides >400 mg/dl	Same denominator as measure "Percentage of patients with one or more A1c test(s)"	Same exclusions as measure "Percentage of patients with one or more A1c test(s)"	Visit, lab, and pharmacy encounter data or claims. Electronic data may be supplemented by medical record data

Appendix E – Specifications of the National Voluntary Consensus Standards for Diabetes—2005 Update (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Percentage of patients with most recent LDL-C <100 mg/dl	NCQA	The most recent LDL-C level (performed during the measurement year) is <100 mg/dL, as documented through automated laboratory data or medical record review. Using automated laboratory data, identify the most recent LDL-C test during the measurement year. The patient is numerator compliant if the most recent automated LDL-C level is < 100 mg/dl. If the automated result for the most recent LDL-C test during the measurement year is = to 100 mg/dl or is missing, or if an LDL-C test was not done in the measurement year, the patient is not numerator compliant For medical record collection: Documentation in the medical record must include, at a minimum, a note indicating the date on which the LDL-C test was performed and the result. LDL-C levels may be calculated from total cholesterol, HDL-C and triglycerides using the Friedewald equation if triglycerides are = 400 mg/dl (LDL-C) = (total cholesterol) - (HDL) - (triglycerides/5) If lipoprotein (a) is measured, this calculation is: (LDL-C) = (total cholesterol) - (HDL) - (triglycerides/5) - 0.3[lipoprotein(a)] These formulae are used when all levels are expressed in mg/dl and cannot be used if triglycerides >400 mg/dl	Same denominator as measure "Percentage of patients with one or more A1c test(s)"	Same exclusions as measure "Percentage of patients with one or more A1c test(s)"	Visit, lab, and pharmacy encounter data or claims. Electronic data may be supplemented by medical record data

Appendix E – Specifications of the National Voluntary Consensus Standards for Diabetes—2005 Update (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
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)	NCQA	Screening for nephropathy or evidence of nephropathy, as documented through either administrative data or medical record review. The following are allowed to count toward the numerator: patients who have been screened for urine microalbumin, or patients who have nephropathy, as demonstrated by either evidence of medical attention for nephropathy, a visit to a nephrologist, or a positive urine macroalbumin test Urine microalbumin test. A urine microalbumin test during the measurement year, with at least one of the following codes: CPT Codes 82042, 82043, 82044, 83518, 84156, or [(84160, 84165, 84166) with Code 81050]; LOINC Codes 11218-5, 14956-7, 14957-5, 14958-3, 14959-1, 30000-4, 300001-2, 30003-8, 1753-3, 1754-1, 1755-8, 9318-7, 13705-9, 14585-4, 20621-9, 21059-1, 32294-1, 2887-8, 2888-6, 2889-4, 2890-2, 12842-1, 13801-6, 18373-1, 21482-5, 26801-1, 27298-9, 32209-9, 32551-4, 34366-5, 35663-4, or documentation in the medical record, which must include a note indicating the date on which the urine microalbumin test was performed and the result. Notation of the following may count in the medical record for urine microalbumin test: ■ 24-hour urine for microalbumin ■ timed urine for microalbumin ■ spot urine for microalbumin ■ microalbumin/creatinine ratio Medical attention for nephropathy. Documentation of nephropathy by one of three methods during the measurement year:	Same denominator as measure "Percentage of patients with one or more A1c test(s)"	Same exclusions as measure "Percentage of patients with one or more A1c test(s)"	Visit, lab, and pharmacy encounter data or claims. Electronic data may be supplemented by medical record data

Appendix E – Specifications of the National Voluntary Consensus Standards for Diabetes—2005 Update (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
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) *continued*		■ evidence of treatment for nephropathy during the measurement year using the following codes: Urine macroalbumin test*: CPT Codes 81000-81003, 81005; LOINC Codes 5804-0, 20454-5, 24356-8, 24357-6. Evidence of diagnosis of or treatment for nephropathy: CPT Codes 36800, 36810, 36815, 36818, 36820, 36821, 50300, 50320 50340, 50360, 50365, 50370, 50380, 90920, 90921, 90924, 90925, 90935, 90937, 90945, 90947, 90989, 90993, 90997, 90999, 99512; ICD-9-CM Codes 39.27, 39.42, 39.43, 39.53, 39.93-39.95, 54.98, 55.4-55.6, 250.4, 403, 404, 405.01, 405.11, 405.91, 581.81, 582.9, 583.81, 584-586, 588, 753.0, 753.1, 791.0; V-Codes V42.0, V45.1, V56; UB-92 Revenue Codes 0800-0804, 0809, 0820-0825, 0829-0835, 0839-0845, 0849-0855, 0859-0882, 0889; DRGs 316, 317, or documentation in the medical record which must include, at a minimum, a note indicating medical attention during the measurement year for: ■ diabetic nephropathy ■ a positive test result for urine microalbumin (i.e., urine protein or proteinuria) ■ end-stage renal disease (ESRD) ■ chronic renal failure (CRF) ■ renal insufficiency ■ acute renal failure (ARF) ■ dialysis, hemodialysis, or peritoneal dialysis *Automated laboratory data must be used to confirm a positive result for a urine macroalbumin test identified through administrative data			

Appendix E – Specifications of the National Voluntary Consensus Standards for Diabetes—2005 Update (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
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) *continued*		■ nephrologist visit during the measurement year (no restriction on the diagnosis or procedure code submitted) ■ a positive urine macroalbumin test during the measurement year, as documented by claim/encounter or automated laboratory data. The urine microalbumin test codes above may be used to identify tests, and automated laboratory data may be used to confirm a positive result. "Trace" urine macroalbumin test results are not considered numerator compliant. At a minimum, documentation in the medical record must include a note indicating the date on which the test was performed and a positive result for protein in the urine. The following may be counted in the medical record: • positive urinalysis (timed, spot, microalbumin/creatinine ratio) • positive urine dipstick • positive tablet reagent Note: "Trace" urine macroalbumin test results are not considered numerator compliant			

Appendix E – Specifications of the National Voluntary Consensus Standards for Diabetes—2005 Update (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
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 *Patient is considered low risk if the following criterion is met: has no evidence of retinopathy in the prior year *continued*	NCQA	An eye screening for diabetic retinal disease includes those patients with diabetes who had a retinal or dilated eye exam by an eye care professional in the measurement year (optometrist or ophthalmologist), as documented through either administrative data or medical record review. A negative retinal exam is also allowed to count toward the numerator performed in the year prior to the measurement year. The following codes may be used to identify eye exams: ■ CPT Codes 67101, 67105, 67107-67108, 67110, 67112, 67141, 67145, 67208, 67210, 67218, 67227, 67228, 92002, 92004, 92012, 92014, 92018, 92019, 92225, 92226, 92230, 92235, 92240, 92250, 92260, 92287, 99203-99205, 99213-99215, 99242-99245; ICD-9-CM Codes 14.1-14.5, 14.9, 95.02-95.04, 95.11, 95.12, 95.16; V Code V72.0. For exams performed in the year prior to the measurement year, an automated result must be available Documentation in the medical record of a retinal eye exam during the measurement year or a negative retinal eye exam during the year prior to the measurement year must include: A note or letter from an ophthalmologist, optometrist, or other health care professional summarizing the date on which the procedure was performed and the results of a retinal evaluation performed by an eye-care professional; or a chart or photograph of retinal abnormalities. If fundus photography was used in the exam, there must be documentation in the medical record indicating the date on which the procedure was performed and evidence that an eye care professional reviewed the results	Same denominator as measure "Percentage of patients with one or more A1c test(s)"	Same exclusions as measure "Percentage of patients with one or more A1c test(s)"	Visit, lab, and pharmacy encounter data or claims. Electronic data may be supplemented by medical record data

Appendix E – Specifications of the National Voluntary Consensus Standards for Diabetes—2005 Update (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
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 *Patient is considered low risk if the following criterion is met: has no evidence of retinopathy in the prior year *continued*		Alternatively, results must be read by a qualified reading center that operates under the direction of a medical director who is a retinal specialist, or a note, which may be prepared by a primary care provider, indicating the date on which the procedure was performed, and that an ophthalmoscopic exam was completed by an eye-care professional, with the results of the exam			

Appendix E – Specifications of the National Voluntary Consensus Standards for Diabetes—2005 Update (continued)

Measure	IP Owner	Numerator	Denominator	Exclusions	Data Source
Percentage of eligible patients receiving at least one foot exam, defined in any manner	NCQA	Patients who received a foot exam, defined in any manner (visual inspection, sensory exam with monofilament, or pulse exam). Indication of a test result and date must be documented	All patients with diabetes 18-75 years of age. See list under measure "Percentage of patients with one or more A1c test(s)" denominator for codes and drugs	Same exclusions as measure "Percentage of patients with one or more A1c test(s)" Patients with bilateral foot/leg amputation (ICD-9-CM Exclusion Codes for foot exam 896.2, 896.3, 897.6, 897)	Visit, lab, and pharmacy encounter data or claims. Electronic data may be supplemented by medical record data
Percentage of patients with most recent blood pressure <140/80 mm Hg	NCQA	Patients with most recent systolic blood pressure measurement <140 mm Hg and a diastolic blood pressure <80 mm Hg during the measurement year, as documented through medical record review. If there is no valid blood pressure level within the last measurement year or if the result for the most recent blood pressure is not available, the level is considered to be >140/80 mm Hg	All patients with diabetes 18-75 years of age. See list under measure "Percentage of patients with one or more A1c test(s)" denominator for codes and drugs	Same exclusions as measure "Percentage of patients with one or more A1c test(s)"	Visit, lab, and pharmacy encounter data or claims. Electronic data may be supplemented by medical record data

Appendix F
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™ consensus standards for ambulatory care. The evidence includes literature that supports a measure's responsiveness to the evaluation criteria (importance, scientific acceptability, usability, and feasibility).

Asthma/Respiratory Illness

Asthma Assessment

American Academy of Pediatrics (AAP). Practice parameter: the office management of acute exacerbations of asthma in children. *Pediatrics.* 1994;93(1):119-126.

Centers for Disease Control and Prevention (CDC). Surveillance for asthma - United States, 1980-1999. *MMWR CDC Surveill Summs.* 2002;51:1-13.

Greenberger PA. Preventing hospitalization for asthma by improving ambulatory management. *Am J Med.* 1996;100:381-382.

Grimshaw JM, Shirran L, Thomas R, et al. Changing provider behavior: an overview of systematic reviews of interventions. *Med Care.* 2001;39(suppl 2):II-2–II-45.

Hartert TV, Windom HH, Peebles S, et al. Inadequate outpatient medical therapy for patients with asthma admitted to two urban hospitals. *Am J Med.* 1996;100:386-394.

Hofer TP, Hayward RA, Greenfield S, et al. The unreliability of individual physician "report cards" for assessing the costs and quality of care of a chronic disease. *JAMA.* 1999;28:2098-2105.

Institute of Medicine (IOM). *Unequal Treatment: What Healthcare Providers Need to Know About Racial and Ethnic Disparities in Healthcare.* Available at www.iom.edu/CMS/3740/4475.aspx. Last accessed January 2003.

Kiefe CI, Allison JJ, Williams OD, et al. Improving quality improvement using achievable benchmarks for physician feedback: a randomized controlled trial. *JAMA.* 2001;285:2871-2879.

National Asthma Education Program, Expert Panel Report. *Guidelines for the Diagnosis and Management of Asthma.* No. 91-3042. Hyattsville, MD: U.S. Department of Health and Human Services (DHHS); 1991.

National Center for Health Statistics (NCHS), CDC. *Asthma Prevalence, Health Care Use and Mortality, 2000-2001.* Available at www.cdc.gov/nchs/products/pubs/pubd/hestats/asthma/asthma.htm. Last accessed May 2003.

National Committee for Quality Assurance (NCQA). *The State of Managed Care Quality;* 2001. Available at www.ncqa.org/somc2001. Last accessed May 2003.

National Heart, Lung, and Blood Institute (NHLBI). *Morbidity and Mortality: 2002 Chart Book on Cardiovascular, Lung, and Blood Diseases.* Available at www.nhlbi.nih.gov/resources/docs/02_chtbk.pdf. Last accessed May 2003.

NHLBI. *National Asthma Education and Prevention Program Expert Panel Report 2: Guidelines for the Diagnosis and Management of Asthma.* National Institutes of Health (NIH) Publication No. 97-4051; July 1997. Available at www.nhlbi.nih.gov/guidelines/asthma/asthgdln.htm. Last accessed February 2005.

Use of Appropriate Medications for People with Asthma
Asthma: Pharmacologic Therapy

AAP. Practice parameter: the office management of acute exacerbations of asthma in children. *Pediatrics.* 1994;93(1):119-126.

Blais L, Suissa S, Boivin JF, et al. First treatment with inhaled corticosteroids and the prevention of admissions to hospital for asthma. *Thorax.* 1998;53:1025-1029.

Bosco LA, Gerstman BB, Tomita DK. Variations in the use of medication for the treatment of childhood asthma in the Michigan Medicaid population, 1980 to 1986. *Chest.* 1993;104(6):1727-1732.

CDC National Health Interview Survey. *Asthma Prevalence, Healthcare Use, and Mortality, 2002.* Available at www.cdc.gov/nchs. Last accessed February 2005.

Eisner MD, Lieu TA, Chi F, et al. Beta agonists, inhaled steroids, and the risk of intensive care unit admission for asthma. *Eur Respir J.* 2001. 17(2):233-240.

Finkelstein JA, Brown RW, Schneider LC, et al. Quality of care for preschool children with asthma: the role of social factors and practice setting. *Pediatrics.* 1995;95(3):389-394.

Hofer TP, Hayward RA, Greenfield S, et al. The unreliability of individual physician "report cards" for assessing the costs and quality of care of a chronic disease. *JAMA.* 1999;28:2098-2105.

Huss K, Rand CS, Butz AM, et al. Home environmental risk factors in urban minority asthmatic children. *Ann Allergy.* 1994;72:173-177.

NCQA. *State of Health Care Quality Report 2004.* Available at www.ncqa.org/communications/SOMC/SOHC2004.pdf. Last accessed January 2006.

NHLBI. *National Asthma Education and Prevention Program Expert Panel Report 2: Guidelines for the Diagnosis and Management of Asthma.* NIH Publication No. 97-4051; July 1997. Available at www.nhlbi.nih.gov/guidelines/asthma/asthgdln.htm. Last accessed February 2005.

NHLBI. *Data Fact Sheet – Asthma Statistics.* Bethesda, MD: DHHS; January 1999.

NHLBI. *National Asthma Education and Prevention Program Task Force on the Cost Effectiveness, Quality of Care, and Financing of Asthma Care.* No. 55-807. Bethesda, MD: DHHS; 1996.

NIH. *Global Initiative for Asthma.* Bethesda, MD: NIH; 1995.

Smith MJ, Rascati KL, McWilliams BC. Inhaled anti-inflammatory pharmacotherapy and subsequent hospitalizations and emergency department visits among patients with asthma in the Texas Medicaid program. *Ann Allergy Asthma Immunol.* 2004;92(1):40-46.

Weiss ST. The origins of childhood asthma. *Monaldi Archives of Chest Diseases.* 1994;49(2):154-158.

Appropriate Treatment for Children with Upper Respiratory Infection

Austin D.J., Kristinsson KG, Anderson RM. The relationship between the volume of antimicrobial consumption in human communities and the frequency of resistance. *Proceedings of the National Academy of Science, USA.* 1999;96:1152-1156.

Cohen ML. Epidemiology of drug resistance: implications for a post-antimicrobial era. *Science.* 1992; 257:1050-1055.

Gonzales R, Malone DC, Maselli JH, et al. Excessive antibiotic use for acute respiratory infections in the United States. *Clin Infect Dis.* 2001;33:757-762.

Grouhi M, Hummel D, Roifman CM. Anaphylactic reaction to oral cefaclor in a child. *Pediatrics.* 1999;103(4):e50.

Jaunay T, Sambrook P, Goss A. Antibiotic prescribing practices by South Australian general dental practitioners. *Aust Dent J.* 2000;45(3):179-186.

Lipsitch M. Measuring and interpreting associations between antibiotic use and penicillin resistance in *Streptococcus pneumoniae. Clin Infect Dis.* 2001;32:1044-1054.

McCaig, LF, Besser, RE, Hughes JM. Trend in antimicrobial prescribing rates for children and adolescents. *JAMA.* 2002;287(23):3096-3102.

Office of Technology Assessment (OTA). *OTA Impact of Antibiotic-Resistant Bacteria: A Report to the U.S. Congress, 1995.* OTA-H-629. Washington DC: OTA; 1995.

Patterson JE. Antibiotic utilization: is there an effect on antimicrobial resistance? *Chest.* 2001;119(suppl 2):426S-430S.

Rosenstein N, Phillips WR, Gerber MA, et al. The common cold: principles of judicious use of antimicrobial agents. *Pediatrics.* 1998;101(1):181-184.

Zebrowska-Lupina I., Szymczyk G, Wrobel A. Adverse effects of interactions of antibiotics with other drugs. *Pol Merkuriusz Lek.* 2000;9(51):623-626.

Appropriate Testing for Children with Pharyngitis

Butler JC, Hofmann J, Cetron MS. The continued emergence of drug-resistant streptococcus pneumoniae in the United States: an update from the Centers for Disease Control and Prevention's Pneumococcal Sentinel Surveillance System. *J Infect Dis.* 1996;174:986-993.

Cunha BA. Antibiotic side-effects. *Med Clin North Amer.* 2001;85(1):149-185.

Dowell SF, Butler JC, Giebink GS, et al. Acute otitis media: management and surveillance in an era of pneumococcal resistance: a report from the Drug-Resistant Streptococcus Pneumoniae Therapeutic Working Group. *Pediatr Infect Dis J.* 1999;18:1-9.

Gonzales R, Malone DC, Maselli JH, et al. Excessive antibiotic use for acute respiratory infections in the United States. *Clin Infect Dis.* 2001;33:757-762.

Grouhi M, Hummel D, Roifman CM. Anaphylactic reaction to oral cefaclor in a child. *Pediatrics.* 1999;103(4):E50.

Hart AP, Buck LL, Morgan S, et al. A comparison of the BioStar strep. A OIA rapid antigen assay, group A selective strep. agar (ssA), and Todd-Hewitt broth cultures for detection of group A *streptococcus* in an outpatient family practice setting. *Diagn Microbiol Infect Dis.* 1997;29:139-145.

Jaunay T, Sambrook P, Goss A. Antibiotic prescribing practices by South Australian general dental practitioners. *Aust Dent J.* 2000;45(3):179-186.

Kuhn S, Davies HDKG, Jadavji T, et al. Evaluation of Strep. A OIA assay versus culture methods: ability to detect different quantities of Group A Streptococcus. *Diagn Microbiol Infect Dis.* 1999;34:275-280.

Kunin, CM. Resistance to antimicrobial drugs: a worldwide calamity. *Ann Intern Med.* 1993;118(7):557-561.

Lipsitch, M. Measuring and interpreting associations between antibiotic use and penicillin resistance in *Streptococcus pneumoniae. Clin Infect Dis.* 2001;32:1044-1054.

Mainous AG, Hueston WJ, Love MM. Antibiotics for colds in children; who are the high prescribers? *Arch Pediatr Adolesc Med.* 1998;152:349-352.

Mainous AG, Zoorob RJ, Kohrs FP, et al. Streptococcal diagnostic testing and antibiotics prescribed for pediatric tonsillopharyngitis. *Pediatr Infect Dis J.* 1996;15:806-810.

Neu HC. The crisis in antibiotic resistance. *Science.* 1992;257:1064-1073.

Phelps CE. Bug/drug resistance: sometimes more is less. *Med Care.* 1989;27:194-203.

Pitetti RD, Drenning SD, Wald ER. Evaluation of a new rapid antigen detection kit for group A beta-hemolytic streptococci. *Pediatr Emerg Care.* 1998;14(6):396-398.

Seppala H, Klaukka T, Vuopiio-Varikila J. The effect of changes in the consumption of macrolide antibiotics on erythromycin resistance in group A streptococci in Finland. *N Engl J Med.* 1997;337:441-446.

Tsevat J, Kotagal UR. Management of sore throats in children: a cost-effectiveness analysis. *Arch Pediatr Adolesc Med.* 1999;153:681-688.

Webb KH. Does culture confirmation of high-sensitivity rapid streptococcal tests make sense? a medical decision analysis. *Pediatrics.* 1998;101(2):E2.

Webb KH, Needham CA, Kurtz SR. Use of a high-sensitivity rapid strep. test without culture confirmation of negative results: 2 years' experience. *J Fam Pract.* 2000;49(1):34-38.

Zebrowska-Lupina I, Szymczyk G, Wrobel A. Adverse effects of interactions of antibiotics with other drugs. *Pol Merkuriusz Lek.* 2000;9(51):623-626.

Behavioral Health

Optimal Practitioner Contacts for Medication Management

American Psychiatric Association (APA). Practice guidelines for the treatment of patients with major depressive disorder (revision). *Am J Psychiatry.* 2000;157(suppl 4):1-45.

Davidson JR, Meltzer-Brody SE. The underrecognition and undertreatment of depression: what is the breadth and depth of the problem? *J Clin Psychiatry.* 1999;60(suppl 7):4-9.

Further Evidence of Racial Disparities in the Diagnosis and Treatment of Schizophrenia and Depression. Johns Hopkins Bloomberg School of Public Health; 2005. Available at www.jhsph.edu/SMI/Research/summaries/racial_disparities.html. Last accessed January 2005.

Hansen D, Vach W, Rosholm J, et al. Early discontinuation of antidepressants in general practice: association with patient and prescriber characteristics. *Fam Pract.* 2004;21(6):623-629.

Healthy People 2010: Leading Health Indicators. Available at www.health.gov/healthypeople/Document/HTML/uih/uih_4.htm. Last accessed August 2002.

Melfi C, Croghan T, Hanna M, et al. Racial variation in antidepressant treatment in a Medicaid population. *J Clin Psychiatry.* 2000;61:16-21.

Mental Health: A Report of the Surgeon General; 1999. Available at www.mentalhealth.org/features/surgeongeneralreport/home.asp. Last accessed August 2002.

The Robert Wood Johnson Foundation. *Chronic Care in America: A 21st Century Challenge.* Princeton, NJ: The Robert Wood Johnson Foundation; 1996.

Sambamoorthi U, Walkup J, Akincigil A. Diagnosis and treatment of depression in the elderly Medicare population: predictors, disparities, and trends. *J Am Geriat Soc.* 2003;51:1718-1728.

Schulberg HC, Katon W, Simon GE, et al. Treating major depression in primary care practice: an update of the Agency for Health Care Policy and Research practice guidelines. *Arch Gen Psychiatry.* 1998;55(12):1121-1127.

Williams J, Rost K, Dietrich A. Primary care physicians' approach to depressive disorders. *Arch Fam Med.* 1999;8:58-67.

Effective Acute Phase Treatment

APA. Practice guidelines for the treatment of patients with major depressive disorder (revision). *Am J Psychiatry.* 2000;157(suppl 4):1-45.

Casacalenda N, Perry J, Looper K. Remission in major depressive disorder: a comparison of pharmacotherapy, psychotherapy, and control conditions. *Am J Psychiatry.* 2002;159:1354-1360.

Davidson JR, Meltzer-Brody SE. The underrecognition and undertreatment of depression: what is the breadth and depth of the problem? *J Clin Psychiatry.* 1999;60(suppl 7):4-9.

Further Evidence of Racial Disparities in the Diagnosis and Treatment of Schizophrenia and Depression. Johns Hopkins Bloomberg School of Public Health; 2005.Available at www.jhsph.edu/SMI/Research/summaries/racial_disparities.html. Last accessed January 2005.

Hansen D, Vach W, Rosholm J, et al. Early discontinuation of antidepressants in general practice: association with patient and prescriber characteristics. *Fam Pract.* 2004;21(6):623-629.

Healthy People 2010: Leading Health Indicators. Available at www.health.gov/healthypeople/Document/HTML/uih/uih_4.htm. Last accessed August 2002.

Melfi C, Chawla AJ, Croghan AW, et al. The effects of adherence to antidepressant treatment guidelines on relapse and recurrence of depression. *Arch Gen Psychiatry.* 1998;55(12):1128-1132.

Melfi C, Croghan T, Hanna M, et al. Racial variation in antidepressant treatment in a Medicaid population. *J Clin Psychiatry.* 2000;61:16-21.

Mental Health: A Report of the Surgeon General; 1999. Available at www.mentalhealth.org/features/surgeongeneralreport/home.asp. Last accessed August 2002.

The Robert Wood Johnson Foundation. *Chronic Care in America: A 21st Century Challenge.* Princeton, NJ: The Robert Wood Johnson Foundation; 1996.

Sambamoorthi U, Walkup J, Akincigil A. Diagnosis and treatment of depression in the elderly Medicare population: predictors, disparities, and trends. *J Am Geriatr Soc.* 2003;51:1718-1728.

Schulberg HC, Katon W, Simon GE, et al. Treating major depression in primary care practice: an update of the Agency for Health Care Policy and Research practice guidelines. *Arch Gen Psychiatry.* 1998;55(12):1121-1127.

Simon GE, Lin EH, Katon W, et al. Outcomes of "inadequate" antidepressant treatment. *J Gen Intern Med.* 1995;10:663-670.

Simon GE, VonKorff M, Wagner EH, et al. Patterns of antidepressant use in community practice. *Gen Hosp Psychiatry.* 1993;15:399-408.

Wells KB, Sherbourne C, Shoenbaum M, et al. Impact of disseminating quality improvement programs for depression in managed primary care; a randomized controlled trial. *JAMA.* 2000;283(2):212-220.

Williams J, Rost K, Dietrich A. Primary care physicians' approach to depressive disorders. *Arch Fam Med.* 1999;8:58-67.

Effective Continuation Phase Treatment

APA. Practice guidelines for the treatment of patients with major depressive disorder (revision). *Am J Psychiatry.* 2000;157(suppl 4):1-45.

Davidson JR, Meltzer-Brody SE. The underrecognition and undertreatment of depression: what is the breadth and depth of the problem? *J Clin Psychiatry.* 1999;60(suppl 7):4-9.

Further Evidence of Racial Disparities in the Diagnosis and Treatment of Schizophrenia and Depression. Johns Hopkins Bloomberg School of Public Health; 2005. Available at www.jhsph.edu/SMI/Research/summaries/racial_disparities.html. Last accessed January 2005.

Hansen D, Vach W, Rosholm J, et al. Early discontinuation of antidepressants in general practice: association with patient and prescriber characteristics. *Fam Pract.* 2004;21(6):623-629.

Keller M, Boland R. Implications of failing to achieve successful long-term maintenance treatment of recurrent unipolar major depression. *Biol Psychiatry.* 1998;44:348-360.

Keller M, Lavori P, Lewis C, et al. Predictors of relapse in major depressive disorder. *JAMA.* 1983;250:3299-3304.

Keller M, Lavori P, Mueller T, et al. Time to recovery, chronicity, and levels of psychopathology in major depression; a 5-year prospective follow-up of 431 subjects. *Arch Gen Psychiatry* 1992;49:809-816.

Melfi C, Croghan T, Hanna M, et al. Racial variation in antidepressant treatment in a Medicaid population. *J Clin Psychiatry.* 2000;61:16-21.

Mental Health: A Report of the Surgeon General; 1999. Available at www.mentalhealth.org/features/surgeongeneralreport/home.asp. Last accessed August 2002.

National Institute of Mental Health Consensus Development Conference Statement. Mood disorders: pharmocologic prevention of recurrences. Consensus Development Panel. *Am J Psychiatry.* 1985;142:469-476.

The Robert Wood Johnson Foundation. *Chronic Care in America: A 21st Century Challenge.* Princeton, NJ: The Robert Wood Johnson Foundation; 1996.

Roose SP, Spatz E. Depression and heart disease. *Depress Anxiety.* 1998;7:158-165.

Schulberg HC, Katon W, Simon GE, et al. Treating major depression in primary care practice: an update of the Agency for Healthcare Policy and Research practice guidelines. *Arch Gen Psychiatry.* 1998;55(12):1121-1127.

Simon GE, Lin EH, Katon W, et al. Outcomes of "inadequate" antidepressant treatment. *J Gen Intern Med.* 1995;10:663-670.

Simon GE, VonKorff M, Wagner EH, et al. Patterns of antidepressant use in community practice. *Gen Hosp Psychiatry.* 1993;15:399-408.

Wells KB, Sherbourne C, Schoenbaum M, et al. Impact of disseminating quality improvement programs for depression in managed primary care: a randomized controlled trial. *JAMA.* 2000;283(2):212-225.

Bone Conditions

Osteoporosis Management in Women Who Had a Fracture

American Association of Clinical Endocrinologists. AACE medical guidelines for clinical practice for the prevention and treatment of postmenopausal osteoporosis: 2001 edition, with selected updates for 2003. *Endocr Pract.* 2003;9(6):544-564.

Andrade SE, Majumdar SR, Chan KA, et al. Low frequency of treatment of osteoporosis among postmenopausal women following a fracture. *Archs of Intern Med.* 2003:163:2052-2057.

Barrett-Connor E, Siris ES, Wehren LE, et al. Osteoporosis and fracture risk in women of different ethnic groups. *J Bone Miner Res.* 2005;20(2):185-194.

Bliuc D, Ong CR, Eisman JA, et al. Barriers to effective management of osteoporosis in moderate and minimal trauma fractures: a prospective study. *Osteoporos Int.* 2005;16(8):977-982.

DHHS. *Bone Health and Osteoporosis: A Report of the Surgeon General;* 2004. Available at www.surgeongeneral.gov/library/bonehealth/content.html. Last accessed January 21, 2005.

Feldstein A, Nichols, GA, Elmer PJ. Older women with fractures: patients falling through the cracks of guideline-recommended osteoporosis screening and treatment. *J Bone Joint Surg.* 2003:85-A(12):2294-2302.

National Osteoporosis Foundation *Physician's Guide to Prevention and Treatment of Osteoporosis;* 2003. Available at www.nof.org/physguide/impact_and_overview.htm. Last accessed January 2005.

Nelson HD, Helfand M, Woolf S, et al. Screening for postmenopausal osteoporosis: a review of the evidence for the U.S. Preventive Services Task (USPSTF) Force. *Ann Intern Med.* 2002;137(6):529-541.

NIH Consensus Development Panel on osteoporosis prevention, diagnosis, and therapy: osteoporosis prevention, diagnosis, and therapy. *JAMA.* 2001;285:785-795.

Solomon DH, Brookhart MA, Gandhi TK, et al. Adherence with osteoporosis practice guidelines: a multilevel analysis of patient, physician, and practice setting characteristics. *Am J Med.* 2004;117(12):919-924.

Osteoarthritis: Assessment for Use of Anti-inflammatory or Analgesic Over-the-Counter Conditions

American Academy of Orthopaedic Surgeons (AAOS). *AAOS Clinical Practice Guideline on Osteoarthritis of the Knee.* Rosemont, IL: AAOS; 2003. Available at www.guideline.gov/summary/summary.aspx?doc_id=3856&nbr=003069&string=osteoarthritis. Last accessed January 2006.

AAOS. *Improving Musculoskeletal Care in America (IMCA) Project. Osteoarthritis of the Knee;* September 2002.

American College of Rheumatology Subcommittee on Osteoarthritis Guidelines. Recommendations for the medical management of osteoarthritis of the hip and knee: 2000 update. *Arthritis Rheum.* 2000;43:1905-1915.

American Geriatrics Society Panel on Exercise and Osteoarthritis. *Exercise Prescription for Older Adults with Osteoarthritis Pain: Consensus Practice Recommendations.* Available at www.americangeriatrics.org/products/positionpapers/oae_guidelines.pdf. Last accessed January 2005.

Arthritis Foundation, *Quality Measurements for Osteoarthritis.* Available at www.arthritis.org/conditions/qualityindicators/quality_indicators_oa.asp. Last accessed January 2005.

CDC. National Center for Chronic Disease Prevention and Health Promotion. *Targeting Arthritis: Reducing Disability for 43 Million Americans, At a Glance 2005.* Available at www.cdc.gov/nccdphp/aag/aag_arthritis.htm. Last accessed January 2005.

Institute for Clinical Systems Improvement (ICSI). *Diagnosis and Treatment of Adult Degenerative Joint Disease (DJD) of the Knee.* Bloomington, MN: ICSI; 2004. Available at www.guideline.gov/summary/summary.aspx?doc_id=6144&nbr=003972&string=osteoarthritis. Last accessed January 2006.

National Arthritis Action Plan: A Public Health Strategy; 1999. Available at www.arthritis.org/resources/ActionPlanInterior.pdf. Last accessed December 2005.

Osteoarthritis: Functional and Pain Assessment

AAOS. *AAOS Clinical Practice Guideline on Osteoarthritis of the Knee.* Rosemont, IL: AAOS; 2003. Available at www.guideline.gov/summary/summary.aspx?doc_id=3856&nbr=003069&string=osteoarthritis. Last accessed January 2006.

AAOS. *Improving Musculoskeletal Care in America (IMCA) Project: Osteoarthritis of the Knee;* September 2002.

American College of Rheumatology Subcommittee on Osteoarthritis Guidelines. Recommendations for the medical management of osteoarthritis of the hip and knee: 2000 update. *Arthritis Rheum.* 2000;43:1905-1915.

American Geriatrics Society Panel on Exercise and Osteoarthritis. *Exercise Prescription for Older Adults with Osteoarthritis Pain: Consensus Practice Recommendations.* Available at www.americangeriatrics.org/products/positionpapers/oae_guidelines.pdf. Last accessed January 2005.

Arthritis Foundation, *Quality Measurements for Osteoarthritis.* Available at www.arthritis.org/conditions/qualityindicators/quality_indicators_oa.asp. Last accessed January 2005.

CDC. National Center for Chronic Disease Prevention and Health Promotion. *Targeting Arthritis:Reducing Disability for 43 Million Americans, At a Glance 2005.* Available at www.cdc.gov/nccdphp/aag/aag_arthritis.htm. Last accessed January 2005.

ICSI. *Diagnosis and Treatment of Adult Degenerative Joint Disease (DJD) of the Knee.* Bloomington, MN: ICSI; 2004. Available at www.guideline.gov/summary/summary.aspx?doc_id=6144&nbr=003972&string=osteoarthritis. Last accessed January 2006.

National Arthritis Action Plan: A Public Health Strategy; 1999. Available at www.arthritis.org/resources/ActionPlanInterior.pdf. Last accessed December 2005.

Heart Disease

Coronary Artery Disease: Symptoms and Activity Assessment

American College of Cardiology (ACC)/American Heart Association (AHA). *2002 Guideline Update for the Management of Patients with Chronic Stable Angina.* Available at www.acc.org/clinical/guidelines/stable/update_index.htm. Last accessed February 2005.

AHA. *Heart Disease and Stroke Statistics: 2004 Update.* Available at www.americanheart.org/downloadable/heart/1079736729696HDSStats2004UpdateREV3-19-04.pdf. Last accessed December 2005.

Grimshaw J, Shirran L, Thomas R, et al. Changing provider behavior: an overview of systematic reviews of interventions. *Med Care.* 2001;39(suppl 2):II-2-II-45.

Jencks S, Huff E, Cuerdon T. Change in the quality of care delivered to Medicare beneficiaries, 1998-1999 to 2000-2001. *JAMA.* 2003;289:305-312.

Minino A, Arias E, Kochanek K, et al. Deaths: final data for 2000. *Natl Vital Stat Rep.* 2002;50(15):1-119.

Popovic, J, Hall, M. *National Hospital Discharge Survey: Advance Data from Vital and Health Statistics; No 319.* Hyattsville, MD: NCHS; 2001

Coronary Artery Disease: Cholesterol Screen
Coronary Artery Disease: Lipid Profile

AHA. *Heart Disease and Stroke Statistics: 2005 Update.* Available at www.americanheart.org/downloadable/heart/1105390918119HDSStats2005Update.pdf. Last accessed December 2005.

AHA. *Heart Disease and Stroke Statistics: 2004 Update.* Available at www.americanheart.org/downloadable/heart/1079736729696HDSStats2004UpdateREV3-19-04.pdf. Last accessed December 2005.

Grimshaw J, Shirran L, Thomas R, et al. Changing provider behavior: an overview of systematic reviews of interventions. *Med Care.* 2001;39(suppl 2):II-2-II-45.

Grundy SM, Cleeman JI, Merz NB, et al. Implications of recent clinical trials for the National Cholesterol Education Program (NCEP) Adult Treatment Panel III Guidelines. *Circulation.* 2004;110:227-239.

NCEP. Second report of the Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel II). *Circulation.* 1994;89(3):1336-1343.

Nelson K, Norris K, Mangione CM. Disparities in the diagnosis and pharmacologic treatment of high serum cholesterol by race and ethnicity: data from the Third National Health and Nutrition Examination Survey. *Arch Intern Med.* 2002;162(8):929-935.

Ryan T, Antman E, Brooks N, et al. 1999 update: ACC/AHA guidelines for the management of patients with acute myocardial infarction: a report of the ACC/AHA Task Force on Practice Guidelines. *J Am Coll Cardiol.* 1999;34(3):890-911.

Summary of the second report of the NCEP Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel II). *JAMA.* 1993;269(23):3015-3023.

Coronary Artery Disease: Drug Therapy for Lowering LDL Cholesterol

AHA. *Cardiovascular Statistics.* Available at www.americanheart.org/presenter.jhtml?identifier=4478. Last accessed January 2005.

AHA. *Heart Disease and Stroke Statistics: 2004 Update.* Available at www.americanheart.org/downloadable/heart/1079736729696HDSStats2004UpdateREV3-19-04.pdf. Last accessed December 2005.

Executive summary of the third report of the NCEP Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III). *JAMA.* 2001;285;19:2486-2497.

Grimshaw J, Shirran L, Thomas R, et al. Changing provider behavior: an overview of systematic reviews of interventions. *Med Care.* 2001;39(suppl 2):II-2-II-45.

Harnick D, Cohen J, Schechter C, et al. Effects of practice setting on quality of lipid-lowering management in patients with coronary artery disease. *Am J Cardiol.* 1998;81(12):1416-1420.

Miller M, Byington R, Hunninghake D, et al. Sex bias and underutilization of lipid-lowering therapy in patients with coronary artery disease at academic medical centers in the National Cholesterol Education Program: second report of the Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel II). *Circulation.* 1994;89(3):1336-1343.

NCQA. *The State of Health Care Quality 2004.* Available at www.ncqa.org/communications/SOMC/SOHC2004.pdf. Last accessed January 2005.

Olson KL, Rasmussen J, Sandhoff BG, et al. Lipid management in patients with coronary artery disease by a clinical pharmacy service in a group model health maintenance organization. *Arch Intern Med.* 2005;165(1):49-54.

Miller M, Byington R, Hunninghake D, et al. Sex bias and underutilization of lipid-lowering therapy in patients with coronary artery disease at academic medical centers in the United States and Canada. Prospective Randomized Evaluation of the Vascular Effects of Norvasc Trial (PREVENT) Investigators. *Arch Intern Med.* 2000;160:343-347.

Coronary Artery Disease: Cholesterol Control
Coronary Artery Disease: LDL Cholesterol Level

AHA. *Heart Disease and Stroke Statistics: 2005 Update.* Available at www.americanheart.org/downloadable/heart/1105390918119HDSStats2005Update.pdf. Last accessed December 2005.

AHA. *Heart Disease and Stroke Statistics – 2004 Update.* Available at www.americanheart.org/downloadable/heart/1079736729696HDSStats2004UpdateREV3-19-04.pdf. Last accessed December 2005. Executive summary of the third report of the NCEP Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel III). *JAMA.* 2001;285(19):2486-2497.

Grimshaw J, Shirran L, Thomas R, et al. Changing provider behavior: an overview of systematic reviews of interventions. *Med Care.* 2001;39(suppl 2):II-2-II-45.

Harnick D, Cohen J, Schechter C, et al. Effects of practice setting on quality of lipid-lowering management in patients with coronary artery disease. *Am J Cardiol.* 1998;81(12):1416-1420.

NCEP. Second report of the Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults (Adult Treatment Panel II). *Circulation.* 1994;89(3):1336-1343.

Coronary Artery Disease: Anti-Platelet Therapy

ACC. Glossary; 2005. Available at www.acc.org/media/patient/chd/glossary.htm. Last accessed January 2005.

ACC/AHA/ACP-ASIM guidelines for the management of patients with chronic stable angina: executive summary and recommendations. A report of the ACC/AHA Task Force on Practice Guidelines (Committee on Management of Patients with Chronic Stable Angina). *Circulation.* 1999;99(21):2829-2848.

AHA. *Heart Disease and Stroke Statistics: 2004 Update.* Available at www.americanheart.org/downloadable/heart/1079736729696HDSStats2004UpdateREV3-19-04.pdf. Last accessed December 2005.

Grimshaw J, Shirran L, Thomas R, et al. Changing provider behavior: an overview of systematic reviews of interventions. *Med Care.* 2001;39(suppl 2):II-2-II-45.

Hall M, Popovic J. *National Hospital Discharge Survey: Advance Data from Vital and Health Statistics; No 319.* Hyattsville, MD: NCHS; 2001. Available at www.cdc.gov/nchs/data/ad/ad316.pdf. Last accessed December 2005.

Hennekens C. Update on aspirin in the treatment and prevention of cardiovascular disease. *Am J Manag Care.* 2002;8(22suppl):S691-700.

McGlynn E, et al. The quality of health care delivered to adults in the United States. *N Engl J Med.* 2003;348(26):2635-2645.

Mehta S, Yusuf S. Short- and long-term oral antiplatelet therapy in acute coronary syndromes and percutaneous coronary intervention. *J Am Coll Cardiol.* 2003;1(4suppl S):79S-88S.

Minino, A, Arias E, Kochanek, K, et al. Deaths: final data for 2000. *Natl Vital Stat Rep.* 2002;50(15):1-119.

Rathore S, Masoudi F, Havranek E, et al. Regional variations in racial differences in the treatment of elderly patients hospitalized with acute myocardial infarction. *Am J Med.* 2004;117(11):811-822.

Stafford R, Radley D. The underutilization of cardiac medications of proven benefit: 1990 to 2002. *J Am Coll Cardiol.* 2003;41(1):56-61.

Coronary Artery Disease: Beta Blocker Treatment After a Heart Attack
Coronary Artery Disease: Beta Blocker Therapy – Prior MI

ACC/AHA Guidelines for the Management of Patients With ST-Elevation Myocardial Infarction – Executive Summary: 1999 Updated Practice Guidelines. Available at www.acc.org.

ACC. *Glossary;* 2005. Available at www.acc.org/media/patient/chd/glossary.htm. Last accessed January 2005.

AHA. *Heart and Stroke Statistics – 2000 Update.* Dallas, TX: AHA; 1999.

Bradford W, Chen J, Krumholz H. Under-utilisation of beta blockers after acute myocardial infarction: pharmacoeconomic implications. *Pharmacoeconomics.* 1999:15(3):257-268.

CDC/NCHS. National hospital discharge survey: 1998 summary. Available at www.cdc.gov/nchs/products/pubs/pubd/ad/311-320/ad316.htm. Last accessed December 2005.

Gottlieb SS, McCarter RJ, Vogel RA. Effect of beta-blockade on mortality among high-risk and low-risk patients after myocardial infarction. *N Engl J Med.* 1998;339:489-497.

NHLBI. *Morbidity and Mortality: 2000: Chart Book on Cardiovascular, Lung, and Blood Diseases.* Bethesda, MD: NHLBI, NIH; 2000.

Coronary Artery Disease: Angiotension Converting Enzyme Inhibitor (ACE Inhibitor)/ Angiotensin Receptor Blocker (ARB) Therapy

Gheorghiade M, Gattis W, O'Connor C. Treatment gaps in the pharmacologic management of heart failure. *Rev Cardiovasc Med.* 2002;3(suppl 3):S11-S19.

Gibbons R, Abrams J, Chatterjee K, et al. ACC/AHA 2002 guideline update for the management of patients with chronic stable angina: a report of the ACC/AHA Task Force on Practice Guidelines. *J Am Coll Cardiol.* 2003;40(1):159-168.

Grimshaw J, Shirran L, Thomas R, et al. Changing provider behavior: an overview of systematic reviews of interventions. *Med Care.* 2001;39(suppl 2):II-2-II-45.

Hunt SA, Baker DW, Chin MH, et al. ACC/AHA guidelines for the evaluation and management of chronic heart failure in the adult—executive summary: a report of the ACC/AHA Task Force on Practice Guidelines (Committee to Revise the 1995 Guidelines for the Evaluation and Management of Heart Failure). Developed in Collaboration With the International Society for Heart and Lung Transplantation; Endorsed by the Heart Failure Society of America. *Circulation.* 2001;104(24):2996-3007.

Jenks S, Huff E, Cuerdon T. Change in the quality of care delivered to Medicare beneficiaries, 1998-1999 to 2000-2001. *JAMA.* 2003;289:305-312.

McGlynn E, Asch SM, Adams J, et al. The quality of health care delivered to adults in the United States. *New Engl J Med.* 2003;348(26)2635-2645.

Mortality risk and patterns of practice in 4606 acute care patients with congestive heart failure: the relative importance of age, sex, and medical therapy. Clinical Quality Improvement Network Investigators. *Arch Intern Med.* 1996;156:1669-1673.

Rathore S, Foody J, Wang Y, et al. Sex, quality of care, and outcomes of elderly patients hospitalized with heart failure: findings from the National Heart Failure Project. *Am Heart J.* 2005;149(1):121-128.

Stafford R, Saglam D, Blumenthal D. National patterns of angiotensin-converting enzyme inhibitor use in congestive heart failure. *Arch Intern Med.* 1997;157:2460-2464.

Coronary Artery Disease: Smoking Cessation
Coronary Artery Disease: Smoking Cessation Intervention

AHA. *Heart Disease and Stroke Statistics: 2005 Update.* Available at www.americanheart.org/downloadable/heart/1105390918119HDSStats2005Update.pdf. Last accessed December 2005.

Brown DW, Croft JB, Schenck AP, et al. Inpatient smoking-cessation counseling and all-cause mortality among the elderly. *Am J Prev Med.* 2004;26(2):.

Burwen DR, Galusha DH, Lewis JM, et al. National and state trends in quality of care for acute myocardial infarction between 1994-1995 and 1998-1999: the Medicare health care quality improvement program. *Arch Intern Med.* 2003;163(12):1430-1439.

CDC. Cigarette smoking-related mortality: tobacco information and prevention source (TIPS); June 2001. Available at www.cdc.gov/tobacco/research_data/health_consequences/mortali.htm. Last accessed January 2005.

CDC. Smoking-attributable mortality, morbidity, and economic costs. *MMWR.* 2002;51(14):300-303.

Critchley J, Capewell, S. Mortality risk reduction associated with smoking cessation in patients with coronary heart disease. *JAMA.* 2003;290(1):86-97.

DHHS. *The Health Consequences of Smoking: A Report of the Surgeon General, 2004.* Available at www.cdc.gov/tobacco/sgr/sgr_2004. Last accessed December 2005.

DHHS. *Reducing the Health Consequences of Smoking: 25 Years of Progress: A Report of the Surgeon General;* 1989.

Goldenberg I, Jonas M, Tenenbaum A, et al. Current smoking, smoking cessation, and the risk of sudden cardiac death in patients with coronary artery disease. *Arch Intern Med.* 2003;163(19):2301-2305.

Goldstein M, DePue J, Monroe A, et al. A population-based survey of physician smoking cessation scounseling practices. *Prev Medicine.* 1998;27(5 Pt 1):720-729.

Grimshaw J, Shirran L, Thomas R, et al. Changing provider behavior: an overview of systematic reviews of interventions. *Med Care.* 2001;39(suppl 2):II-2-II-45.

Minino A, Arias E, Kochanek K, et al. Deaths: final data for 2000. *Natl Vital Stat Rep.* 2002;50(15):1-119.

Natarajan S, Nietert, P. National trends in screening, prevalence, and treatment of cardiovascular risk factors. *Prev Med.* 2003;36(4):389-397.

Nyboe J, Jensen G, Appleyard M, et al. Smoking and the risk of first acute myocardial infarction. *Am Heart J.* 1991;122(2):438-447.

Ryan T, Antman E, Brooks N, et al. 1999 update: ACC/AHA guidelines for the management of patients with acute myocardial infarction: a report of the ACC/AHA Task Force on Practice Guidelines. *J Am Coll Cardiol.* 1999;34(3):890-911.

Thun M, Day-Lally C, Calle E. et al. Excess mortality among cigarette smokers: changes in a 20-year interval. *Am J Public Health.* 1995;85:1223-1230.

Heart Failure: Left Ventricular Function Assessment

AHA. *Heart Disease and Stroke Statistics: 2005 Update.* Available at www.americanheart.org/downloadable/heart/1105390918119HDSStats2005Update.pdf. Last accessed December 2005.

Ahmed A, Allman R, Kiefe C, et al. Association of consultation between generalists and cardiologists with quality and outcomes of heart failure care. *Am Heart J.* 2003;145(6):1086-1093.

American Medical Association (AMA). *Heart Failure Measurement Set.* Available at www.ama-assn.org/ama1/pub/upload/mm/370/hfset-8-05.pdf. Last accessed January 2006.

Grimshaw J, Shirran L, Thomas R, et al. Changing provider behavior: an overview of systematic reviews of interventions. *Med Care.* 2001;39(suppl 2):II-2-II-45.

Havranek E, Wolfe P, Masoudi F, et al. Provider and hospital characteristics associated with geographic variation in the evaluation and management of elderly patients with heart failure. *Arch Intern Med.* 2004;164(11):1186-1191.

Hunt SA, Baker DW, Chin MH, et al. *ACC/AHA Guidelines for the Evaluation and Management of Chronic Heart Failure in the Adult: A Report of the ACC/AHA Task Force on Practice Guidelines;* 2001.

Jencks S, Huff E, Cuerdon T. Change in the quality of care delivered to Medicare beneficiaries, 1998-1999 to 2000-2001. *JAMA.* 2003;289:305-312.

Roger V, Weston S, Redfield M, et al. Trends in heart failure incidence and survival in a community-based population. *JAMA.* 2004;292:344-350.

Heart Failure: Weight Measurement

ACC/AHA. *Guidelines for the Evaluation and Management of Chronic Heart Failure in the Adult;* 2001.

Ayanian J, Weissman, J, Chasan-Taber, S, et al. Quality of care by race and gender for congestive heart failure and pneumonia. *Med Care.* 1999;37(12):1260-1269.

Baker DW, Hayes RP, Massie BM, Craig CA. Variations in family physicians' and cardiologists' care for patients with heart failure. *Am Heart J.* 1999;138(5 Pt 1):826-834.

CDC. *Heart Failure Fact Sheet;* September 2004. Available at www.cdc.gov/cvh/library/pdfs/fs_heart_failure.pdf. Last accessed January 2005.

Goldberg L, Piette J, Walsh M, et al. Randomized trial of a daily electronic home monitoring system in patients with advanced heart failure: the Weight Monitoring in Heart Failure (WHARF) trial. *Am Heart J.* 2003;146(4):705-712.

Havranek E, Wolfe P, Masoudi F, et al. Provider and hospital characteristics associated with geographic variation in the evaluation and management of elderly patients with heart failure. *Arch Intern Med.* 2004;164(11):1186-1191.

Luthi J, McClellan W, Fitzgerald D, et al. Variations among hospitals in the quality of care for heart failure. *Eff Clin Pract.* 2000;3(2):69-77.

Philbin E, Weil H, Erb T, et al. Cardiology or primary care for heart failure in the community setting: process of care and clinical outcomes. *Chest.* 1999;116(2):346-354.

Reis S, Holubkov R, Edmundowicz D, et al. Treatment of patients admitted to the hospital with congestive heart failure: specialty-related disparities in practice patterns and outcomes. *J Am Coll Cardiol.* 1997;30(3):733-738.

Heart Failure: Assessment of Clinical Symptoms of Volume Overload

AHA. *Heart Disease and Stroke Statistics: 2004 Update.* Available at www.americanheart.org/downloadable/heart/1079736729696HDSStats2004UpdateREV3-19-04.pdf. Last accessed December 2005.

AHA. *Heart Disease and Stroke Statistics: 2003 Update.* Available at www.americanheart.org/downloadable/heart/10590179711482003HDSStatsBookREV7-03.pdf. Last accessed December 2005.

Braunwald, E, ed. *Heart Disease,* 5th ed. Philadelphia, PA: WB Saunders Co; 1997.

Gheorghiade M, Gattis W, O'Connor C. Treatment gaps in the pharmacologic management of heart failure. *Rev Cardiovasc Med.* 2002;3(suppl 3):S11-S19.

Jencks S, Huff E, Cuerdon T. Change in the quality of care delivered to Medicare beneficiaries, 1998-1999 to 2000-2001. *JAMA.* 2003;289:305-312.

Jong P, Gong Y, Liu P, et al. Care and outcomes of patients newly hospitalized for heart failure in the community treated by cardiologists compared with other specialists. *Circulation.* 2003:108:184.

Kiefe C, Allison J, Williams O, et al. Improving quality improvement using achievable benchmarks for physician feedback: a randomized controlled trial. *JAMA.* 2001;285:2871-2879.

Lloyd-Jones D, Larson M, Leip E, et al. Lifetime risk for developing congestive heart failure: the Framingham Heart Study. *Circulation.* 2002;106:3068-3072.

Rathore S, Foody J, Wang Y, et al. Race, quality of care, and outcomes of elderly patients hospitalized with heart failure. *JAMA.* 2003;289:2459.

Heart Failure: Assessment of Activity Level

AHA. *Heart Disease and Stroke Statistics: 2004 Update.* Available at www.americanheart.org/downloadable/heart/1079736729696HDSStats2004UpdateREV3-19-04.pdf. Last accessed December 2005.

AHA. *Heart Disease and Stroke Statistics: 2003 Update.* Available at www.americanheart.org/downloadable/heart/10590179711482003HDSStatsBookREV7-03.pdf. Last accessed December 2005.

Dosh S. Diagnosis of heart failure in adults. *Am Fam Physician.* 2004;70(11):2145-2152.

Grimshaw J, Shirran L, Thomas R, et al. Changing provider behavior: an overview of systematic reviews of interventions. *Med Care.* 2001;39(suppl 2):II-2-II-45.

Hunt SA, Baker DW, Chin MH, et al. *ACC/AHA Guidelines for the Evaluation and Management of Chronic Heart Failure in the Adult: A Report of the ACC/AHA Task Force on Practice Guidelines;* 2001.

Hunt SA, Baker DW, Chin MH, et al. ACC/AHA guidelines for the evaluation and management of chronic heart failure in the adult—executive summary: a report of the ACC/AHA Task Force on Practice Guidelines (Committee to Revise the 1995 Guidelines for the Evaluation and Management of Heart Failure). *J Am Coll Cardiol.* 2001;38:2101-2113.

Jencks S, Huff E, Cuerdon T. Change in the quality of care delivered to Medicare beneficiaries, 1998-1999 to 2000-2001. *JAMA.* 2003;289:305-312.

Kiefe C, Allison J, Williams O, et al. Improving quality improvement using achievable benchmarks for physician feedback; a randomized controlled trial. *JAMA.* 2001;285:2871-2879.

Lloyd-Jones D, Larson M, Leip E, et al. Lifetime risk for developing congestive heart failure: the Framingham Heart Study. *Circulation.* 2002;106:3068-3072.

McGlynn EA, Asch SM, Adams J, et al. The quality of health care delivered to adults in the United States. *N Engl J Med.* 2003;348(26):2635-2645.

Heart Failure: Patient Education

AHA. *Heart Disease and Stroke Statistics: 2004 Update.* Available at www.americanheart.org/downloadable/heart/1079736729696HDSStats2004UpdateREV3-19-04.pdf. Last accessed December 2005.

AHA. *Heart Disease and Stroke Statistics: 2003 Update.* Available at www.americanheart.org/downloadable/heart/10590179711482003HDSStatsBookREV7-03.pdf. Last accessed December 2005.

Berg GD, Wadhwa S, Johnson AE. A matched-cohort study of health services utilization and financial outcomes for a heart failure disease-management program in elderly patients. *J Am Geriatr Soc.* 2004;52(10):1655-1661.

Grimshaw J, Shirran L, Thomas R, et al. Changing provider behavior: an overview of systematic reviews of interventions. *Med Care.* 2001;39(suppl 2):II-2-II-45.

Hunt SA, Baker DW, Chin MH, et al. *ACC/AHA Guidelines for the Evaluation and Management of Chronic Heart Failure in the Adult: A Report of the ACC/AHA Task Force on Practice Guidelines;* 2001.

Hunt SA, Baker DW, Chin MH, et al. ACC/AHA guidelines for the evaluation and management of chronic heart failure in the adult: executive summary: a report of the ACC/AHA Task Force on Practice Guidelines (Committee to Revise the 1995 Guidelines for the Evaluation and Management of Heart Failure). *J Am Coll Cardiol.* 2001;38:2101-2113.

Koelling TM, Johnson ML, Cody RJ, et al. Discharge education improves clinical outcomes in patients with chronic heart failure. *Circulation.* 2005;111(2):179-185.

Lloyd-Jones D, Larson M, Leip E, et al. Lifetime risk for developing congestive heart failure: the Framingham heart study. *Circulation.* 2002;106:3068-3072.

McGlynn EA, Asch SM, Adams J, et al. The quality of health care delivered to adults in the United States. *N Engl J Med.* 2003;348(26):2635-2645.

Nohria A, Chen Y, Morton D. Quality of care for patients hospitalized with heart failure at academic medical centers. *Am Heart J.* 1999;137(6):1028-1034.

Roger V, Weston S, Redfield M. Trends in heart failure incidence and survival in a community-based population. *JAMA.* 2004;292(3):344-350.

Heart Failure: Beta Blocker Therapy

AHA. *Heart Disease and Stroke Statistics: 2004 Update.* Available at www.americanheart.org/downloadable/heart/1079736729696HDSStats2004UpdateREV3-19-04.pdf. Last accessed December 2005.

AHA. *Heart Disease and Stroke Statistics: 2003 Update.* Available at www.americanheart.org/downloadable/heart/10590179711482003HDSStatsBookREV7-03.pdf. Last accessed December 2005.

AMA. *Heart Failure Measurement Set.* Available at www.ama-assn.org/ama1/pub/upload/mm/370/hfset-8-05.pdf. Last accessed January 2006.

Bertoni A, Duren-Winfield V, Ambrosius W. Quality of heart failure care in managed Medicare and Medicaid patients in North Carolina. *Am J Cardiol.* 2004;93(6):714-718.

Grimshaw J, Shirran L, Thomas R, et al. Changing provider behavior: an overview of systematic reviews of interventions. *Med Care.* 2001;39(suppl 2):II-2-II-45.

Hunt SA, Baker DW, Chin MH, et al. *ACC/AHA Guidelines for the Evaluation and Management of Chronic Heart Failure in the Adult: A Report of the ACC/AHA Task Force on Practice Guidelines;* 2001.

Lloyd-Jones D, Larson M, Leip E, et al. Lifetime risk for developing congestive heart failure: the Framingham Heart Study. *Circulation.* 2002;106:3068-3072.

Roger V, Weston S, Redfield M. Trends in heart failure incidence and survival in a community-based population. *JAMA.* 2004;292(3):344-350.

Heart Failure: ACE Inhibitor/ARB Therapy

AHA. *Heart Disease and Stroke Statistics: 2004 Update.* Available at www.americanheart.org/downloadable/heart/1079736729696HDSStats2004UpdateREV3-19-04.pdf. Last accessed December 2005.

AHA. *Heart Disease and Stroke Statistics: 2003 Update.* Available at www.americanheart.org/downloadable/heart/10590179711482003HDSStatsBookREV7-03.pdf. Last accessed December 2005.

Butler J, Arbogast PG, Daugherty J, et al. Outpatient utilization of angiotensin-converting enzyme inhibitors among heart failure patients after hospital discharge. *J Am Coll Cardiol.* 2004;43(11):2036-2043.

Grimshaw J, Shirran L, Thomas R, et al. Changing provider behavior: an overview of systematic reviews of interventions. *Med Care.* 2001;39(suppl 2):II-2-II-45.

Lloyd-Jones D, Larson M, Leip E., et al. Lifetime risk for developing congestive heart failure: the Framingham Heart Study. *Circulation.* 2002;106:3068-3072.

Mortality risk and patterns of practice in 4606 acute care patients with congestive heart failure: the relative importance of age, sex, and medical therapy. Clinical Quality Improvement Network Investigators. *Arch Intern Med.* 1996;156:1669-1673.

Rathore S, Foody J, Wang Y, et al. Sex, quality of care, and outcomes of elderly patients hospitalized with heart failure: findings from the National Heart Failure Project. *Am Heart J.* 2005;149(1):121-128.

Stafford R, Saglam D, Blumenthal D. National patterns of angiotensin-converting enzyme inhibitor use in congestive heart failure. *Arch Intern Med.* 1997;157:2460-2464.

Heart Failure: Warfarin Therapy for Patients with Atrial Fibrillation

AHA. *Heart Disease and Stroke Statistics: 2004 Update.* Available at www.americanheart.org/downloadable/heart/1079736729696HDSStats2004UpdateREV3-19-04.pdf. Last accessed December 2005.

AHA. *Heart Disease and Stroke Statistics: 2003 Update.* Available at www.americanheart.org/downloadable/heart/10590179711482003HDSStatsBookREV7-03.pdf. Last accessed December 2005.

AHA. *Atrial Fibrillation;* 2005. Available at www.americanheart.org/presenter.jhtml?identifier=4451. Last accessed February 2005.

Feinberg W, Blackshear J, Laupacis A, et al. Prevalence, age distribution, and gender of patients with atrial fibrillation: analysis and implications. *Arch Intern Med.* 1995;155:469-473.

Go A, Hylek E, Phillips K, et al. Prevalence of diagnosed atrial fibrillation in adults—national implications for rhythm management and stroke prevention: the Anticoagulation and Risk Factors in Atrial Fibrillation (ATRIA) Study. *JAMA.* 2001;285:2370-2375.

Grimshaw J, Shirran L, Thomas R, et al. Changing provider behavior: an overview of systematic reviews of interventions. *Med Care.* 2001;39(suppl 2):II-2-II-45.

Ibrahim S, Kwoh C. Underutilization of oral anticoagulant therapy for stroke prevention in elderly patients with heart failure. *Am Heart J.* 2000;140(2):219-220.

Lloyd-Jones D, Larson M, Leip E, et al. Lifetime risk for developing congestive heart failure: the Framingham Heart Study. *Circulation.* 2002;106:3068-3072.

McGlynn EA, Asch SM, Adams J, et al. The quality of health care delivered to adults in the United States. *N Engl J Med.* 2003;348(26):2635-2645.

Rockson S, Albers G. Comparing the guidelines: anticoagulation therapy to optimize stroke prevention in patients with atrial fibrillation. *J Am Coll Cardiol.* 2004;43(6):929-935.

Stafford R, Radley D. The underutilization of cardiac medications of proven benefit, 1990 to 2002. *J Am Coll Cardiol.* 2003;41(1):56-61.

Wattigney W, Mensah G, Croft J. Increased atrial fibrillation mortality: United States, 1980-1998. *Am J Epidemiol.* 2002;155:819–826.

Hypertension

Plan of Care

Chobanian AV, Bakris GL, Black HR, et al. Seventh report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. *Hypertension.* 2003;42:1206.

Controlling High Blood Pressure

Chobanian AV, Bakris GL, Black HR, et al. Seventh report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. *Hypertension.* 2003;42:1206.

Wang Y, Wang QJ. The prevalence of prehypertension and hypertension among U.S. adults according to the new joint national committee guidelines: challenges of the old problem. *Arch Intern Med.* 2004;164(19):2126-2134.

Prenatal Care

Anti-D Immune Globulin

AAP and ACOG. *Guidelines for Prenatal Care,* 5th ed.. Elk Grove Village, IL: AAP/ACOG; 2002

American College of Obstetricians and Gynecologists (ACOG). ACOG practice bulletin. Prevention of Rh D alloimmunization. Number 4, May 1999 (replaces educational bulletin Number 147, October 1990). Clinical management guidelines for obstetrician-gynecologists. American College of Obstetrics and Gynecology. *Int J Gynaecol Obstet.* 1999;66(1):63-70.

AMA—Physician Consortium for Performance Improvement. "Clinical Performance Measures, Prenatal Testing: Tools Developed by Physicians, for Physicians." © 2002 American Medical Association. Available at www.ama-assn.org/ama1/pub/upload/mm/370/prenatalset-8-05.pdf. Last accessed January 2006.

Bowman JM. Controversies in Rh prophylaxis. *Am J Obstet Gynecol.* 1985;151:289-294.

Bowman JM. The prevention of Rh immunization. *Transfus Med Rev.* 1988;2:129-150.

Freda VJ, Gorman JG, Pollack W, et al. Prevention of Rh hemolytic disease—ten years' clinical experience with Rh immune globulin. *N Engl J Med.* 1975;292:1014-1016.

Golden WE, Archer N, Sanchez N, et al. Evaluating prenatal care in Arkansas. *J Ark Med Soc.* 2002;98(9):296-297.

Grimshaw JM, Shirran L, Thomas R, et al. Changing provider behavior: an overview of systematic reviews of interventions. *Med Care.* 2001;39(suppl 2):II-2-II-45.

Hofer TP, Hayward RA, Greenfield S, et al. The unreliability of individual physician "report cards" for assessing the costs and quality of care of a chronic disease. *JAMA.* 1999;28:2098-2105.

Huchcroft S, Gunton P, Bowen T. Compliance with postpartum Rh isoimmunization prophylaxis in Alberta. *Can Med Assoc J.* 1985;133:871-875.

Hughes RG, Craig JI, Murphy WG, et al. Causes and clinical consequences of Rhesus (D) haemolytic disease of the newborn: a study of a Scottish population, 1985-1990. *Br J Obstet Gynaecol.* 1994;101:297-300.

Martin JA, Hamilton BE, Ventura SJ, et al. Births: final data for 2000. *Natl Vital Stat Rep.* 2002;50(5):1-101.

Martin JA, Park MM, Sutton PD. Births: preliminary data for 2001. *Natl Vital Stat Rep.* 2002;50(10):1-20.

Mollison PL, Engelfriet CP, Contreras M. *Blood Transfusion in Clinical Medicine,* 8th ed. Oxford: Blackwell Scientific Publications; 1987.

Mollison PL, Engelfreit CP, Contreras M. Haemolytic disease of the newborn in blood. In: *Blood Transfusion in Clinical Medicine,* 8th ed. Oxford: Blackwell Scientific Publications; 1987:637-687 (Level III).

NCHS. *Health, United States, 2004, With Chartbook on Trends in the Health of Americans;* 2004.

Sibai BM, Lindheimer M, Hauth J, et al. Risk factors for preeclampsia, abruptio placentae, and adverse neonatal outcomes among women with chronic hypertension. *NEJM.* 1998;339(10):667–671.

Tannirandorn Y, Rodeck CH. New approaches in the treatment of haemolytic disease of the fetus. *Baillieres Clin Haematol.* 1990;3:289-320.

Tovey LA, Townley A, Stevenson BJ, et al. The Yorkshire antenatal anti-D immunoglobulin trial in primigravidae. *Lancet.* 1983;2:244-246.

USPSTF. *Guide to Clinical Preventive Services,* 2nd ed. Baltimore, MD: Williams & Wilkins; 1996.

USPSTF. *Screening for Rh (D) Incompatibility: Recommendation Statement;* February 2004. Available at www.ahrq.gov/clinic/3rduspstf/rh/rhrs.htm. Last accessed January 2006.

Xiong X, Mayes D, Demianczuk N, et al. Impact of pregnancy-induced hypertension on fetal growth. *Am J Obstet Gynecol.* 1999;180(1 Pt 1):207-213.

Screening for Human Immunodeficiency Virus

AMA—Physician Consortium for Performance Improvement. "Clinical Performance Measures, Prenatal Testing: Tools Developed by Physicians, for Physicians." © 2002 American Medical Association. Available at www.ama-assn.org/ama1/pub/upload/mm/370/prenatalset-8-05.pdf. Last accessed January 2006.

Breese P, Burman W, Schlay J, et al. The effectiveness of a verbal opt-out system for Human Immunodeficiency Virus screening during pregnancy. *Obstet Gynecol.* 2004;104:134-137.

CDC. Cases of HIV infection and AIDS in the United States, 2002. *HIV/AIDS Surveillance Report.* 2002;14-1-40.

Golden WE, Archer N, Sanchez N, et al. Evaluating prenatal care in Arkansas. *J Ark Med Soc.* 2002;98(9):296-297.

HIV testing among pregnant women U.S. and Canada, 1998-2001. *MMWR,* 2002;51:1013-1016.

Hofer TP, Hayward RA, Greenfield S, et al. The unreliability of individual physician "report cards" for assessing the costs and quality of care of a chronic disease. *JAMA.* 1999;28:2098-2105.

Prenatal and perinatal human immunodeficiency virus testing: expanded recommendations. ACOG Committee Opinion No. 304. *Obstet Gynecol.* 2004;104:1119-1124.

Moefenson LM. Recommendations of the U.S. Public Health Service Task Force on the use of zidovudine to reduce perinatal transmission of HIV-1 transmission in the United States. *MMWR.* 2002;51(RR18):1-38.

Stringer EM, Stringer JS, Cliver SP, et al. Evaluation of a new testing policy for HIV to improve screening rates. *Obstet Gynecol.* 2001;98:1104-1108.

Wade NA, Birkhead GS, Warren BL, et al. Abbreviated regimens of zidovudine prophylaxis and perinatal tranmission of HIV. *N Engl J Med.* 1998;339:1409-1414.

Prevention, Immunization, and Screening

Tobacco Use
Smoking Cessation
Advising Smokers to Quit
Discussing Smoking Cessation Medication
Discussing Smoking Cessation Strategies

CDC. Cigarette smoking among adults—United States, 2004. In: *Health, United States, 2004.* Available at www.cdc.gov/nchs/data/hus/hus04trend.pdf#exe. Last accessed December 2004.

CDC. Cigarette smoking among adults—United States, 2002. *MMWR.* 2002;53(20):427-431. Available at www.cdc.gov/mmwr/preview/mmwrhtml/mm5320a2.htm#tab. Last accessed January 2005.

CDC. Cigarette smoking among adults—United States, 1995. *MMWR.* 1997a;46(51):1217-1220.

CDC. *Cigarette Smoking-Related Mortality. Tobacco Information and Prevention Source (TIPS);* June 2001. Available at www.cdc.gov/tobacco/research_data/health_consequences/mortali.htm. Last accessed January 2005.

CDC. Medical care expenditures attributable to cigarette smoking–United States, 1993. *MMWR.* 1994;43:469-472.

CDC. Smoking-attributable mortality, morbidity, and economic costs. *MMWR.* 2002;51(14):300-303.

CDC. Strategies for reducing exposure to environmental tobacco smoke, increasing tobacco-use cessation, and reducing initiation in communities and health care systems, a report on recommendations of the Task Force on Community Preventive Services. *MMWR.* 2000b;49:1-11.

CDC. *Tobacco Use Among U.S. Racial/Ethnic Minority Groups – African Americans, American Indians and Alaska Natives, Asian Americans and Pacific Islanders, and Hispanics: A Report of the Surgeon General.* Atlanta, GA: CDC; 1998.

Coffield AB, Maciosek MV, McGinnis JM, et al. Priorities among recommended clinical preventive services. *Am J Prev Med.* 2001;21(1):1-9.

Cromwell J, Bartosch WJ, Fiore MC, et al. Cost-effectiveness of the clinical practice recommendations in the AHCPR guideline for smoking cessation. *JAMA.* 1997;278(21):1759-1766.

Cummings SR, Rubin SM, Oster G. The cost-effectiveness of counseling smokers to quit. *JAMA.* 1989;261(1):75-79.

Curry SJ, Grohaus MA, McAffee T, et al. Use and cost effectiveness of smoking-cessation services under four insurance plans in a health maintenance organization. *N Engl J Med.* 1998;339(10):673-679.

DHHS. *For a Healthy Nation: Returns on Investment in Public Health.* Office for Disease Prevention and Health Promotion. Washington, DC: USGPO; 1994.

DHHS. *Healthy People 2010: Understanding and Improving Health.* 2nd ed. Washington, DC: US Government Printing Office (USGPO); November 2000. Available at www.healthypeople.gov/Document/tableofcontents.htm. Last accessed January 2006.

DHHS. *Reducing the Health Consequences of Smoking; 25 Years of Progress: A Report of the Surgeon General.* Rockville, MD: DHHS, PHS, CDC, Office on Smoking and Health; 1989.

DHHS. *Reducing Tobacco Use: A Report of the Surgeon General.* Rockville MD; DHHS, PHS, Office of the Surgeon General; 2000.

DHHS. *The Health Benefits of Smoking Cessation: A Report of the Surgeon General.* Rockville MD; DHHS, PHS, CDC, Office on Smoking and Health; 1990.

DHHS. *Tobacco Use Among U.S. Racial/Ethnic Minority Groups – African Americans, American Indians and Alaska Natives, Asian Americans and Pacific Islanders, and Hispanics: A Report of the Surgeon General.* Atlanta, Georgia: DHHS, CDC, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 1998. Available at www.cdc.gov/tobacco/sgr/sgr_1998. Last accessed January 2006.

DHHS. *Women and Smoking: A Report of the Surgeon General.* Rockville, MD: DHHS, PHS, Office of the Surgeon General; 2001.

Fiore MC, Bailey WC, Cohen SJ, et al. *Smoking Cessation. Clinical Practice Guideline No. 18.* Rockville, MD: DHHS, AHCPR; 1996.

Fiore MC, Bailey WC, Cohen SJ, et al. *Treating Tobacco Use and Dependence. Clinical Practice Guideline.* Rockville, MD: DHHS, PHS; June 2000.

Grimshaw JM, Shirran L Thomas R, et al. Changing provider behavior: an overview of systematic reviews of interventions. *Med Care.* 2001;39(suppl 2):II-2-II-45.

Herdman R, Hewitt M, Laschober M. Smoking-related deaths and financial costs: Office of Technology Assessment estimates for 1990. Washington, DC: Congress of the United States, OTA; 1993.

Hodgson T. Cigarette smoking and lifetime medical expenditures. *Milbank Q.* 1992;70(1):81-125.

IOM. *Clearing the Smoke: Assessing the Science Base for Tobacco Harm Reduction.* Washington, DC: National Academies Press; 2001.

Kendrick JS, Zahniser SC, Miller N, et al. Integrating smoking cessation into routine public prenatal care: the smoking cessation in pregnancy project. *Am J Public Health.* 1995;85:217-222.

Marks JS, Koplan JP, Hogue CJ, et al. A cost-benefit/cost-effectiveness analysis of smoking cessation for pregnant women. *Am J Prev Med.* 1990;6(5):282-289.

Miller LS, Zhang X, Rice DP, et al. State estimates of total medical expenditures attributable to cigarette smoking, 1993. *Public Health Rep.* 1998;113:447-458.

Miller VP, Ernst C, Collin F. Smoking attributable medical care costs in the USA. *Soc Sci Med.* 1999;48:375-391.

Oster G, Colditz GA, Kelly NL. The economic costs of smoking and benefits of quitting for individual smokers. *Prev Med.* 1984;13:377-389.

Patrick DL, Cheadle A, Thompson DC, et al. The validity of self-reported smoking: a review and meta-analysis. *Am J Public Health.* 1994;84:1086-1093.

Schauffer HH, Rodriguez T. Availability and utilization of health promotion programs and satisfaction with health plan. *Med Care.* 1994;32:1182-1196.

Shopland DR, Niemcryk SJ, Marconi KM. Geographic and gender variations in total tobacco use. *Am J Public Health.* 1994;84:1086-1093.

Thorndike AN, Rigotti NA, Stafford RS, et al. National patterns in the treatment of smokers by physicians. *JAMA.* 1998;279(8):604-608.

Thun MJ, Day-Lally CA, Calle EE, et al. Excess mortality among cigarette smokers: changes in a 20-year interval. *Am J Public Health.* 1995;85:1223-1230.

Tomar SL, Husten CG, Manley MW. Do dentists and physicians advise tobacco users to quit? *JADA.* 1996;127:259-265.

Tsevat J. Impact and cost-effectiveness of smoking intervention. *Am J Med.* 1992;93(suppl a):43S-47S.

USPSTF. *Counseling: Tobacco Use;* November 2003. Available at www.ahrq.gov/clinic/uspstf/uspstbac.htm. Last accessed January 2006.

Wagner EH, Curry SJ, Grothaus L, et al. The impact of smoking and quitting on health care use. *Arch Intern Med.* 1995;155:1789-1795.

Discussing Urinary Incontinence

AHCPR. Overview: Urinary Incontinence in Adults—Clinical Practice Guideline Update. Rockville, MD: AHCPR; March 1996. Available at www.ahcpr.gov/news/press/overview.htm. Last accessed January 2006.

American Geriatric Society. *Urinary Incontinence.* Available at www.americangeriatrics.org/products/ui_chapter.shtml#Head5. Last accessed January 2006.

Association of Women's Health, Obstetric and Neonatal Nurses (AWHONN). *Continence for Women. Evidence-Based Practice Guideline.* Washington, DC: AWHONN; 2000. Available at www.awhonn.org/awhonn/?pa=ecommerce&sa=viewProductDetail&catalogId=1&searchTerm=Continence&pageNum=1&productCode=ECW. Last accessed January 2006.

Bland DR, Dugan E, Cohen SJ, et al. The effects of implementation of the Agency for Health Care Policy and Research urinary incontinence guidelines in primary care practices. *J Am Geriatr Soc.* 2003;51(7):979-984.

Cohen SJ, Robinson D, Dugan E, et al. Communication between older adults and their physicians about urinary incontinence. *J Gerontol A. Biol Sci Med Sci.* 1999.54(1):M34-M7.

Diokno AC, Burgio K, Fultz NH, et al. Medical and self-care practices reported by women with urinary incontinence. *Am J Manag Care.* 2004;10(part 1):69-78.

Dugan E, Roberts CP, et al. Why older community-dwelling adults do not discuss urinary incontinence with their primary care physicians. *J Am Geriatric Soc.* 2001;49(4):462-465.

Hu TW, Wagner TH, Bentkover JD, et al. Costs of urinary incontinence and overactive bladder in the United States: a comparative study. *Urology.* 2004;63(3):461-465.

Jackson RA, Vittinghoff E, Kanaya AM, et al. Health, aging, and body composition study: urinary incontinence in elderly women—findings from the health, aging, and body composition study. *Obstet Gynecol.* 2004;104:301–307.

Litwin MS, Saigal CS, eds. *Urologic Diseases in America.* NIH Publication No. 04-5512. Washington, DC: USGPO; 2004. Available at http://kidney.niddk.nih.gov/statistics/uda. Last accessed February 2005.

Makinen J. Urinary incontinence in women. In: *EBM Guidelines. Evidence-Based Medicine* [CD-ROM]. Helsinki, Finland: Duodecim Medical Publications Ltd.; 2004. Available at www.guideline.gov/summary/summary.aspx?doc_id=8146&nbr=004539&string=Continence+AND+Women.+AND+Evidence-Based+AND+Practice+AND+Guideline. Last accessed January 2006.

Roberts RO, Jacobsen SJ, Rhodes T, et al. Urinary incontinence in a community-based cohort: prevalence and healthcare-seeking. *J Am Geriatr Soc.* 1998;46(4):467-472.

Receiving Urinary Incontinence Treatment

AHCPR. Overview: Urinary Incontinence in Adults—Clinical Practice Guideline Update. Rockville, MD: AHCPR; March 1996. Available at www.ahcpr.gov/news/press/overview.htm. Last accessed January 2006.

AWHONN. *Continence for Women. Evidence-Based Practice Guideline.* Washington, DC: AWHONN; 2000. Available at www.awhonn.org/awhonn/?pa=ecommerce&sa=viewProductDetail&catalogId=1&searchTerm=Continence&pageNum=1&productCode=ECW. Last accessed January 2006.

Bland DR, Dugan E, Cohen SJ, et al. The effects of implementation of the Agency for Health Care Policy and Research urinary incontinence guidelines in primary care practices. *J Am Geriatr Soc.* 2003;51(7):979-984.

Cohen SJ, Robinson D, Dugan E, et al. Communication between older adults and their physicians about urinary incontinence. *J Gerontol A. Biol Sci Med Sci.* 1999;54(1):M34-M7.

Diokno AC, Burgio K, Fultz NH, et al. Medical and self-care practices reported by women with urinary incontinence. *Am J Manag Care.* 2004;10(part 1):69-78.

Dugan E, Roberts CP, et al. Why older community-dwelling adults do not discuss urinary incontinence with their primary care physicians. *J Am Geriatric Soc.* 2001;49(4):462-465.

Hu TW, Wagner TH, Bentkover JD, et al. Costs of urinary incontinence and overactive bladder in the United States: a comparative study. *Urology.* 2004;63(3):461-465.

Jackson RA, Vittinghoff E, Kanaya AM, et al. Health, aging, and body composition study: urinary incontinence in elderly women—findings from the health, aging, and body composition study. *Obstet Gynecol.* 2004;104:301–307.

Litwin MS, Saigal CS, eds. *Urologic Diseases in America.* NIH Publication No. 04-5512. Washington, DC: USGPO; 2004. Available at kidney.niddk.nih.gov/statistics/uda. Last accessed February 2005.

Makinen J. Urinary incontinence in women. In: *EBM Guidelines. Evidence-Based Medicine* [CD-ROM]. Helsinki, Finland: Duodecim Medical Publications Ltd.; 2004. Available at www.guideline.gov/summary/summary.aspx?doc_id=8146&nbr=004539&string=Continence+AND+Women.+AND+Evidence-Based+AND+Practice+AND+Guideline. Last accessed January 2006.

Roberts RO, Jacobsen SJ, Rhodes T, et al. Urinary incontinence in a community-based cohort: prevalence and healthcare-seeking. *J Am Geriatr Soc.* 1998;46(4):467-472.

Flu Shot for Adults
Influenza Vaccination

AMA. *Clinical Performance Measures: Preventive Care and Screening*; 2003. Available at www.ama-assn.org/ama/pub/category/4837.html. Last accessed December 2004.

CDC. *Influenza.* Available at www.cdc.gov/nchs/fastats/flu.htm. Last accessed March 2003.

CDC. Influenza surveillance report no. 80. Atlanta, GA: U.S. Department of Health, Education and Welfare, PHS; 1964, 8-11.

CDC. Prevention and control of influenza: recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR (serial online).* 2004;53(RR06):1-40 Available at www.cdc.gov/mmwr/preview/mmwrhtml/rr5306a1.htm. Last accessed June 2005.

CDC. Recommended adult immunization schedule—United States, October 2004-September 2005. *MMWR.* 1994;53(45):Q1-Q4. Available at www.cdc.gov/mmwr/preview/mmwrhtml/mm5345-Immunizationa1.htm. Last accessed June 2005.

CDC. Updated interim influenza vaccination recommendations—2004-05 influenza season. *MMWR (serial online).* 2004;53(50):1183-1184. Available at www.cdc.gov/mmwr/preview/mmwrhtml/mm5350a7.htm. Last accessed December 2004.

Davis JW, Lee E, Taira DA, et al. Influenza vaccination, hospitalizations, and costs among members of a Medicare managed care plan. *Med Care.* 2001;39:1273-1280.

Gross PA, Hermongenes AW, Sacks HS, et al. The efficacy of influenza vaccine in elderly persons; a meta-analysis and review of the literature. *Ann Intern Med.* 1995;123:518-527.

Kamal KM, Madhavan SS, Amonkar MM. Determinants of adult influenza and pneumonia immunization rates. *J Am Pharm Assoc.* 2003;43(3):403-411.

National Coalition for Adult Immunization. *Facts About Influenza for Adults.* Available at www.nfid.org/factsheets/influadult.html. Last accessed January 2005.

NCHS. *National Health Interview Survey.* Available at www.cdc.gov/nchs/about/major/nhis/released200212/figures04_1-4_3.htm. Last accessed January 2005.

NCQA. *The State of Health Care Quality 2004, New Measure: Flu Shots for Adults.* Available at www.ncqa.org/communications/sohc2004/flu_shots.htm. Last accessed January 2005.

Simonsen L, Clarke MJ, Williamson GD, et al. The Impact of influenza epidemics on mortality: introducing a severity index. *Am J Public Health.* 1997;87(12):1944-1950.

USPSTF. *Guide to Clinical Preventive Services, 2nd ed.;* 1996. Available at www.ahrq.gov/clinic/2ndcps/adultimm.pdf. Last accessed December 2004.

Pneumonia Vaccination

CDC. Influenza and pneumococcal vaccination levels among adults aged ≥65 years—United States, 1997. *MMWR.* 1998;47(38):797-802. Available at www.cdc.gov/mmwr/preview/mmwrhtml/mm5145a3.htm. Last accessed February 2005.

CDC. Prevention of pneumococcal disease: recommendations of the Advisory Committee on Immunization Practices (ACIP). *MMWR (serial online).* 1997;46(RR-08):1-24. Available at www.cdc.gov/epo/mmwr/preview/mmwrhtml/00047135.htm#00002348.htm. Last accessed February 2005.

CDC. Recommended adult immunization schedule—United States, October 2004-September 2005. *MMWR.* 2004;53(45):Q1-Q4. Available at www.cdc.gov/mmwr/preview/mmwrhtml/mm5345-Immunizationa1.htm. Last accessed June 2005.

Ely, E. Pneumonia in the elderly: diagnostic and therapeutic challenges. *Infect Med.* 1997;14(8):643-654.

MacDonald R, Baken L, Nelson A, et al. Validation of self-report of influenza and pneumococcal vaccination status in elderly outpatients. *Am J Prev Med.* 1999;16(3):173-177.

NCHS. *Healthy People 2000 Review, 1998-99.* Hyattsville, MD: PHS; 1999, 204-206.

USPSTF. *Guide to Clinical Preventive Services, 2nd ed.* Baltimore, MD: Williams & Wilkins; 1989, 791-814.

Childhood Immunization Status

AHRQ. *National Healthcare Disparities Report;* July 2003. Available at www.qualitytools.ahrq.gov/disparitiesreport/download_report.aspx. Last accessed February 2005.

CDC. General recommendations on immunization: recommendations of the Advisory Committee on Immunization Practices (ACIP) and the American Academy of Family Physicians (AAFP). *MMWR.* 2002;51(RR02):1-36. Available at www.cdc.gov/mmwr/preview/mmwrhtml/rr5102a1.htm. Last accessed February 2005.

CDC. National, state, and urban area vaccination coverage among children aged 19-35 months—United States, 2003. *MMWR.* 2004;53(29):658-661.

CDC. Recommended childhood and adolescent immunization schedule—United States, 2005. *MMWR.* 2005;53(51):Q1-Q3. Available at www.cdc.gov/mmwr/preview/mmwrhtml/mm5351-Immunizationa1.htm. Last accessed June 2005.

Fenner F, Henderson DA, Arita I, et al. Smallpox and its eradication. Geneva: World Health Organization; 1988. Available at www.who.int/emc/diseases/smallpox/Smallpoxeradication.html. Last accessed February 2005.

Thompson JW, Ryan KW, Pinidiya SD, et al. Quality of care for children in commercial and Medicaid managed care. *JAMA.* 2003;290(11):1486-1493.

Breast Cancer Screening

Black ME, Stein KF, Loveland-Cherry CJ. Older women and mammography screening behavior: do possible selves contribute? *Health Educ Behav.* 2001;28(2):200-216.

Chu KC, Lamar CA, Freeman HP. Racial disparities in breast carcinoma survival rates: separating factors that affect diagnosis from factors that affect treatment. *Cancer.* 2003;97(11):2853-2860.

Coleman EA, O'Sullivan P. Racial differences in breast cancer screening among women from 65 to 74 years of age: trends from 1987-1993 and barriers to screening. *J Women Aging.* 2001;13(3):23-39.

Cunningham JE, Butler WM. Racial disparities in female breast cancer in South Carolina: clinical evidence for a biological basis. *Breast Cancer Res Treat.* 2004;88(2):161-176.

Ghafoor A, Jemal A, Cokkinides V, et al. Cancer statistics for African Americans. *CA Canc J Clin.* 2002;52:326-341.

Ghafoor A, Jemal A, Ward E. Trends in breast cancer by race and ethnicity. *CA Canc J Clin.* 2003;53(6):342-355.

Goldzweig CL, Parkerton PH, Washington DL, et al. Primary care practice and facility quality orientation: influence on breast and cervical cancer screening rates. *Am J Manag Care.* 2004;10:265-272.

Hawley ST, Earp JA, O'Malley M, et al. The role of physician recommendation in women's mammography use: is it a 2-stage process? *Med Care.* 2000;38(4):392-403.

Jones BA, Kasl SV, Howe CL, et al. African-American/White differences in breast carcinoma: p53 alterations and other tumor characteristics. *Cancer.* 2004;101(6):1261-1263.

O'Malley MS, Earp JA, Hawley ST, et al. The association of race/ethnicity, socioeconomic status, and physician recommendation for mammography: who gets the message about breast cancer screening? *Am J Public Health.* 2001;91(1):49-54.

Parker S, Tong L, Bolden S, et al. Cancer statistics 1996. *CA Cancer J Clin.* 1996;46:8-9.

Ruchlin HS. Prevalence and correlates of breast and cervical cancer screening among older women. *Obstet Gynecol.* 1997;90:16-21.

Schootman M, Jeffe DB, Reschke AH, et al. Disparities related to socioeconomic status and access to medical care remain in the United States among women who never had a mammogram. *Cancer Causes Control,* 2003;14(5):419-425.

Smith RA, Saslow D, Sawyer KA, et al. American Cancer Society guidelines for breast cancer screening; update 2003. *CA Cancer J Clin*. 2003;53:141-169.

Colorectal Cancer Screening

Dulai GS, Farmer MM, Ganz PA, et al. Primary care provider perceptions of barriers to and facilitators of colorectal cancer screening in a managed care setting. *Cancer.* 2004;100(9):1843-1852.

Patel P, Forjuoh SN, Avots-Avotins A, et al. Identifying opportunities for improved colorectal cancer screening in primary care. *Prev Med.* 2004;39(2):239-246.

Rao RS, Graubard BI, Breen N, et al. Understanding the factors underlying disparities in cancer screening rates using the Peters-Belson approach: results from the 1998 National Health Interview Survey. *Med Care.* 2004;42(8):789-800.

Seeff LC, Nadel MR, Klabunde CN, et al. Patterns and predictors of colorectal cancer test use in the adult U.S. population. *Cancer.* 2004;100(10):2093-2103.

Cervical Cancer Screening

American Cancer Society. *Overview of Cervical Cancer.* Available at www.cancer.org/docroot/CRI/CRI_2_1x.asp?dt=8. Last accessed January 2006.

Cassard SD, Weisman CS, Plichta SB, et al.. Physician gender and women's preventive services. *J Women's Health.* 1997;6(2):199-207.

Chen JY, Diamant AL, Kagawa-Singer M, et al. Disaggregating data on Asian and Pacific Islander women to assess cancer screening. *Am J Prev Med.* 2004;27(2):139-145.

Coronado GD, Thompson B, Koepsell TD, et al. Use of Pap test among Hispanics and non-Hispanic whites in a rural setting. *Prev Medicine.* 2004;38(6):713-722.

Coughlin SS, Uhler RJ, Richards T, et al. Breast and cervical cancer screening practices among Hispanic and non-Hispanic women residing near the United States-Mexico border, 1999-2000. *Fam Community Health.* 2003;26(2):130-139.

Cyrus-David MS, Michielutte R, Paskett ED, et al. Cervical cancer risk as a predictor of Pap smear use in rural North Carolina. *J Rural Health.* 2002;18(1):67-76.

Dickinson L, Mussey ME, Kurland LT. Evaluation of the effectiveness of cytologic screening for cervical cancer. II. Survival parameters before and after inception of screening. *Mayo Clin Proc.* 1972;47:545-549.

Eddy DM. Screening for cervical cancer. *Ann Intern Med.* 1990;113:214-226.

Gold MR, Siegel JE, Russell LB, et al., eds. *Cost-Effectiveness in Health and Medicine.* New York: Oxford University Press; 1996.

Hall HI, Rogers JD, Weir HK, et al. Breast and cervical carcinoma mortality among women in the Appalachian region of the U.S., 1976-1996. *Cancer.* 2000;89(7):1593-1602.

Hewitt M, Devesa SS, Breen N. Cervical cancer screening among U.S. women: an analyses of the 2000 National Health Interview Survey. *Prev Med.* 2004;39:270-278. Available at dceg.cancer.gov/pdfs/hewitt392702004.pdf. Last accessed January 2005.

Levy S, Dowling P, Boult L, et al. The effect of physician and patient gender on preventive medicine practices in patients older than fifty. *Fam Med.* 1992;24(1):58-61.

Lurie N, Margolis KL, McGovern PG, et al. Why do patients of female physicians have higher rates of breast and cervical cancer screening? *J Gen Intern Med.* 1997;12(1):34-43.

Lurie N, Slater J, McGovern P, et al. Preventive care for women: does the sex of the physician matter? *N Eng J Med.* 1993;329(7):478-482.

National Cancer Institute. *Cervical Cancer (PDQ®): Prevention.* Updated July 2005. Available at www.cancer.gov/cancertopics/pdq/prevention/cervical/patient. Last accessed January 2006.

NCQA. *Cervical Cancer Screening.* Available at www.ncqa.org/sohc2003/cervical_cancer_screening.htm. Last accessed January 2006.

Ries LAG, Miller BA, Hankey BF, eds. *SEER Cancer Statistics Review 1973-1991: Tables and Graphs. National Cancer Institute.* National Institute on Aging (NIA) Pub. No. 94-2789. Bethesda, MD: NIA; 1994.

Schwartz KL, Crossley-May H, Vigneau FD, et al. Race, socioeconomic status and stage at diagnosis for five common malignancies. *Cancer Causes Control.* 2003;14(8):761-766.

Thompson B, Coronado GD, Solomon CC, et al. Cancer prevention behaviors and socioeconomic status among Hispanics and non-Hispanic whites in a rural population in the United States. *Cancer Causes Control.* 2002.13(8):719-728.

USPSTF. Screening for cervical cancer. In: *Guide to Clinical Preventive Services: An Assessment of the Effectiveness of 169 Interventions.* Baltimore, MD: Williams & Wilkins;1989.

Wyatt SW, Huang B, Tucker TC, et al. Geographic trends in cervical cancer incidence and mortality in Kentucky, 1995-2000. *J K Med Assoc.* 2004;102(1):11-4.

Young JM, Ward JE. Strategies to improve cancer screening in general practice: are guidelines the answer? *Fam Pract.* 1999;16:66-70.

Appendix G
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.

THE NATIONAL QUALITY FORUM (NQF) is a private, nonprofit, open membership, public benefit corporation whose mission is to improve the American healthcare system so that it can be counted on to provide safe, timely, compassionate, and accountable care using the best current knowledge. Established in 1999, the NQF is a unique public-private partnership having broad participation from all parts of the healthcare industry. As a voluntary consensus standards-setting organization, the NQF seeks to develop a common vision for healthcare quality improvement, create a foundation for standardized healthcare performance data collection and reporting, and identify a national strategy for healthcare quality improvement. The NQF provides an equitable mechanism for addressing the disparate priorities of healthcare's many stakeholders.

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SPECIFICATIONS OF NATIONAL VOLUNTARY CONSENSUS STANDARDS FOR AMBULATORY CARE: PHASE 3 CYCLE 1

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
Asthma Assessment	AMA/PCPI[2,3]	Patients who were evaluated during at least one office visit during the reporting year for the frequency (numeric) of daytime and nocturnal asthma symptoms**To be counted in calculations of this measure, symptom frequency must be numerically quantified. Measure may also be met by physician documentation or patient completion of an asthma assessment tool/survey/questionnaire. Assessment tools may include the QualityMetric Asthma Control Test™; NAEPP Asthma Symptoms and Peak Flow Diary.	All patients aged 5-40 years with asthma Patient Selection: ICD-9-CM Codes for asthma: 493.00-493.92And CPT codes for patient visit: 99201-99205, 99212-99215, 99241-99245, 99354-99355, 99383-99385, 99393-99395, 99401-99404 *And* Patient's age is between 5 and 40 years.	None	Paper medical record, paper flowsheet and EHRS.

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

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

IPRO - IPRO,Inc. (www.ipro.org)

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

ICSI – Institute for Clinical Systems Improvement (www.icsi.org)

NYC-DHMH - New York City Department of Health And Mental Hygiene (http://www.nyc.gov/html/doh/html/home/home.shtml)

NICHQ – National Initiative for Children's Healthcare Quality (www.nichq.org)

RHI - Resolution Health, Inc. (www.resolutionhealth.com)

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[3] Physician Performance Measures (Measures) and related data specifications, developed by the Physician Consortium for Performance Improvement (the Consortium), are intended to facilitate quality improvement activities by physicians. These Measures are intended to assist physicians in enhancing quality of care. Measures are designed for use by any physician who manages the care of a patient for a specific condition or for prevention. These performance Measures are not clinical guidelines and do not establish a standard of medical care. The Consortium has not tested its Measures for all potential applications. The Consortium encourages the testing and evaluation of its Measures. Measures are subject to review and may be revised or rescinded at any time by the Consortium. The

SPECIFICATIONS OF NATIONAL VOLUNTARY CONSENSUS STANDARDS FOR AMBULATORY CARE: PHASE 3 CYCLE 1

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
Management plan for people with asthma	IPRO	Patients for whom there is documentation, at any time during the abstraction period, that a written asthma management plan was provided either to the patient or the patient's caregiver OR at a minimum, specific written instructions on under what conditions the patient's doctor should be contacted or the patient should go to the emergency room: *Inclusions:* Copy of asthma management plan on record OR written note by provider documenting having given the patient/parent/caregiver written asthma management instructions. Instructions can include when to use PEFR or change medications in response to a change in patient symptoms &/or when to contact a physician &/or when to go directly to the emergency room.	Patients who had at least two (2) separate Ambulatory visits to your practice site for asthma during the time period January through December. A visit is considered an asthma visit if, in any claims-diagnostic field, the patient has an ICD-9-CM diagnosis code of 493.xx (i.e., 493 alone or with any extension- the common code combinations are 493, 493.0, 493.1, 493.9, there may be a fifth digit which is either a 0 or 1- for example 493.90). If your claims/encounter system also uses CPT codes- acceptable CPT codes with these ICD-9-CM are listed below. Acceptable CPT codes with ICD 9 codes above include: 99201-99205; 99211-99215; 99241-99245; 99271-99275.	Numerator Exclusions: Documentation of verbal directions given to patient/parent/caregiver without documentation of written directions being given to patient/parent/caregiver	Medical record abstraction, identified by administrative data

SPECIFICATIONS OF NATIONAL VOLUNTARY CONSENSUS STANDARDS FOR AMBULATORY CARE: PHASE 3 CYCLE 1

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
Use of Appropriate Medications for People with Asthma	NCQA[2,4]	Electronic Collection: Numerator- Dispensed at least one prescription for inhaled corticosteroids, nedocromil, cromolyn sodium, leukotriene modifiers or methylxanthines during the measurement year. Medical Record Collection: Electronic Health Record (EHR) users may opt to use this methodology or the electronic data collection methodology described above. EHR users who have information on drugs prescribed and not dispensed may opt to follow the medical record specifications below but produce data on 100% of their denominator population instead of a sample. Numerator- Documentation in the medical record must include, at a minimum, a note indicating the patient received a t least one written prescription for inhaled corticosteroids, nedocromil, cromolyn sodium, leukotriene modifiers or methylxanthines during the measurement year.	Electronic Collection: Denominator- All patients ages 5-56 years as of December 31 of the measurement year with persistent asthma reported in three age stratifications (5-9, 10-17, 18-56) and as a combined rate. To identify patients with persistent asthma, use all applicable coding schemes listed below (i.e., count patients that meet the criteria for any one of the approaches below Criteria need not be the same across years.). Step 1:Identify patients as having persistent asthma who met at least one of the four criteria below, during both the measurement year and the year prior to the measurement year. · • at least one Emergency Department (ED) visit based on CPT Codes: 99281-99285, UB-92 Codes: 0450,0451, 0452, 0459, 0981 with asthma (ICD-9 code 493) as the principal diagnosis · • at least one acute inpatient discharge based on CPT codes (99221-99223, 99231-99233, 99238,	Exclude from the eligible population all patients diagnosed with emphysema and chronic obstructive pulmonary disease (COPD) anytime on or prior to December 31 of the measurement year as identified by the following codes, or for medical record collection, as documented within the chart: EmphysemaICD-9 codes (492, 506.4, 518.1, 518.2)COPD ICD-9 codes: (491.2, 493.2, 496, 506.4)	Electronic data (visit and pharmacy encounter data or claims or medical record data.

[4] This performance measure was developed by and is owned by and the National Committee for Quality Assurance ("NCQA"). This performance measure is not a clinical guideline and does not establish a standard of medical care. NCQA makes no representations, warranties or endorsement about the quality of any organization or physician that uses or reports performance measures and NCQA has no liability to anyone who relies on such measures. NCQA holds a copyright in this measure and can rescind or alter the measure at any time. Users of the measure shall not have the right to alter, enhance, or otherwise modify the measure and shall not disassemble, recompile, or reverse engineer the source code or object code relating to the measure. Anyone desiring to use or reproduce the measure without modification for a noncommercial purpose may do so without obtaining any approval from NCQA. All commercial uses must be approved by NCQA and are subject to a license at the discretion of NCQA.

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			99239, 99251-99255, 99261-99263, 99291, 99292, 99356, 99357) and UB-92 Revenue Codes (010X–016X, 020X–022X, 072X, 080X, 0987) with asthma (ICD-9 code 493) as the principal diagnosis · • at least four outpatient asthma visits based on CPT codes (99201-99205, 99211-99215, 99217-99220, 99241-99245, 99271-99275) UB-92 Revenue Codes (0456, 0510, 0515-0517, 0520, 0521, 0523, 0526, 076X, 0770, 0779, 0982, 0983, 0988) with asthma (ICD-9 code 493) as one of the listed diagnoses and at least two asthma medication dispensing events · • at least four asthma medication dispensing events (ie, an asthma medication was dispensed on four occasions). Asthma Medications (NCQA will provide a comprehensive list of NDC codes on its website)Preferred therapy: Cromolyn sodium nhaled corticosteroids Leukotriene modifiers Methylxanthines Nedocromil Add-on therapy: Long-acting, inhaled beta-2 agonists. Step 2:For a patient identified as having persistent asthma because of at least four asthma medication dispensing events, where leukotriene modifiers were the sole		

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			asthma medication dispensed, the patient must: · meet any one of the other three criteria in step 1, or · have at least one diagnosis of asthma in any setting in the same as the leukotriene modifier (i.e. measurement year or year prior to the measurement year). <u>Medical Record Collection</u>: Electronic Health Record (EHR) users may opt to use this methodology or the electronic data collection methodology described above. EHR users who have information on drugs prescribed and not dispensed may opt to follow the medical record specifications below but produce data on 100% of their denominator population instead of a sample. **Denominator-** All patients ages 5-56 years as of December 31 of the measurement year with persistent asthma reported in three age stratifications (5-9, 10-17, 18-56) and as a combined rate. To identify patients with persistent asthma, use criteria listed below (i.e., count patients that meet the criteria for any one of the approaches below Criteria need not		

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			be the same across years.).. Step 1: Identify patients as having persistent asthma who met at least one of the four criteria below, during *both* the measurement year and the year prior to the measurement year. • at least one Emergency Department (ED) visit with asthma as the principal diagnosis • at least one acute inpatient discharge with asthma as the principal diagnosis • at least four outpatient asthma visits with asthma as one of the listed diagnoses and at least two asthma medication prescription/refill events • at least four asthma medication prescription events (i.e., an asthma medication was prescribed/refilled on four occasions). Asthma Medications (NCQA will provide a comprehensive list of NDC codes on its website) *Preferred therapy:* Cromolyn sodium Inhaled corticosteroids Leukotriene modifiers Methylxanthines Nedocromil *Add-on therapy:*		

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			Long-acting, inhaled beta-2 agonists Step 2: For a patient identified as having persistent asthma because of at least four asthma medication prescription/refill events, where leukotriene modifiers were the sole asthma medication prescribed, the patient must: • meet any one of the other three criteria in step 1, **or** • have at least one diagnosis of asthma in any setting in the same as the leukotriene modifier (i.e. measurement year or year prior to the measurement year). The denominator (patients for inclusion): A sample should be determined using the most accurate data available in the settings in which the measure will be implemented. The measure developer recommends that in most settings office visit claims (see list of codes) or other codified encounter data should be used to identify patients who have had at least one office visit in the prior (12) months from which a purposeful sample (random, consecutive retrospective or prospective from a specific date) can then be chosen for the denominator. In other uses of the		

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			measure, insurer level claims (pooled or single insurer) data can be used to identify the denominator.		
Asthma: Pharmacologic Therapy	AMA/PCPI[2,3]	Patients who were prescribed either the preferred long-term control medication (inhaled corticosteroid) or an acceptable alternative treatment (leukotriene modifiers, cromolyn sodium, nedocromil sodium, or sustained-released methylxanthines) (drug list available)	All patients aged 5-40 years with mild, moderate, or severe persistent asthma Patient Selection: ICD-9-CM Codes for asthma: 493.00-493.92 And Additional individual medical record review must be completed to identify those patients with mild, moderate, or severe persistent asthma and Patient's age is between 5 and 40 years	Documentation of patient reason(s) for not prescribing either the preferred long-term control medication (inhaled corticosteroid) or an acceptable alternative treatment	Paper medical record, paper flowsheet and EHRS.
Inappropriate Antibiotic Treatment for Adults With Acute Bronchitis	NCQA[2,4]	Electronic Collection: A dispensed outpatient prescription for antibiotic medication on or within three days after the Episode date. Outpatient Antibiotic Medications include: Amikacin, Amoxicillin, Amox/Clavulanate Ampicillin, Ampicillin-sulbactam, Azithromycin, Benzathine penicillin, Cefaclor, Cefadroxil, Cefadroxil hydrate, Cefazolin, Cefotetan, Cefoxitin, Cefdinir, Cefditoren, Cefepime, Cefoperzone, Cefotaxime, Cefpodoxime proxetil, Cefprozil, Ceftazidime, Ceftibuten, Ceftizoxime, Ceftriaxone,	Electronic Collection: Step 1: Identify all patients 18 years as of January 1 of the year prior to the measurement year to 64 years as of December 31 of the measurement year who during the Intake Period had a claim/encounter with any diagnosis of acute bronchitis and an outpatient visit code. (The Intake Period is between January 1-December 24 of the measurement year.) Codes to identify acute bronchitis: ICD-9-CM Code 466.0	Exclusion for competing diagnoses is built into the denominator specifications.	Electronic data (visit and pharmacy encounter data or claims or medical record data.

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		Cefuroxime, Cephalexin, Chloramphenical, Ciprofloxacin, Clarithromycin, Clindamycin, Cloxacillin, Daptomycin, Dicloxacillin, Dirithromycin, Doxycycline, Enoxacin, Erythromycin, Ery E-Succ/Sulfisoxazole, Flomefloxacin, Fosfomycin, Fusidic acid, Gatifloxacin, Gentamicin, Gemifloxacin, Kanamycin, Levofloxacin, Lincomycin, Linezolid, Lomefloxacin, Loracarbef, Methicillin, Metronidazole, Mezlocillin, Moxifloxacin, Minocycline, Nafcillin, Neomycin, Netilmicin, Nitrofurantoin, Norfloxacinj,Ofloxacin, Oxacillin, Pefloxacin, Penicillin VK, Penicillin G, Piperacillin, Procaine penicillin, Rifampin, Quinupristin/Dalfopristin, Sparfloxacin, Streptomycin, Sulfisoxazole, Sulfadiazine, Sulfamethizole, Sulfamethoxazole, Sulfasalzine, Telithromycin, Teicoplanin, Tetracycline, Ticarcillin, Trimethoprim, Trimethoprim-sulfamethoxazole, Vancomycin NCQA will provide a list of NDC codes on its Web site. <u>Medical Record Collection:</u> Electronic Health Record (EHR) users may opt to use this methodology or the electronic data collection methodology described above. EHR users who have information on drugs	Codes to identify outpatient visits: Evaluation and management codes—office or other outpatient services: CPT codes 99201-99205, 99211-99215, 99217-99220, 99241-99245, 99271-99275, 99381-99385, 99391-99395 Urgent care: UB-92 Revenue Code 456 Clinic: UB-92 Revenue Code 51X Freestanding Clinic: UB-92 Revenue Code 52X Professional fees, outpatient services: UB-92 Revenue Code 982 Professional fees, clinic: UB-92 Revenue Code 983 Codes to identify emergency department visits *Exclude from the denominator patients admitted to the hospital from the ED.: UB-92 Bill codes 13X, 43X AND UB-92 Revenue Codes 450-452, 459, 981 OR CPT codes 99281-99285 Step 2: Determine all acute bronchitis Episode Dates. For each patient identified in step 1, determine all outpatient Episode Dates. Step 3: Exclude patients who during the 12 months prior to the Episode Date, had at least one claim/encounter with a diagnosis for a comorbid condition.		

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		prescribed and not dispensed may opt to follow the medical record specifications below but produce data on 100% of their denominator population instead of a sample. Numerator: Documentation in the medical record must include, at a minimum, a note indicating the of patient having received a prescription for antibiotic medications on or within 3 days after the First Eligible Episode date. Outpatient Antibiotic Medications include: Amikacin, Amoxicillin, Amox/Clavulanate Ampicillin, Ampicillin-sulbactam, Azithromycin, Benzathine penicillin, Cefaclor, Cefadroxil, Cefadroxil hydrate, Cefazolin, Cefotetan, Cefoxitin, Cefdinir, Cefditoren, Cefepime, Cefoperzone, Cefotaxime, Cefpodoxime proxetil, Cefprozil, Ceftazidime, Ceftibuten, Ceftizoxime, Ceftriaxone, Cefuroxime, Cephalexin, Chloramphenical, Ciprofloxacin, Clarithromycin, Clindamycin, Cloxacillin, Daptomycin, Dicloxacillin, Dirithromycin, Doxycycline, Enoxacin, Erythromycin, Ery E-Succ/Sulfisoxazole, Flomefloxacin, Fosfomycin, Fusidic acid, Gatifloxacin, Gentamicin, Gemifloxacin, Kanamycin, Levofloxacin, Lincomycin,	*Note:* If the acute bronchitis episode occurred on January 1 of the measurement year, look 12 months prior to the start of the measurement year to check for the patient's comorbid condition history. Codes to Identify Comorbid Conditions: HIV infection; HIV asymptomatic: ICD-9-CM code 042, V Code V08 Cystic fibrosis: ICD-9-CM code 277.0 Disorders of the immune system: ICD-9 CM code 279 Malignancy neoplasms: ICD-9-CM code 140-199, 200-208 Chronic bronchitis: ICD-9-CM code 491 Emphysema: ICD-9-CM code 492 Bronchiectasis: ICD-9-CM code 494 Extrinsic allergic alveolitis: ICD-9-CM code 495 Chronic airway pulmonary obstruction, not otherwise classified: ICD-9-CM codes 496, 493.2 Pneumoconiosis and other lung disease due to external agents: ICD-9-CM codes 500-508 Other diseases of the respiratory system: ICD-9-CM codes 510-519 Tuberculosis: ICD-9-CM codes 010-018 Step 4: Test for Negative Medication History. Exclude Episode Dates		

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		Linezolid, Lomefloxacin, Loracarbef, Methicillin, Metronidazole, Mezlocillin, Moxifloxacin, Minocycline, Nafcillin, Neomycin, Netilmicin, Nitrofurantoin, Norfloxacinj,Ofloxacin, Oxacillin, Pefloxacin, Penicillin VK, Penicillin G, Piperacillin, Procaine penicillin, Rifampin, Quinupristin/Dalfopristin, Sparfloxacin, Streptomycin, Sulfisoxazole, Sulfadiazine, Sulfamethizole, Sulfamethoxazole, Sulfasalzine, Telithromycin, Teicoplanin, Tetracycline, Ticarcillin, Trimethoprim, Trimethoprim-sulfamethoxazole, Vancomycin	where a new or refill prescription for an antibiotic medication was filled 30 days prior to the Episode Date or which was active on the Episode Date. Outpatient Antibiotic Medications include: Amikacin, Amoxicillin, Amox/Clavulanate Ampicillin, Ampicillin-sulbactam, Azithromycin, Benzathine penicillin, Cefaclor, Cefadroxil, Cefadroxil hydrate, Cefazolin, Cefotetan, Cefoxitin, Cefdinir, Cefditoren, Cefepime, Cefoperzone, Cefotaxime, Cefpodoxime proxetil, Cefprozil, Ceftazidime, Ceftibuten, Ceftizoxime, Ceftriaxone, Cefuroxime, Cephalexin, Chloramphenical, Ciprofloxacin, Clarithromycin, Clindamycin, Cloxacillin, Daptomycin, Dicloxacillin, Dirithromycin, Doxycycline, Enoxacin, Erythromycin, Ery E-Succ/Sulfisoxazole, Flomefloxacin, Fosfomycin, Fusidic acid, Gatifloxacin, Gentamicin, Gemifloxacin, Kanamycin, Levofloxacin, Lincomycin, Linezolid, Lomefloxacin, Loracarbef, Methicillin, Metronidazole, Mezlocillin, Moxifloxacin, Minocycline, Nafcillin, Neomycin, Netilmicin, Nitrofurantoin, Norfloxacinj,Ofloxacin, Oxacillin,		

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			Pefloxacin, Penicillin VK, Penicillin G, Piperacillin, Procaine penicillin, Rifampin, Quinupristin/Dalfopristin, Sparfloxacin, Streptomycin, Sulfisoxazole, Sulfadiazine, Sulfamethizole, Sulfamethoxazole, Sulfasalzine, Telithromycin, Teicoplanin, Tetracycline, Ticarcillin, Trimethoprim, Trimethoprim-sulfamethoxazole, Vancomycin *Note:* If the acute bronchitis episode occurred on January 1 of the measurement year, look 30 days prior to the start of the measurement year to check for the patient's negative medication history. *(Please refer to the NCQA Web site for a comprehensive list of NDC codes for antibiotic medications.) Step 5: Test for Competing Diagnoses. Exclude Episode Dates where there is a claim or encounter with a competing diagnosis 30 days prior to the episode date through 7 days after the episode date. *Note:* If the episode occurred on January 1 of the measurement year, look 30 days prior to the start of the measurement year to check for the patient's competing diagnosis history. Codes to Identify Competing		

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			Diagnoses Intestinal infections ICD-9-CM Codes (001-009) Pertussis ICD-9-CM (033) Bacterial infection unspecified ICD-9-CM (041.9) Lyme disease and other arthropod-borne diseases ICD-9-CM (088) Otitis media ICD-9-CM (382) Acute sinusitis ICD-9-CM (461) Acute pharyngitis ICD-9-CM (462, 034.0) Acute tonsillitis ICD-9-CM (463) Chronic sinusitis ICD-9-CM (473) Infections of the pharynx, larynx, tonsils, adenoids ICD-9-CM (464.1-464.3, 474, 478.21, 478.22, 478.24, 478.29, 478.71. 478.79, 478.9) Prostatitis ICD-9-CM (601) Cellulitis, mastoiditis, other bone infections ICD-9-CM (681, 682, 730, 383) Acute lymphadenitis ICD-9-CM (683) Impetigo ICD-9-CM (684) Skin staph infections ICD-9-CM (686) Pneumonia ICD-9-CM (481- 486) Gonococcal infections and venereal diseases ICD-9-CM (098, 099) V Codes (V01.6, V02.7, V02.8) Syphilis ICD-9-CM (090, 091, 092-097) Chlamydia ICD-9-CM (078.88, 079.88, 079.98) Inflammatory diseases (female		

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			reproductive organs) ICD-9-CM (614, 615, 616) Infections of the kidney ICD-9-CM (590) Cystitis or UTI ICD-9-CM (595, 599.0) Step 6: Calculate Measure Denominator. This measure examines one Eligible Episode per patient. Select the first Eligible Episode for each patient during the measurement Intake Period that meets all criteria for inclusion in the denominator. This is the patient's First Eligible Episode. <u>Medical Record Collection:</u> Electronic Health Record (EHR) users may opt to use this methodology or the electronic data collection methodology described above. EHR users who have information on drugs prescribed and not dispensed may opt to follow the medical record specifications below but produce data on 100% of their denominator population instead of a sample. Step 1: Identify all patients 18 years as of January 1 of the year prior to the measurement year to 64 years as of December 31 of the measurement year who during the Intake Period		

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			had a outpatient diagnosis of acute bronchitis. (The Intake Period is between January 1-December 24 of the measurement year.) ED visits that do not result in a hospital admission are considered an outpatient visit for this measure) Exclude from the denominator patients admitted to the hospital from the ED. Step 2: Determine all acute bronchitis Episode Dates. For each patient identified in step 1, determine all outpatient Episode Dates. Step 3: Exclude patients who during the 12 months prior to the Episode Date, had at least one diagnosis for a comorbid condition. *Note:* If the acute bronchitis episode occurred on January 1 of the measurement year, look 12 months prior to the start of the measurement year to check for the patient's comorbid condition history. Comorbid Conditions: HIV infection; HIV asymptomatic; Cystic fibrosis; Disorders of the immune system;: Malignancy neoplasms; Chronic bronchitis; Emphysema:; Bronchiectasis; Extrinsic allergic alveolitis; Chronic		

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			airway pulmonary obstruction, not otherwise classified; Pneumoconiosis and other lung disease due to external agents; Other diseases of the respiratory system; Tuberculosis: Step 4: Test for Negative Medication History. Exclude Episode Dates where a new or refill prescription for an antibiotic medication was written 30 days prior to the Episode Date or which was active on the Episode Date. Outpatient Antibiotic Medications include: Amikacin, Amoxicillin, Amox/Clavulanate Ampicillin, Ampicillin-sulbactam, Azithromycin, Benzathine penicillin, Cefaclor, Cefadroxil, Cefadroxil hydrate, Cefazolin, Cefotetan, Cefoxitin, Cefdinir, Cefditoren, Cefepime, Cefoperzone, Cefotaxime, Cefpodoxime proxetil, Cefprozil, Ceftazidime, Ceftibuten, Ceftizoxime, Ceftriaxone, Cefuroxime, Cephalexin, Chloramphenical, Ciprofloxacin, Clarithromycin, Clindamycin, Cloxacillin, Daptomycin, Dicloxacillin, Dirithromycin, Doxycycline, Enoxacin, Erythromycin, Ery E-Succ/Sulfisoxazole, Flomefloxacin, Fosfomycin, Fusidic acid,		

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			Gatifloxacin, Gentamicin, Gemifloxacin, Kanamycin, Levofloxacin, Lincomycin, Linezolid, Lomefloxacin, Loracarbef, Methicillin, Metronidazole, Mezlocillin, Moxifloxacin, Minocycline, Nafcillin, Neomycin, Netilmicin, Nitrofurantoin, Norfloxacinj,Ofloxacin, Oxacillin, Pefloxacin, Penicillin VK, Penicillin G, Piperacillin, Procaine penicillin, Rifampin, Quinupristin/Dalfopristin, Sparfloxacin, Streptomycin, Sulfisoxazole, Sulfadiazine, Sulfamethizole, Sulfamethoxazole, Sulfasalzine, Telithromycin, Teicoplanin, Tetracycline, Ticarcillin, Trimethoprim, Trimethoprim-sulfamethoxazole, Vancomycin *Note:* If the acute bronchitis episode occurred on January 1 of the measurement year, look 30 days prior to the start of the measurement year to check for the patient's negative medication history. Step 5: Test for Competing Diagnoses. Exclude Episode Dates where there is a competing diagnosis 30 days prior to the episode date through 7 days after the episode date. *Note:* If the episode occurred on January 1 of the measurement year, look 30 days prior to the start of the		

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			measurement year to check for the patient's competing diagnosis history. Competing Diagnoses: Intestinal infections; Pertussis; Bacterial infection unspecified; Lyme disease and other arthropod-borne diseases; Otitis media; Acute sinusitis; Acute pharyngitis; Acute tonsillitis; Chronic sinusitis; Infections of the pharynx, larynx, tonsils, adenoids; Prostatitis; Cellulitis, mastoiditis, other bone infections; Acute lymphadenitis; Impetigo; skin staph infections; Pneumonia; Gonococcal infections and venereal diseases; Syphilis; Chlamydia; Inflammatory diseases (female reproductive organs); Infections of the kidney; Cystitis; Step 6: Calculate Measure Denominator. This measure examines one Eligible Episode per patient. Select the first Eligible Episode for each patient during the measurement Intake Period that meets all criteria for inclusion in the denominator. This is the patient's First Eligible Episode. A sample should be determined using the most accurate data available in the settings in which the		

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			measure will be implemented. The measure developer recommends that in most settings office visit claims (see list of codes) or other codified encounter data should be used to identify patients who have had at least one office visit in the prior 12 months from which a purposeful sample (random, consecutive retrospective or prospective from a specific date) can then be chosen for the denominator. In other uses of the measure, insurer level claims (pooled or single insurer) data can be used to identify the denominator.*		
Upper Respiratory Infection-Appropriate Treatment for Children	NCQA[2,4]	Electronic Collection: Numerator- A dispensed prescription for antibiotic medication on or within 3 days after the Episode Date. The measure examines one eligible episode per patient.Antibiotic Medications (NCQA will provide a list of NDC codes for antibiotic medications on its website): Amoxicillin · Amox/Clavulanate · Ampicillin · Azithromycin · Cefaclor · Cefadroxil hydrate · Cefdinir · Cefixime · Cefditoren · Ceftibuten · Cefpodoxime proxetil · Cefprozil · Ceftriaxone · Cefuroxime · Cephalexin · Ciprofloxacin · Clindamycin · Dicloxacillin · Dirithromycin ·	Electronic Collection Denominator- Step 1: Identify all children age 3 months as of July 1 of the year prior to the measurement year to 18 years as of June 30 of the measurement year who had an outpatient visit with only a diagnosis of nonspecific upper respiratory infection (URI) and an outpatient visit code. Codes to Identify URI: Acute nasopharyngitis (common cold): 460 URI unspecified site: 465 Codes to Identify Outpatient Visits: Evaluation and management codes—office or other outpatient service, CPT (99201-99205, 99211-99215, 99217-99220,	None	Electronic data (visit and pharmacy encounter data or claims or medical record data.

* See table A for list of medications

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		Doxycycline · Erythromycin · Ery E-Succ/Sulfisoxazole · Flomefloxacin · Gatifloxacin · Levofloxacin · Loracarbef · Minocycline · Ofloxacin · Penicillin VK · Penicillin G · Sparfloxacin · Sulfisoxazole · Tetracycline · Trimethoprim · Trimethoprim-sulfamethoxazol Medical Record Collection: Electronic Health Record (EHR) users may opt to use this methodology or the electronic data collection methodology described above. EHR users who have information on drugs prescribed and not dispensed may opt to follow the medical record specifications below but produce data on 100% of their denominator population instead of a sample. Numerator- Documentation in the medical record must include, at a minimum, a note indicating a written prescription for antibiotic medication (drug list available) on the Episode Date. The measure examines one eligible episode per patient.	99241-99245, 99271-99275, 99381-99385, 99391-99395) After hours and non emergency urgent care UB-92: 0456 Clinic UB-92: 051X Freestanding Clinic UB-92: 052XProfessional fees-outpatient services UB-92: 0982 Professional fees-clinic, UB-92: 0983 Codes to Identify Emergency Department Visits* UB-92 Type of Bill Codes: 13X, 43X and UB-92 Revenue Codes: 0450, 0451,0452,0459, 0981 or CPT Code: 99281-99285 *Exclude from the denominator patients admitted to the hospital from the ED. Step 2: For each patient identified in step 1, determine all outpatient Episode Dates. Step 3: Exclude Episode Dates where a new or refill prescription for an antibiotic medication was filled 30 days prior to the Episode Date or which was active on the Episode Date. Antibiotic Medications: **Amoxicillin · Amox/Clavulanate · Ampicillin · Azithromycin · Cefaclor · Cefadroxil hydrate · Cefdinir · Cefixime · Cefditoren · Ceftibuten · Cefpodoxime proxetil · Cefprozil · Ceftriaxone · Cefuroxime · Cephalexin · Ciprofloxacin · Clindamycin ·**		

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			Dicloxacillin · Dirithromycin · Doxycycline · Erythromycin · Ery E-Succ/Sulfisoxazole · Flomefloxacin · Gatifloxacin · Levofloxacin · Loracarbef · Minocycline · Ofloxacin · Penicillin VK · Penicillin G · Sparfloxacin · Sulfisoxazole · Tetracycline · Trimethoprim · Trimethoprim-sulfamethoxazol *Note:* If the episode occurred on July 1 of the year prior to the measurement year, look 30 days prior to the start of the Intake Period (June1-30) to check for negative medication history. Step 4: This measure examines one eligible episode per patient. Select the first eligible episode for each patient during the measurement Intake period that meets all criteria for inclusion in the denominator. <u>Medical Record Collection</u> Electronic Health Record (EHR) users may opt to use this methodology or the electronic data collection methodology described above. EHR users who have information on drugs prescribed and not dispensed may opt to follow the medical record specifications below but produce data on 100% of their denominator population		

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			instead of a sample. Step 1: Identify all children age 3 months as of July 1 of the year prior to the measurement year to 18 years as of June 30 of the measurement year who had an outpatient visit with only a diagnosis of nonspecific upper respiratory infection (Acute nasopharyngitis (common cold) or URI unspecified site.) Step 2: For each patient identified in step 1, determine all outpatient Episode Dates. Step 3: Exclude Episode Dates where a new or refill prescription for an antibiotic medication was written 30 days prior to the Episode Date or which was active on the Episode Date. Antibiotic Medications: Amoxicillin · Amox/Clavulanate · Ampicillin · Azithromycin · Cefaclor · Cefadroxil hydrate · Cefdinir · Cefixime · Cefditoren · Ceftibuten · Cefpodoxime proxetil · Cefprozil · Ceftriaxone · Cefuroxime · Cephalexin · Ciprofloxacin · Clindamycin · Dicloxacillin · Dirithromycin · Doxycycline · Erythromycin · Ery E-Succ/Sulfisoxazole · Flomefloxacin · Gatifloxacin · Levofloxacin ·		

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			Loracarbef · Minocycline · Ofloxacin · Penicillin VK · Penicillin G · Sparfloxacin · Sulfisoxazole · Tetracycline · Trimethoprim · Trimethoprim-sulfamethoxazol *Note:* If the episode occurred on July 1 of the year prior to the measurement year, look 30 days prior to the start of the Intake Period (June1-30) to check for negative medication history. Step 4: This measure examines one eligible episode per patient. Select the first eligible episode for each patient during the measurement Intake period that meets all criteria for inclusion in the denominator. The denominator (patients for inclusion): A sample should be determined using the most accurate data available in the settings in which the measure will be implemented. The measure developer recommends that in most settings office visit claims (see list of codes) or other codified encounter data should be used to identify patients who have had at least one office visit in the prior (12) months from which a purposeful sample (random, consecutive retrospective or prospective from a specific date) can then be chosen for the denominator. In other uses of the		

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			measure, insurer level claims (pooled or single insurer) data can be used to identify the denominator.		
Chronic Obstructive Pulmonary Disease (COPD): Assessment of Oxygen Saturation (Physician-focused)	AMA/PCPI[2,3]	Patients with oxygen saturation assessed and documented CPT codes for oxygen saturation: 94760, 94761, 82803 82805, 82810 or LOINC codes for oxygen saturation: 115556-8, 2703-5, 2704-5, 19211-2, 2705-2, 3148-4, 3149-2, 34163-6, 19218-7, 19219-5, 19221-1, 19220-3, 20564-1, 2708-6, 2709-4, 19224-5, 2711-0, 2714-4, 2715-1, 2716-9, 2717-7, 24336-0, 24337-8, 24338-6, 24339-4, 24341-0, 24342-8, 24343-6, 24344-4	All patients aged ≥ 18 years with the diagnosis of COPD and a FEV_1 < 40 % of predicted value Patient Selection: Documentation in the medical record of a diagnosis of COPD *OR* ICD-9-CM codes for COPD: 491, 491.1, 491.2, 491.21, 491.22, 491.9, 492, 492.8, 496 *AND* CPT codes for patient visit: 99201-99205, 99212-99215, 99241-99245, 99354-99355, 99385-99387, 99395-99397, 99401-99404 *AND* Documentation in the medical record of a FEV_1 < 40 % of predicted value *AND* Patient's age is ≥ 18 years of age	Documentation of medical reason(s) for not assessing oxygen saturation (equipment not available, other medical reason) Documentation of patient reason(s) for not assessing oxygen saturation (economic, social, religious, other patient reasons)	Paper medical record, paper flowsheet and EHRS.
COPD: Spirometry Evaluation (Physician-focused)	AMA/PCPI[2,3]	Patients with spirometry results documented (FEV_1 and FEV_1/FVC) CPT codes for spirometry: 94010, 94014, 94015, 94016, 94060, 94070, 94620	All patients aged ≥ 18 years with the diagnosis of COPD Patient Selection: Documentation in the medical record of a diagnosis of COPD *OR* ICD-9-CM codes for COPD: 491, 491.1, 491.2, 491.21, 491.22, 491.9, 492, 492.8, 496 *AND* CPT codes for patient visit: 99201-99205, 99212-99215, 99241-99245,	Documentation of medical reason(s) for no spirometry evaluation (patient physically unable to perform spirometry, other medical reasons) Documentation of patient reason(s) for no spirometry evaluation (patient refusal, other patient reasons)	Paper medical record, paper flowsheet and EHRS.

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			99354-99355, 99385-99387, 99395-99397, 99401-99404 *AND* Patient's age is ≥ 18 years of age		
COPD: Inhaled Broncho-dilator Therapy (Physician-focused)	AMA/PCPI[2,3]	Symptomatic patients who were prescribed an inhaled bronchodilator (β2-agonist and/or anticholinergic; drug list available)	All patients aged ≥ 18 years with the diagnosis of COPD who have $FEV_1/FVC < 70$ % and have symptoms Patient Selection: Documentation in the medical record of a diagnosis of COPD *OR* ICD-9-CM codes for COPD: 491, 491.1, 491.2, 491.21, 491.22, 491.9, 492, 492.8, 496 *AND* CPT codes for patient visit: 99201-99205, 99212-99215, 99241-99245, 99354-99355, 99383-99385, 99393-99395, 99401-99404 *AND* Documentation in the medical record of $FEV_1/FVC < 70$ % *AND* Documentation in the medical record of COPD symptoms (synonyms available) There must be documentation of the presence of at least one of the following: dyspnea, cough/sputum, or wheezing. *OR* ICD-9 codes for dyspnea: 786.00, 786.01, 786.02, 786.05, 786.09, 493.2 *OR* ICD-9 codes for cough: 786.2, 491.0 *OR*	Documentation of medical reason(s) for not prescribing an inhaled bronchodilator (allergy, drug interaction, contraindication, other medical reasons) Documentation of patient reason(s) for not prescribing an inhaled bronchodilator (economic, social, religious, other patient reasons)	Paper medical record, paper flowsheet and EHRS.

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			ICD-9 codes for sputum: 786.3, 786.4 *OR* ICD-9 codes for wheezing: 786.07 *AND* Patient's age is ≥ 18 years of age Note: Documentation of FEV1/FVC and COPD symptoms do not have to occur during the same office visit.		
Appropriate Testing for Children with Pharyngitis	NCQA[2,4]	Electronic Collection: Numerator- A strep test administered in the 7-day period from 3 days prior through 3 days after the First Eligible Episode Date. Codes to Identify Group A Streptococcus TestsAntigen detection…by enzyme immunoassayCPT (87430) LOINC (6556-5, 6557-3, 6558-1, 6559-9, 18481-2, 31971-5)by nucleic acid CPT (87650-87652) LOINC (5036-9)by direct optical observation CPT (87880)by throat culture CPT (87081, 87070-87071) LOINC (626-2, 11268-0, 11475-1, 17656-0) Medical Record Collection: Electronic Health Record (EHR) users may opt to use this methodology or the electronic data collection methodology described above. EHR users who have information on drugs prescribed and not dispensed may opt to follow the medical record specifications below but produce data on 100% of their denominator population instead of a sample.	*Electronic Collection* Step 1: Identify children age 2 years as of July 1 of the year prior to the measurement year to 18 years as of June 30 of the measurement year who had an outpatient visit with only a diagnosis of pharyngitis. Exclude claims/encounters with more than one diagnosis.ICD-9-CM Codes to Identify Pharyngitis:Acute or unspecified pharyngitis: 462Acute tonsillitis: 463Streptococcal tonsillitis: 034.0CPT Codes to Identify Outpatient Visits: Evaluation and management codes—office or other outpatient services: 99201-99205, 99211-99215, 99217-99220, 99241-99245, 99271-99275, 99381-99385, 99391-99395UB-92 Codes to Identify Outpatient Visits: After-hours nonemergency urgent care: 0456Clinic: 051XFreestanding clinic: 052XProfessional fees- outpatient services: 0982Professional fees-clinic: 0983Codes to Identify Emergency Department Visits UB-92	None	Electronic data (visit and pharmacy encounter data or claims or medical record data.

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		Documentation in the medical record must include at minimum, a note indicating a strep test was administered in the 7-day period from 3 days prior through 3 days after the First Eligible Episode Date. Group A Streptococcus Tests Include:Antigen detection…by enzyme immunoassay, nucleic acid, by direct optical observation,or by throat culture.	Type of Bill Codes: 13X, 43X and UB-92 Revenue Codes: 0450, 0451, 0452, 0459, 0981 or CPT Codes 99281-99285 *Patients admitted to the hospital from the ED should not be included in the denominator. Step 2: For each patient identified in step 1, determine all outpatient Episode Dates. Step 3: For each episode date with a qualifying diagnosis, determine if antibiotics were prescribed on or within three days after the episode date. Exclude episode dates if the patient did not receive antibiotics on or within three days after the episode date.Antibiotic Medications (NCQA will provide a list of NDC codes for antibiotic medications on its website): · Amoxicillin · Amox/Clavulanate · Ampicillin · Azithromycin · Cefaclor · Cefadroxil hydrate · Cefdinir · Cefixime · Cefditoren · Ceftibuten · Cefpodoxime proxetil · Cefprozil · Ceftriaxone · Cefuroxime · Cephalexin · Ciprofloxacin · Clindamycin · Dicloxacillin · Dirithromycin · Doxycycline · Erythromycin · Ery E-Succ/Sulfisoxazole · Flomefloxacin · Gatifloxacin · Levofloxacin · Loracarbef · Minocycline · Ofloxacin ·		

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			Penicillin VK · Penicillin G · Sparfloxacin · Sulfisoxazole · Tetracycline · Trimethoprim · Trimethoprim-sulfamethoxazole Step 4:Exclude episode dates where a new or refill prescription for an antibiotic medication was filled 30 days prior to the episode date or which was active on the episode date. ***Note:*** If the episode occurred on July 1 of the year prior to the measurement year, look back 30 days prior to the start of the Intake Period (i.e., June 1–30) to check for the patient's medication history. Step 5: the measure examines one eligible episode per patient. When calculating the final measure denominator, select the first eligible episode for each patient during the measurement intake period that meets all criteria for inclusion in the denominator. <u>Medical Record Collection</u> Electronic Health Record (EHR) users may opt to use this methodology or the electronic data collection methodology described above. EHR users who have information on drugs prescribed and not dispensed may opt to follow		

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			the medical record specifications below but produce data on 100% of their denominator population instead of a sample. Step 1: Identify children age 2 years as of July 1 of the year prior to the measurement year to 18 years as of June 30 of the measurement year who had an outpatient visit with only a diagnosis of pharyngitis (acute or unspecified pharyngitis, acute tonsillitis or streptococcal tonsillitis). Exclude encounters with more than one diagnosis. Step 2: For each patient identified in step 1, determine all outpatient Episode Dates. Step 3: For each episode date with a qualified diagnosis, determine if antibiotics were prescribed on or within three days after the episode date. Exclude episode dates if the patient did not receive antibiotics on or within three days after the episode date. Amoxicillin · Amox/Clavulanate · Ampicillin · Azithromycin · Cefaclor · Cefadroxil hydrate · Cefdinir · Cefixime · Cefditoren · Ceftibuten · Cefpodoxime proxetil · Cefprozil · Ceftriaxone · Cefuroxime · Cephalexin · Ciprofloxacin · Clindamycin · Dicloxacillin ·		

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			Dirithromycin · Doxycycline · Erythromycin · Ery E-Succ/Sulfisoxazole · Flomefloxacin · Gatifloxacin · Levofloxacin · Loracarbef · Minocycline · Ofloxacin · Penicillin VK · Penicillin G · Sparfloxacin · Sulfisoxazole · Tetracycline · Trimethoprim · Trimethoprim-sulfamethoxazole Step 4:Exclude episode dates where a new or refill prescription for an antibiotic medication was written 30 days prior to the episode date or which was active on the episode date. Step 5: the measure examines one eligible episode per patient. When calculating the final measure denominator, select the first eligible episode for each patient during the measurement intake period that meets all criteria for inclusion in the denominator. The denominator (patients for inclusion): A sample should be determined using the most accurate data available in the settings in which the measure will be implemented. The measure developer recommends that in most settings office visit claims (see list of codes) or other codified encounter		

ASTHMA AND RESPIRATORY ILLNESS					
MEASURE	IP OWNER[1]	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			data should be used to identify patients who have had at least one office visit in the prior (12) months from which a purposeful sample (random, consecutive retrospective or prospective from a specific date) can then be chosen for the denominator. In other uses of the measure, insurer level claims (pooled or single insurer) data can be used to identify the denominator.		

HYPERTENSION					
MEASURE	SOURCE	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
Blood Pressure Measurement	AMA PCPI[2,3]/ ACC/AHA	Patient visits with blood pressure measurement recorded.	All visits for patients ≥ 18 years of age with diagnosed hypertension. Patient Selection: ICD-9-CM codes for Hypertension: 401.0, 401.1, 401.9, 402.xx, 403.xx, 404.xx *And* CPT office or other outpatient service codes: 99201-99205, 99212-99215, 99241-99245, 99341-99350, 99354-99355, 99385-99387, 99395-99397, 99401-99404, 99411-99412, 99420-99429 *And* Patient's age is ≥ 18 years.	None.	Electronic health records, retrospective paper medical records, prospective flow sheet.

HYPERTENSION					
MEASURE	SOURCE	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
Plan of Care	AMA PCPI[2,3]/ ACC/AHA	Patient visits with a documented plan of care for hypertension. Plan of care should include one or more of the following: recheck blood pressure at specified future date, initiate or alter antihypertensive pharmacological therapy, and/or initiate or alter non-pharmacologic therapy. Non pharmacological therapy may include weight reduction, decreased sodium and alcohol intake, and exercise.	All visits for patients ≥ 18 years of age with diagnosed hypertension during which either systolic blood pressure ≥ 140 mm Hg or diastolic blood pressure ≥ 90 mm Hg. Patient Selection: ICD-9-CM codes for Hypertension: 401.0, 401.1, 401.9, 402.xx, 403.xx, 404.xx *And* CPT office or other outpatient service codes: 99201-99205, 99212-99215, 99241-99245, 99354, 99355, 99385-99387, 99395-99397, 99401-99404 *And* Additional individual medical record review must be completed to identify patient visits with a systolic blood pressure ≥ 140 mm Hg or a diastolic blood pressure ≥ 90 mm Hg *And* Patient's age is ≥ 18 years.	None.	Electronic health records, retrospective paper medical records, prospective flow sheet.
Controlling High Blood Pressure	CMS/ NCQA[2,4]	Patients with last blood pressure measurement adequately controlled to systolic blood pressure < 140 mm Hg *and* diastolic blood pressure < 90 mm Hg during the measurement year.	All patients ≥ 18 years of age with a diagnosis of hypertension in the first six months of the measurement year or any time prior. Patient Selection: ICD-9-CM codes for Hypertension: 401.0, 401.1, 401.9, 402.xx, 403.xx, 404.xx A patient is considered to be	None.	Electronic health records, retrospective flow sheet, medical record review.

HYPERTENSION					
MEASURE	SOURCE	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			hypertensive if there is at least one outpatient encounter (outpatient or other outpatient services - 99201-99205, 99211-99215, 99241, 99245) with a diagnosis of hypertension (applicable ICD-9 codes) during the first six months of the measurement year. To confirm the diagnosis of hypertension, notation of the following must be found in the medical record on or before June 30 of the measurement year: • HTN • high blood pressure (HBP) • elevated blood pressure • borderline HTN • intermittent HTN • history of HTN. The notation of hypertension may appear anytime on or before June 30 of the measurement year, including prior to the measurement year. It does not matter if hypertension was treated or is currently being treated. The notation indicating a diagnosis of hypertension may be recorded on any of the following documents: • a problem list • office note, • subjective, objective, assessment, plan (SOAP) note, • encounter form, • telephone call record,		

HYPERTENSION					
MEASURE	SOURCE	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			• diagnostic report, and/or • hospital discharge summary. Statements such as "rule out hypertension," "possible hypertension," "white-coat hypertension," "questionable hypertension," and "consistent with hypertension" are not sufficient to confirm the diagnosis of hypertension if such statements are the only notations of hypertension in the medical record.		

MEDICATION MANAGEMENT					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
Documentation of Medication List in the Outpatient Record	CMS-SCRIPT[5]	Patients with a medication list[6] in their medical record	All patients who were continuously enrolled during the measurement year.	NA	Chart abstraction via paper-based abstraction tool designed for SCRIPT project
Documentation of Allergies and Adverse Reactions in the Outpatient Record	CMS-SCRIPT	Patients with allergy and adverse reaction status[7] present in medical record	All patients who were continuously enrolled during the measurement year.	NA	Chart abstraction via paper-based abstraction tool designed for SCRIPT project

[5] The SCRIPT measures were developed by the Coalition for Quality in Medication Use funded by CMS and are in the public domain. Since the project has concluded and the Coalition no longer available to maintain the measure, NQF has identified a developer who is willing to maintain and update the measure for its currency.
[6] A separate, additional document can satisfy the numerator as can a list of medications simply noted in a patient's progress note.

MEDICATION MANAGEMENT					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
Therapeutic Monitoring – Annual Monitoring for Patients on Persistent Medications **a. Annual monitoring for patients on ACE Inhibitors/ARBs**	NCQA[2,4]	Electronic Collection: Numerator a: The number of patients with at least one serum potassium and either a serum creatinine or a blood urea nitrogen therapeutic monitoring test in the measurement year. *Note: The two tests do not need to occur on the same service date, only within the measurement year.* Codes to Identify Physiologic Monitoring Tests (for patients on ACEI or ARB, Digoxin or Diuretics and Any Combination Products): Serum Potassium (K+): CPT Codes: 84132, 80050, 80051, 80053, 80048, 80069; LOINC Codes: 2824-1, 2823-3, 6298-4, 12812-4, 12813-2, 22760-3, 24320-4, 24321-2, 24322-0, 24323-8, 24326-1, 24362-6, 29349-8, 32713-0, 34548-8, 34554-6 AND Serum Creatinine (SCr): CPT Codes: 82565, 80050, 80053, 80048, 80069, 82575; LOINC Codes: 2160-0, 2163-4, 2164-2, 5919-6, 11041-1, 11042-9, 12195-4, 13441-1, 13442-9, 13443-7, 13446-0, 13447-8, 13449-4, 13450-2, 13451-0, 14682-9, 15051-6, 16188-5, 16189-3, 21232-4, 24321-2, 24322-0, 24323-8, 24320-4, 24362-6, 26752-6, 33558-8, 34555-3, 35591-7, 35592-5, 35593-3, 35594-1, 38483-4 OR Blood Urea Nitrogen (BUN): CPT Codes: 84520, 84525, 80050, 80053,	Electronic collection: Denominator a: The number of patients ages 18 years and older who received at least a 180-days supply of ACE inhibitors or ARBs, including any combination products during the measurement year. A list of included drugs can be accessed at: http://www.ncqa.org/Programs/HEDIS/2006/Volume2/NDCLicense.htm Medical Record Collection: Electronic Health Record (EHR) users may opt to use this methodology or the electronic data collection methodology described above. EHR users who have information on drugs prescribed and not dispensed may opt to follow the medical record specifications below but produce data on 100% of their denominator population instead of a sample. Denominator a: The number of patients ages 18 years and older who received a prescription for at least a 180-days supply of ACEI or ARBs, including any combination products during the measurement year (refer to drug lists detailed in the	Exclude patients from each rate denominator with a hospitalization in the measurement year. These patients may have received a monitoring event during the hospitalization which may not be captured Hospitalizations can be identified using either codes for inpatient discharges or non acute care or through the medical record. Codes to Identify Total Inpatient Discharges: ICD-9-CM Codes: (all principal diagnosis codes except: 290-316, 960-979 with a secondary diagnosis of chemical dependency, V30-V39) WITH UB-92 Codes: (type of bill codes: 11X, 12X, 41X, 42X, 84X) OR DRGs: (1-423, 439-455, 461, 463-471, 473, 475-520, 524-540, 541-559) OR ICD-9-CM Codes: (all principle diagnosis codes with an inpatient facility code except: 290-316, 960-979	Electronic data (i.e., claims or encounter data for visits, laboratory tests and pharmacy) or medical record review

[7] A separate, additional document can satisfy the numerator as can a note in a patient's progress note.

MEDICATION MANAGEMENT					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		80048, 80069; LOINC Codes: 3094-0, 6299-2, 11064-3, 11065-0, 12964-3, 12965-0, 12966-8, 14937-7, 24320-4, 24321-2, 24322-0, 24323-8, 24362-6 **<u>Medical Record Collection</u>:** Electronic Health Record (EHR) users may opt to use this methodology or the electronic data collection methodology described above. EHR users who have information on drugs prescribed and not dispensed may opt to follow the medical record specifications below but produce data on 100% of their denominator population instead of a	denominator statement for the electronic version). For medical record extraction, a sample should be determined using the most accurate data available in the settings in which the measure will be implemented. The measure developer recommends that in most settings office visit claims or other codified encounter data should be used to identify patients who have had at least one office visit in the prior (12) months from which a purposeful sample (random, consecutive retrospective or prospective from a specific date) can then be chosen for the denominator. In other uses of the measure, insurer level claims (pooled or single insurer) data can be used to identify the denominator.	with a secondary diagnosis of chemical dependency, V30-V39.) Codes to Identify Nonacute Care: Hospice- UB-92 Type of Bill Codes (81X, 82X), UB-92 Revenue Codes (115, 125, 135, 145, 155, 650, 656, 658, 659) SNF- UB-92 Type of Bill Codes (21X, 22X), UB-92 Revenue Codes (19X) Hospital transitional care, swing bed or rehabilitation- UB-92 Type of Bill Codes (18X) Rehabilitation- UB-92 Revenue Codes (118, 128, 138, 148, 158), DRG (462) Respite- UB-92 Revenue Codes (655) OR Other nonacute care facilities that do not use the UB-92 for billing (ICF, SNF, etc.)	

MEDICATION MANAGEMENT					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		sample. Numerator a: Documentation in the medical record must include, at a minimum of at least one serum potassium and either a serum creatinine or a blood urea nitrogen therapeutic monitoring test in the measurement year. *Note: The two tests do not need to occur on the same service date, only within the measurement year.*			
b. Annual Monitoring for Patients on Digoxin	NCQA	Electronic collection: Numerator b: The number of patients with at least one serum potassium and either a serum creatinine or a blood urea nitrogen therapeutic monitoring test in the measurement year. *Note:* The two tests do not need to occur on the same service date, only within the measurement year. Codes to Identify Physiologic Monitoring Tests (for patients on ACEI or ARB, Digoxin or Diuretics and Any Combination Products): Serum Potassium (K+): CPT Codes: 84132, 80050, 80051, 80053, 80048, 80069; LOINC Codes: 2824-1, 2823-3, 6298-4, 12812-4, 12813-2, 22760-3, 24320-4, 24321-2, 24322-0, 24323-8, 24326-1, 24362-6, 29349-8, 32713-0,	Electronic collection: Denominator b: The number of patients ages 18 years and older who received at least a 180-days supply of digoxin, including any combination products, during the measurement year. A list of included drugs can be accessed at: http://www.ncqa.org/Programs/HEDIS/2006/Volume2/NDCLicense.htm **Medical Record Collection:** For medical record extraction, a sample should be determined using the most accurate data available in the settings in which the measure will be implemented. The measure developer recommends that in most	Exclude patients from each rate denominator with a hospitalization in the measurement year. These patients may have received a monitoring event during the hospitalization which may not be captured. Hospitalizations can be identified using either codes for inpatient discharges or non acute care or through medical records. Codes to Identify Total Inpatient Discharges: ICD-9-CM Codes: (all principal diagnosis codes except: 290-316, 960-979	Electronic data (i.e., claims or encounter data for visits, laboratory tests and pharmacy) or medical record review

MEDICATION MANAGEMENT					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		34548-8, 34554-6 AND Serum Creatinine (SCr): CPT Codes: 82565, 80050, 80053, 80048, 80069, 82575; LOINC Codes: 2160-0, 2163-4, 2164-2, 5919-6, 11041-1, 11042-9, 12195-4, 13441-1, 13442-9, 13443-7, 13446-0, 13447-8, 13449-4, 13450-2, 13451-0, 14682-9, 15051-6, 16188-5, 16189-3, 21232-4, 24321-2, 24322-0, 24323-8, 24320-4, 24362-6, 26752-6, 33558-8, 34555-3, 35591-7, 35592-5, 35593-3, 35594-1, 38483-4 OR Blood Urea Nitrogen (BUN): CPT Codes: 84520, 84525, 80050, 80053, 80048, 80069; LOINC Codes: 3094-0, 6299-2, 11064-3, 11065-0, 12964-3, 12965-0, 12966-8, 14937-7, 24320-4, 24321-2, 24322-0, 24323-8, 24362-6 **Medical Record Collection:** Electronic Health Record (EHR) users may opt to use this methodology or the electronic data collection methodology described above. EHR users who have information on drugs prescribed and not dispensed may opt to follow the medical record specifications below but produce data on 100% of their denominator population instead of a sample. Numerator b: Documentation in the	settings office visit claims or other codified encounter data should be used to identify patients who have had at least one office visit in the prior (12) months from which a purposeful sample (random, consecutive retrospective or prospective from a specific date) can then be chosen for the denominator. In other uses of the measure, insurer level claims (pooled or single insurer) data can be used to identify the denominator. Denominator b: The number of patients ages 18 years and older who received a prescription for at least a 180-days supply of digoxin, including any combination products, during the measurement year (refer to drug list mentioned above)..	with a secondary diagnosis of chemical dependency, V30-V39) WITH UB-92 Codes: (type of bill codes: 11X, 12X, 41X, 42X, 84X) OR DRGs: (1-423, 439-455, 461, 463-471, 473, 475-520, 524-540, 541-559) OR ICD-9-CM Codes: (all principle diagnosis codes with an inpatient facility code except: 290-316, 960-979 with a secondary diagnosis of chemical dependency, V30-V39.) Codes to Identify Nonacute Care: Hospice- UB-92 Type of Bill Codes (81X, 82X), UB-92 Revenue Codes (115, 125, 135, 145, 155, 650, 656, 658, 659) SNF- UB-92 Type of Bill Codes (21X, 22X), UB-92 Revenue Codes (19X) Hospital transitional care, swing bed or rehabilitation- UB-92 Type of Bill Codes (18X) Rehabilitation- UB-92 Revenue Codes (118, 128, 138, 148, 158), DRG (462) Respite- UB-92 Revenue Codes (655)	

MEDICATION MANAGEMENT					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		medical record must include, at minimum, a note indicating the patient received at least one serum potassium and either a serum creatinine or a blood urea nitrogen therapeutic monitoring test in the measurement year.		OR Other nonacute care facilities that do not use the UB-92 for billing (ICF, SNF, etc.)	
c. Annual monitoring for patients on diuretics	NCQA	Electronic collection: Numerator c: The number of patients with at least one serum potassium and either a serum creatinine or a blood urea nitrogen therapeutic monitoring test in the measurement year. *Note:* The two tests do not need to occur on the same service date, only within the measurement year. **Codes to Identify Physiologic** Monitoring Tests (for patients on ACEI or ARB, Digoxin or Diuretics and Any Combination Products): Serum Potassium (K+): CPT Codes: 84132, 80050, 80051, 80053, 80048, 80069; LOINC Codes: 2824-1, 2823-3, 6298-4, 12812-4, 12813-2, 22760-3, 24320-4, 24321-2, 24322-0, 24323-8, 24326-1, 24362-6, 29349-8, 32713-0, 34548-8, 34554-6 AND Serum Creatinine (SCr): CPT Codes: 82565, 80050, 80053, 80048, 80069, 82575; LOINC Codes: 2160-0, 2163-4, 2164-2, 5919-6, 11041-1, 11042-9, 12195-4, 13441-1, 13442-9, 13443-7, 13446-0, 13447-8, 13449-4, 13450-2, 13451-0, 14682-9, 15051-6, 16188-5, 16189-3,	Electronic collection: Denominator c: The number of patients ages 18 years and older who received at least a 180-days supply of a diuretic, including any combination products, during the measurement year. A list of included drugs can be accessed at: http://www.ncqa.org/Programs/HEDIS/2006/Volume2/NDCLicense.htm *Note:* Patients may switch therapy within any medication listed during the measurement year and have the days supply for the medications count toward the total 180-days supply. **Medical Record Collection:** For medical record extraction, a sample should be determined using the most accurate data available in the settings in which the measure will be implemented. The measure	Exclude patients from each rate denominator with a hospitalization in the measurement year. These patients may have received a monitoring event during the hospitalization which may not be captured. Hospitalizations can be identified using either codes for inpatient discharges or non acute care or medical records. Codes to Identify Total Inpatient Discharges: ICD-9-CM Codes: (all principal diagnosis codes except: 290-316, 960-979 with a secondary diagnosis of chemical dependency, V30-V39) WITH UB-92 Codes: (type of bill codes: 11X, 12X, 41X, 42X, 84X) OR DRGs: (1-423, 439-455, 461, 463-471, 473, 475-520, 524-540, 541-559) OR ICD-9-CM	Electronic data (i.e., claims or encounter data for visits, laboratory tests and pharmacy) or medical record review

MEDICATION MANAGEMENT					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		21232-4, 24321-2, 24322-0, 24323-8, 24320-4, 24362-6, 26752-6, 33558-8, 34555-3, 35591-7, 35592-5, 35593-3, 35594-1, 38483-4 OR Blood Urea Nitrogen (BUN): CPT Codes: 84520, 84525, 80050, 80053, 80048, 80069; LOINC Codes: 3094-0, 6299-2, 11064-3, 11065-0, 12964-3, 12965-0, 12966-8, 14937-7, 24320-4, **Medical Record Collection:** Electronic Health Record (EHR) users may opt to use this methodology or the electronic data collection methodology described above. EHR users who have information on drugs prescribed and not dispensed may opt to follow the medical record specifications below but produce data on 100% of their denominator population instead of a sample. Numerator c: Documentation in the medical record must include, at minimum, a note indicating the patient received at least one serum potassium and either a serum creatinine or a blood urea nitrogen therapeutic monitoring test in the measurement year. *Note:* The two tests do not need to occur on the same service date, only within the measurement year.	developer recommends that in most settings office visit claims or other codified encounter data should be used to identify patients who have had at least one office visit in the prior (12) months from which a purposeful sample (random, consecutive retrospective or prospective from a specific date) can then be chosen for the denominator. In other uses of the measure, insurer level claims (pooled or single insurer) data can be used to identify the denominator. Denominator c: The number of patients ages 18 years and older who received a prescription for at least a 180-days supply of a diuretic, including any combination products, during the measurement year.	Codes: (all principle diagnosis codes with an inpatient facility code except: 290-316, 960-979 with a secondary diagnosis of chemical dependency, V30-V39.) Codes to Identify Nonacute Care: Hospice- UB-92 Type of Bill Codes (81X, 82X), UB-92 Revenue Codes (115, 125, 135, 145, 155, 650, 656, 658, 659) SNF- UB-92 Type of Bill Codes (21X, 22X), UB-92 Revenue Codes (19X) Hospital transitional care, swing bed or rehabilitation- UB-92 Type of Bill Codes (18X) Rehabilitation- UB-92 Revenue Codes (118, 128, 138, 148, 158), DRG (462) Respite- UB-92 Revenue Codes (655) OR Other nonacute care facilities that do not use the UB-92 for billing (ICF, SNF, etc.)	

MEDICATION MANAGEMENT					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
d. Annual monitoring for patients on anticonvulsants	NCQA	Electronic collection: Numerator d: The number of patients with at least one drug serum concentration level monitoring test for the prescribed drug in the measurement year. If a patient received only one type of anticonvulsant, the drug serum concentration level test must be for the specific drug taken as a persistent medication. If a patient persistently received multiple types of anticonvulsants, each anticonvulsant medication and drug monitoring test combination is counted as a unique event (i.e., a patient on both phenytoin and valproic acid with at least a 180-days supply for each drug in the measurement year must separately show evidence of receiving drug serum concentration tests for each drug to be considered numerator-compliant for each drug). Codes to Identify Drug Serum Concentration Monitoring Tests: Drug serum concentration for Phenobarbital: CPT code: 80184, LOINC codes: 3948-7, 3951-1, 10547-8, 14874-2, 34365-7; Drug serum concentration for Phenytoin: CPT codes: 80185, 80186, LOINC codes: 3968-5, 3969-3, 14877-5, 32109-1, 34540-5; Drug serum concentration for valproic acid: CPT code: 80164; LOINC Codes: 4086-5, 4087-3, 4088-1, 14946-8,	Electronic collection: Denominator d: The number of patients in the denominator who received at least a 180-days supply for any anticonvulsant for phenytoin, phenobarbital, valproic acid or carbamazepine during the measurement year. Each patient-drug combination is considered a unique event. *Note: To count toward the denominator, patients must be on one of the fouranticonvulsant medications listed during the measurement year for at least a 180-days supply. Patients who are on multiple anticonvulsant drugs count toward the denominator multiple times if they meet the persistent medications criteria for each drug taken during the measurement year (i.e., a patient who received at least 180 days of phenytoin and 180 days of valproic acid will be counted twice in the denominator for rate 4, once for each drug.* A list of included drugs can be accessed at: http://www.ncqa.org/Programs/HEDIS/2006/Volume2/NDCLicense.htm **Medical Record Collection:** For medical record extraction, a sample	Exclude patients from each rate denominator with a hospitalization in the measurement year. These patients may have received a monitoring event during the hospitalization which may not be captured. Hospitalizations can be identified using either codes for inpatient discharges or non acute care. Codes to Identify Total Inpatient Discharges: ICD-9-CM Codes: (all principal diagnosis codes except: 290-316, 960-979 with a secondary diagnosis of chemical dependency, V30-V39) WITH UB-92 Codes: (type of bill codes: 11X, 12X, 41X, 42X, 84X) OR DRGs: (1-423, 439-455, 461, 463-471, 473, 475-520, 524-540, 541-559) OR ICD-9-CM Codes: (all principle diagnosis codes with an inpatient facility code except: 290-316, 960-979 with a secondary diagnosis of chemical dependency, V30-V39.)	Electronic data (i.e., claims or encounter data for visits, laboratory tests and pharmacy) or medical record review

MEDICATION MANAGEMENT					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		18489-5, 21590-5, 32119-0, 32283-4; Drug serum concentration for carbamaxepine: CPT codes: 80156, 80157; LOINC Codes: 3432-2, 3433-0, 9415-1, 14056-6, 14639-9, 18270-9, 29147-6, 29148-4, 32058-0, 32852-6, 34545-4 **<u>Medical Record Collection:</u>** Electronic Health Record (EHR) users may opt to use this methodology or the electronic data collection methodology described above. EHR users who have information on drugs prescribed and not dispensed may opt to follow the medical record specifications below but produce data on 100% of their denominator population instead of a sample.	should be determined using the most accurate data available in the settings in which the measure will be implemented. The measure developer recommends that in most settings office visit claims or other codified encounter data should be used to identify patients who have had at least one office visit in the prior (12) months from which a purposeful sample (random, consecutive retrospective or prospective from a specific date) can then be chosen for the denominator. In other uses of the measure, insurer level claims (pooled or single insurer) data can be used to identify the denominator. Denominator d: The number of patients in the denominator who received a prescription for at least a 180-days supply for any anticonvulsant for phenytoin, phenobarbital, valproic acid or carbamazepine during the measurement year. Each patient-drug combination is considered a unique event. *Note: To count toward the denominator, patients must have a prescription for one of the four anticonvulsant medications listed during the measurement year for at least a 180-days supply.*	Codes to Identify Nonacute Care: Hospice- UB-92 Type of Bill Codes (81X, 82X), UB-92 Revenue Codes (115, 125, 135, 145, 155, 650, 656, 658, 659) SNF- UB-92 Type of Bill Codes (21X, 22X), UB-92 Revenue Codes (19X) Hospital transitional care, swing bed or rehabilitation- UB-92 Type of Bill Codes (18X) Rehabilitation- UB-92 Revenue Codes (118, 128, 138, 148, 158), DRG (462) Respite- UB-92 Revenue Codes (655) OR Other nonacute care facilities that do not use the UB-92 for billing (ICF, SNF, etc.)	

MEDICATION MANAGEMENT					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		Numerator: The number of patients with documentation of at least one drug serum concentration level monitoring test for the prescribed drug in the measurement year. If a patient received only one type of anticonvulsant, the drug serum concentration level test must be for the specific drug taken as a persistent medication. If a patient persistently received multiple types of anticonvulsants, each anticonvulsant medication and drug monitoring test combination is counted as a unique event (i.e., a patient on both phenytoin and valproic acid with at least a 180-days supply for each drug in the measurement year must separately show evidence of receiving drug serum concentration tests for each drug to be considered numerator-compliant for each drug). Drug Serum Concentration Monitoring Tests: Drug serum concentration for Phenobarbital; Drug serum concentration for Phenytoin; Drug serum concentration for valproic acid; Drug serum concentration for carbamaxepine;			
e. Annual monitoring for patients on	NCQA	Electronic collection: Numerator e: The number of patients with both an ALT and an AST liver enzyme test in the measurement year.	Electronic collection: Denominator e: The number of patients in the denominator who	Exclude patients from each rate denominator with a hospitalization in the measurement year. These	Electronic data (i.e., claims or encounter

MEDICATION MANAGEMENT					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
statins		A hepatic function panel (which includes both a ALT and AST) also counts as numerator compliant. Codes to Identify Liver Function Monitoring Tests (for patients on statins) Liver enzyme test (AST): CPT Codes: 84450; LOINC Codes: 1920-8, 27344-1, 30239-8 Liver enzyme test (ALT): CPT Codes: 84460; LOINC Codes: 1742-6, 1743-4, 1744-2 · Liver function (hepatic function): CPT Codes: 80076, 80053; LOINC Codes: 24323-8, 24325-3, 24324-6 **Medical Record Collection:** Electronic Health Record (EHR) users may opt to use this methodology or the electronic	received at least a 180-days supply for any statin (HMG CoA Reductase Inhibitors), including any combination product, during the measurement year. *Note: Patients may switch therapy within any medication listed during the measurement year and have the days supply for the medications count toward the total 180-days supply.* A list of included drugs can be accessed at: http://www.ncqa.org/Programs/HEDIS/2006/Volume2/NDCLicense.htm **Medical Record Collection:** For medical record extraction, a sample should be determined using the most accurate data available in the settings in which the measure will be implemented. The measure developer recommends that in most settings office visit claims or other codified encounter data should be used to identify patients who have had at least one office visit in the prior (12) months from which a purposeful sample (random, consecutive retrospective or prospective from a specific date) can then be chosen for the denominator.	patients may have received a monitoring event during the hospitalization which may not be captured. Hospitalizations can be identified using either codes for inpatient discharges or non acute care or medical records. Codes to Identify Total Inpatient Discharges: ICD-9-CM Codes: (all principal diagnosis codes except: 290-316, 960-979 with a secondary diagnosis of chemical dependency, V30-V39) WITH UB-92 Codes: (type of bill codes: 11X, 12X, 41X, 42X, 84X) OR DRGs: (1-423, 439-455, 461, 463-471, 473, 475-520, 524-540, 541-559) OR ICD-9-CM Codes: (all principle diagnosis codes with an inpatient facility code except: 290-316, 960-979 with a secondary diagnosis of chemical dependency, V30-V39.) Codes to Identify Nonacute Care: Hospice- UB-92 Type of	data for visits, laboratory tests and pharmacy) or medical record review

MEDICATION MANAGEMENT					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		data collection methodology described above. EHR users who have information on drugs prescribed and not dispensed may opt to follow the medical record specifications below but produce data on 100% of their denominator population instead of a sample. Numerator: Documentation in the medical record must include at a minimum an ALT and an AST liver enzyme test in the measurement year. A hepatic function panel (which includes both a ALT and AST) also counts as numerator compliant.	In other uses of the measure, insurer level claims (pooled or single insurer) data can be used to identify the denominator. Denominator e: The number of patients in the denominator who received a prescription for at least a 180-days supply for any statin (HMG CoA Reductase Inhibitors), including any combination product, during the measurement year. *Note: Patients may switch therapy within any medication listed during the measurement year and have the days supply for the medications count toward the total 180-days supply.*	Bill Codes (81X, 82X), UB-92 Revenue Codes (115, 125, 135, 145, 155, 650, 656, 658, 659) SNF- UB-92 Type of Bill Codes (21X, 22X), UB-92 Revenue Codes (19X) Hospital transitional care, swing bed or rehabilitation- UB-92 Type of Bill Codes (18X) Rehabilitation- UB-92 Revenue Codes (118, 128, 138, 148, 158), DRG (462) Respite- UB-92 Revenue Codes (655) OR Other nonacute care facilities that do not use the UB-92 for billing (ICF, SNF, etc.)	
f. Annual monitoring—combined rate	NCQA	Sum of the five numerators (a-e)	Sum of the five denominators (a-e)	See individual measure specifications.	See individual measure specifications.

MEDICATION MANAGEMENT					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
Drugs to Be Avoided in the Elderly	NCQA[2,4]	Electronic collection: Numerator a: at least one prescription for any drug to be avoided in the elderly in the measurement year. A list of included drugs can be accessed at: http://www.ncqa.org/Programs/HEDIS/2006/Volume2/NDCLicense.htm **Medical Record Collection:** Electronic Health Record (EHR) users may opt to use this methodology or the electronic data collection methodology described above. EHR users who have information on drugs prescribed and not dispensed may opt to follow the medical record specifications below but produce data on 100% of their denominator population instead of a sample. Numerator a: Documentation in the medical record must include, at a minimum, a prescription for at least one drug to be avoided in the elderly in the measurement year.	Electronic collection: Denominator a: All patients ages 65 years and older as of December 31 of the measurement year. **Medical Record Collection:** For medical record extraction, a sample should be determined using the most accurate data available in the settings in which the measure will be implemented. The measure developer recommends that in most settings office visit claims or other codified encounter data should be used to identify patients who have had at least one office visit in the prior (12) months from which a purposeful sample (random, consecutive retrospective or prospective from a specific date) can then be chosen for the denominator. In other uses of the measure, insurer level claims (pooled or single insurer) data can be used to identify the denominator. Denominator: Patients ages 65 years and older as of December 31 of the measurement year.	NA	Electronic data (i.e., claims or encounter data for visits, laboratory tests and pharmacy) or medical record review

MEDICATION MANAGEMENT

MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		Numerator b: At least two different drugs to be avoided in the elderly in the measurement year. A list of included drugs can be accessed at: http://www.ncqa.org/Programs/HEDIS/2006/Volume2/NDCLicense.htm **Medical Record Collection:** Electronic Health Record (EHR) users may opt to use this methodology or the electronic data collection methodology described above. EHR users who have information on drugs prescribed and not dispensed may opt to follow the medical record specifications below but produce data on 100% of their denominator population instead of a sample. Numerator b: Documentation in the medical record must include at a minimum, prescriptions for at least two different drugs to be avoided in the elderly in the measurement year.		NA	Electronic data (i.e., claims or encounter data for visits, laboratory tests and pharmacy) or medical record review

OBESITY

MEASURE	SOURCE	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
Adults >18 years old with BMI	NYCDHMH	Adults >18 years old with BMI documented in the past 24 months.	Total number of patients > 18 years old seen in the measurement period.	None.	Medical record.

OBESITY					
MEASURE	SOURCE	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
documented in the past 24 months					
BMI 2 through 18 years of age	NICHQ	Number of children 2 through 18 years of age who came in for a well child visit in the measurement period month and who were classified based on BMI percentile for age and gender.	Number children 2 through 18 years of age, with a well child visit in the measurement period month.	None.	Medical record.

PREVENTION, IMMUNIZATION AND SCREENING -TOBACCO USE					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
a. Tobacco Use: Tobacco use prevention for infants, children and adolescents:	ICSI	Number of patients' charts audited whose current tobacco status is documented in the medical record	Total number of patients' charts audited	inclusions: total number of patient charts audited exclusions: none. The measures applies to all patients visiting the practice, regardless of age, who have any indication on their charts that they are or may be users of tobacco, or in the case of children that they are regularly exposed to tobacco smoke	Medical record
b. Tobacco use cessation for infants, children and adolescents	ICSI	Number of tobacco users advised to quit or whose readiness to quit was assessed at the latest visit.	Total number of tobacco users* audited	inclusions: total number of patient charts audited exclusions: none The measures applies to all patients visiting the practice, regardless of age, who have any indication on their charts that they are or may be users of tobacco,	Medical Record

PREVENTION, IMMUNIZATION AND SCREENING -TOBACCO USE					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
				or in the case of children that they are regularly exposed to tobacco smoke	
Smoking Cessation-Medical Assistance **a. Advising Smokers to Quit** **b. Discussing Smoking Cessation Medications** **c. Discussing Smoking Cessation Strategies**	NCQA[2,4]	**Numerator a: Advising Smokers to Quit:** The number of patients in the denominator who responded to the survey and indicated that they had received advice to quit smoking from a doctor or other health provider during the measurement year. Patient choices must be as follows to be included in the numerator: Q: In the last 12 months, on how many visits were you advised to quit smoking by a doctor or other health care provider? A: "1 visit" or "2-4 visits" or "5-9 visits" or "10 or more visits" must be chosen from the options of "None" or "1 visit" or "2-4 visits" or "5-9 visits" or "10 or more visits" or "I had no visits in the last 12 months" **Numerator b: Discussing Smoking Cessation Medications:** The number of patients in the denominator who responded to the survey and indicated that their doctor or other health provider recommended or discussed medications to assist with quitting smoking during the measurement year. Patient choices must be as follows to be included in the numerator:	**Denominator:** The number of patients 18 and older who responded to the survey and indicated that they were current smokers and had one or more visits during the measurement year. Patient choices must be as follows to be included in the denominator: Q: Do you now smoke cigarettes every day, some days, or not at all? A: "Every day" or "Some days" must be chosen from the options of "Every day", "Some days", "Not at all" or "Don't know". Q: In the last 12 months, on how many visits were you advised to quit smoking by a doctor or other health professional? A: A: "1 visit" or "2-4 visits" or "5-9 visits" or "10 or more visits" must be chosen from the options of "None" or "1 visit" or "2-4 visits" or "5-9 visits" or "10 or more visits"	Exclusions: Patients who responded "I had no visits in the last 12 months" and who smoke cigarettes "not at all" are excluded.	Patient survey

PREVENTION, IMMUNIZATION AND SCREENING -TOBACCO USE					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		Q: On how many visits was medication recommended or discussed to assist you with quitting smoking (for example: nicotine gum, patch, nasal spray, inhaler, prescription medicine)? A: "1 visit" or "2-4 visits" or "5-9 visits" or "10 or more visits" must be chosen from the options of "None" or "1 visit" or "2-4 visits" or "5-9 visits" or "10 or more visits", or "I had no visits in the last 12 months" **Numerator c: Discussing Smoking Cessation Strategies:** The number of patients in the denominator who responded to the survey and indicated that their doctor or health care provider recommended or discussed methods and strategies other than medication to assist with quitting smoking during the measurement year. Patient choices must be as follows to be included in the numerator: Q: On how many visits did your doctor or health provider discuss methods and strategies (other than medication) to assist you with quitting smoking? A:"1 visit" or "2-4 visits" or "5-9 visits" or "10 or more visits" must be chosen from the options of "None" or "1 visit" or "2-4 visits" or "5-9 visits"			

PREVENTION, IMMUNIZATION AND SCREENING -TOBACCO USE					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		or "10 or more visits" or "I had no visits in the last 12 months"			
a.Tobacco Use Assessment	AMA-PCPI[2,3]	Patients who were queried about tobacco use one or more times	All patients ≥ 18 years of age at the beginning of the two-year measurement period Patient Selection: CPT codes for patient visits: 99201-99205, 99212-99215, 99241-99245, 99354-99355, 99385-99387, 99395-99397, 99401-99404 *And* Patient's age is ≥ 18 years	None.	Electronic health record system (EHRS), paper medical record, prospective flow sheet
b. Tobacco Cessation Intervention	AMA-PCPI[2,3]	Patients identified as tobacco users who received cessation intervention Cessation intervention may include smoking cessation counseling (e.g., advise to quit, referral for counseling) and/or pharmacologic therapy	All patients ≥ 18 years of age identified as tobacco users at the beginning of the two-year measurement period Patient Selection: [CPT codes for patient visits: 99201-99205, 99212-99215, 99241-99245, 99354-99355, 99385-99387, 99395-99397, 99401-99404] *And* [ICD-9-CM codes for tobacco user: 305.1 *Or* Individual medical record review must be completed to identify those patients who are tobacco users] *And* Patient's age is ≥ 18 years	None	Electronic health record system (EHRS), paper medical record, prospective flow sheet

PREVENTION, IMMUNIZATION AND SCREENING - GENERAL PREVENTION					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
Physical Activity in Older Adults **a. Discussing Physical Activity** **b. Advising Physical activity**	NCQA[2,4]	Survey Questions: ▪ In the last 12 months, did you talk with a doctor or other health provider about your level of exercise or physical activity? For example, a doctor or other health provider may ask if you exercise regularly or take part in physical exercise. Yes, Go to next Question No, Go to next Question I had no visits in the last 12 months, Go to Question X ▪ In the last 12 months, did a doctor or other health provider advise you to start, increase or maintain your level of exercise or physical activity? For example, in order to improve your health, your doctor or other health provider may advise you to start taking the stairs, increase walking from 10 to 20 minutes every day or to maintain your current exercise program.: Yes / No **Numerator a- Discussing physical activity:** The number of patients in the denominator who responded "yes" to the question, "In the last 12 months, did you talk with a doctor or other health provider about your level of exercise or physical activity? For example, a doctor or other health provider may ask if you exercise regularly or take	**Denominator a- Discussing physical activity:** The number of patients 65 years and older as of December 31st of the measurement year who responded "yes" or "no" to the question "In the last 12 months, did you talk with a doctor or other health provider about your level of exercise or physical activity? For example, a doctor or other health provider may ask if you exercise regularly or take part in physical exercise." . **Denominator b- Advising Physical activity:** The number of patients 65 years and older as of December 31st of the measurement year who responded "yes" or "no" to the question, "In the last 12 months, did a doctor or other health provider advise you to start, increase or maintain your level of exercise or physical activity? For example, in order to improve your health, your doctor or other health provider may advise you to start taking the stairs, increase walking from 10 to 20 minutes every day or to maintain your current exercise program.".	None. There are very few people for whom exercise and physical activity are contraindicated (for example, people with symptomatic aortic stenosis may be advised against strenuous physical activity[i]; aortic stenosis affects about 3 percent to 5 percent of the elderly over 75, only half are symptomatic. The National Center for Physical Activity and Disability also recommends that people with disabilities exercise, since they are less active, and has developed a guide (NCPAD, 2004) [ii]advising disabled people to talk to a doctor before starting an exercise program and to discuss any possible effects of medications on exercising. Therefore this measure is also relevant to patients with disabilities. Exclusions may be	Patient survey

PREVENTION, IMMUNIZATION AND SCREENING - GENERAL PREVENTION					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		part in physical exercise." **Numeratorb- Advising physical activity:** The number of patients in the denominator who responded "yes" to the question, "In the last 12 months, did a doctor or other health provider advise you to start, increase or maintain your level of exercise or physical activity? For example, in order to improve your health, your doctor or other health provider may advise you to start taking the stairs, increase walking from 10 to 20 minutes every day or to maintain your current exercise program."		considered in provider level settings who care exclusively for patients with severe limitations in activities of daily living. It is expected that only a very small percentage of community-dwelling respondents for whom questions on exercise and physical activity may potentially be less relevant, due to serious limitations and difficulty in being able to conduct activities of daily living (e.g., bathing, dressing, eating, getting in and out of chairs, walking, using the toilet) or other severe disabilities. National statistics[iii] suggest that the majority of the elderly (83 percent) have no limitations, and only 6 percent indicate they need help with activities of daily living.	
Urinary Incontinence-Management in Older Adults	NCQA[2,4]	**Numerator a - Discussing Urinary Incontinence:** The number of patients in denominator 1 who indicated they discussed their urine leakage problem with their current provider. Patient choices must be as follows to be	**Denominator a - Discussing Urinary Incontinence:** The number of patients 65 years and older who responded to the survey indicating they had a urine leakage problem in the last 6 months. Patient choices must be as follows to	**Exclusions:** Patients who did not have a doctor's visit in the last year or who reported they did not have a problem with UI, are excluded.	Patient survey

PREVENTION, IMMUNIZATION AND SCREENING - GENERAL PREVENTION					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
a. Discussing Urinary Incontinence **b. Receiving Urinary Incontinence Treatment**		included in the numerator: Q: "In the last six months, have you talked with your current doctor or other health care provider about your urine leakage problem?" A: "Yes" must be chosen from the options of: "Yes" or "No" or "I did not see a doctor or health provider in the last six months". **Numerator b-Receiving Urinary Incontinence Treatment:** The number of patients in denominator 2 who indicated they received treatment for their current urine leakage problem. Member choices must be as follows to be included in the numerator: Q: "There are many ways to treat urinary incontinence including bladder training, exercises, medication and surgery. Have you received these or any other treatments for your current urine leakage problem?" A: "Yes" must be chosen from the options of: "Yes" or "No"	be included in the numerator: Q: "Many people experience problems with urinary incontinence, the leakage of urine. In the last six months, have you accidentally leaked urine?" A: "Yes" must be chosen from the options of: "Yes" or "No" Q: "How much of a problem, if any, was the urine leakage for you?" A: "A big problem" or "A small problem" must be chosen from the options of: "A big problem" or "A small problem" or Not a problem". **Denominator b- Receiving Urinary Incontinence Treatment:** The number of patients 65 years and older who responded to the survey indicating they had a urine leakage problem in the last 6 months and discussed their urine leakage problem with their current provider. Member choices must be as follows to be included in the numerator: Q: "Many people experience problems with urinary incontinence, the leakage of urine. In the last six months, have you accidentally leaked urine?" A: "Yes" must be chosen from the options of: "Yes" or "No" Q: "How much of a problem, if any, was the urine leakage for you?"		

PREVENTION, IMMUNIZATION AND SCREENING - GENERAL PREVENTION					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			A: "A big problem" or "A small problem" must be chosen from the options of: "A big problem" or "A small problem" or Not a problem". Q: "In the last six months, have you talked with your doctor or other health provider about your current urine leakage problem?" A: "Yes" must be chosen from the options of: "Yes" or "No" or "I did not see a doctor or health provider in the last six months".		

PREVENTION, IMMUNIZATION AND SCREENING - SCREENING					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
Breast Cancer Screening	NCQA[2,4]	**Electronic Collection:** **Numerator-** One or more mammograms during the measurement year or the year prior to the measurement year. (CPT Codes: 76083, 76090-76092; ICD-9-CM Codes 87.36, 87.37; V-Codes: V76.11, V76.12; UB-92 Codes; 0401, 0403) **Medical Record Collection** Numerator- One or more mammograms during the measurement year or the year prior to the measurement year. Documentation in the medical record must include both of the following:	**Electronic collection:** **Denominator-** Women 52-69 years as of December 31 of the measurement year. *Note:* Given the measurement look back period, women 50-69 will be captured in this measure. **Medical Record Collection:** Women 52-69 years as of December 31 of the measurement year. *Note:* Given the measurement look back period, women 50-69 will be captured in this measure. The denominator (patients for	**Exclusions:** Exclude women who had a bilateral mastectomy and for whom administrative data does not indicate that a mammogram was performed. Look for evidence of bilateral mastectomy as far back as possible in the patient's history, through either administrative data or medical record review (exclusionary evidence in the medical record must	Electronic data (i.e., claims or encounter data for visits, diagnoses and procedures) or medical record review r

PREVENTION, IMMUNIZATION AND SCREENING - SCREENING					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		a note indicating the date the mammogram was performed, and the result or finding. Electronic Health Record (EHR) users may opt to use record based methodology or the electronic data collection methodology described above. EHR users may opt to follow the medical record specifications but produce data on 100% of their denominator population instead of a sample.	inclusion): A sample should be determined using the most accurate data available in the settings in which the measure will be implemented. The measure developer recommends that in most settings office visit claims (see list of codes) or other codified encounter data should be used to identify patients who have had at least one office visit in the prior (12) months from which a purposeful sample (random, consecutive retrospective or prospective from a specific date) can then be chosen for the denominator. In other uses of the measure, insurer level claims (pooled or single insurer) data can be used to identify the denominator.	include a note indicating a bilateral mastectomy.) If there is evidence of two separate mastectomies, this patient may be excluded from the measure. The bilateral mastectomy must have occurred by December 31st of the measurement year. Codes to identify exclusions for breast cancer screening: (For Bilateral: ICD-9-CM Codes: 85.42, 85.44, 85.46, 85.48; CPT Codes: 19180.50 or 19180 w/modifier 09950*, 19200.50 or 19200 w/modifier code 09950*, 19220.50 or 19220 w/modifier 09950*, 19240.50 or 19240 w/ modifier 09950*.) (For Unilateral codes (need 2 separate occurrences on 2 different dates of service): ICD-9-CM Codes: 85.41, 85.43, 85.45, 85.47; CPT Codes 19180, 19200, 19220, 19240) *.50 and 09950 modifier codes indicate the procedure was bilateral and performed during the same operative session.	

PREVENTION, IMMUNIZATION AND SCREENING - SCREENING					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
Cervical Cancer Screening	NCQA[2,4]	**Electronic Collection:** **Numerator-** One or more Pap tests during the measurement year or the two years prior to the measurement year. A woman had a Pap test if a submitted claim/encounter contains any one of the following codes: CPT (88141-88145, 88147, 88148, 88150, 88152-88155, 88164-88167, 88174-88175) LOINC (10524-7, 18500-9, 19762-4, 19764-0, 19765-7, 19766-5, 19774-9, 33717-0) ICD-9-CM (91.46) V Codes: V72.32, V76.2) UB-92 (0923) **Medical Record Collection** **Numerator-** One or more Pap tests during the measurement year or the two years prior to the measurement year. Documentation in the medical record must include both of the following: · • a note indicating the date the test was performed, and • the result or finding.	**Electronic Collection:** **Denominator-** Women 21–64 years of age during the measurement year. *Note:* Given the measurement look back period, women 18-64 will be captured in this measure. **Medical Record Collection:** **Denominator-** A systematic sample of women 21–64 years during the measurement year. *Note:* Given the measurement look back period, women 18-64 will be captured in this measure. Electronic Health Record (EHR) users may opt to use this methodology or the electronic data collection methodology described above. EHR users may opt to follow the medical record specifications below but produce data on 100% of their denominator population instead of a sample. The denominator (patients for inclusion): A sample should be determined using the most accurate data available in the settings in which the measure will be implemented. The measure	Women who had a hysterectomy and who have no residual cervix and for whom the data do not indicate that a Pap test was performed. Look for evidence of a hysterectomy as far back as possible in the patient's history, through either administrative data or medical record review (exclusionary evidence in the medical record must include a note indicating a hysterectomy with no residual cervix. Documentation of "complete hysterectomy", "total hysterectomy", "total abdominal hysterectomy", or "radical hysterectomy" meets the criteria for hysterectomy with no residual cervix. Documentation of "hysterectomy" alone does not meet the criteria because it does not indicate the cervix has been removed.) The hysterectomy must have occurred by December 31 of the measurement year. Use any of the following codes or descriptions of	Electronic data (i.e., claims or encounter data for visits, diagnoses laboratory and procedures) or medical record review

PREVENTION, IMMUNIZATION AND SCREENING - SCREENING					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			developer recommends that in most settings office visit claims (see list of codes) or other codified encounter data should be used to identify patients who have had at least one office visit in the prior (12) months from which a purposeful sample (random, consecutive retrospective or prospective from a specific date) can then be chosen for the denominator. In other uses of the measure, insurer level claims (pooled or single insurer) data can be used to identify the denominator.	codes in the medical record, listed below to identify allowable exclusions: Surgical codes for hysterectomy CPT (51925, 56308, 58150, 58152, 58200, 58210, 58240, 58260, 58262, 58263, 58267, 58270, 58275, 58280, 58285, 58290-58294, 58550, 58551, 58552-58554, 58951, 58953-58954, 58956, 59135) ICD-9-CM (68.4-68.8, 618.5) V codes: (V67.01, V76.47)	
Chlamydia Screening in Women	NCQA[2,4]	**Electronic Collection:** **Numerator-** At least one Chlamydia test during the measurement year as documented through administrative data. A woman is considered as having a test if she had a claim/encounter with a service date during the measurement year with one or more of the following codes to identify Chlamydia screening: CPT: (87110, 87270, 87320, 87490, 87491, 87492, 87810) LOINC : *Chlamydia trachomatis tests:* (4993-2, 6349-5, 6354-5, 6355-2, 6356-0, 6357-8, 14470-9, 14471-7, 14463-4, 14464-2, 14467-5, 14474-1, 14509-4, 14510-2, 14513-6, 16600-9, 16601-7, 16602-5, 20993-2, 21189-6, 21190-4, 21191-2, 21192-0, 21613-5, 23838-6, 31771-9, 31772-7, 31775-0, 31777-6) LOINC : *Chlamydia species tests:* (557-9, 560-	**Electronic Collection** Denominator- Women 16-25 years of age (reported in stratifications of 16-20, 21-25 and overall) as of December 31 of the measurement year who are sexually active. Two methods are provided to identify sexually active women: pharmacy data and claims/encounter data. Use both methods to identify the eligible population, although a patient must appear in only one method to be eligible for the measure. • Pharmacy data: Patients dispensed prescription contraceptives (oral contraceptives, IUD, diaphragm or other prescribed contraceptive) during the measurement	**Exclusions:** Patients should be excluded who had a pregnancy test during the measurement year followed within seven days (inclusive) by either a prescription for Accutane (isotretinion) or an x-ray. This exclusion does not apply to patients who qualify for the denominator based on services other than the pregnancy test alone. The following codes and descriptions of codes are provided to identify these services: Pregnancy test CPT (81025, 84702, 84703) LOINC (2106-3, 2107-1,	Electronic data (i.e., claims or encounter data for visits, diagnoses laboratory pharmacy and procedures) or medical record review

PREVENTION, IMMUNIZATION AND SCREENING - SCREENING					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		3, 561-1, 6343-8, 6345-3, 6346-1, 6347-9, 16593-6, 31765-1, 32001-0, 32003-6, 32004-4, 32671-0, 32774-2, 34708-8, 35713-7, 35714-5, 35715-2, 35716-0, 35717-8, 35722-8, 35726-9, 35727-7, 35728-5, 35729-3, 35730-1) LOINC : *Chlamydia tracomatis and Neiserria gonorrhoeae tests:* (36902-5, 36903-3) **Medical Record Collection:** Electronic Health Record (EHR) users may opt to use this methodology or the electronic data collection methodology described above. EHR users who have information on drugs prescribed and not dispensed may opt to follow the medical record specifications below but produce data on 100% of their denominator population instead of a sample. Numerator- Documentation in the medical record of at least one Chlamydia test during the measurement year. A woman is considered as having a test if there is documentation of a Chlamydia *trachomatis or species test* with a service date during the measurement year. Documentation in the medical record must include both of the following: • a note indicating the date chlamydia test was performed, **and** • the result or finding	year. • Claims/encounter data: Patients who had at least one encounter during the measurement year with any of the diagnosis or procedure codes listed below: CPT Codes: (11975-11977, 57022, 57170, 58300, 58301, 58600, 58605, 58611, 58615, 58970, 58974, 58976, 59000, 59001, 59012, 59015, 59020, 59025, 59030, 59050, 59051, 59070, 59072, 59074, 59076, 59100, 59120, 59121, 59130, 59135, 59136, 59140, 59150, 59151, 59160, 59200, 59300, 59320, 59325, 59350, 59400, 59409, 59410, 59412, 59414, 59425, 59426, 59430, 59510, 59514, 59515, 59525, 59610, 59612, 59614, 59618, 59620, 59622, 59812, 59820, 59821, 59830, 59840, 59841, 59850-59852, 59855-59857, 59866, 59870, 59871, 59897, 59898, 59899, 76801, 76802, 76805, 76810-76812, 76815-76821, 76825-76828, 76941, 76945-76946, 80055, 81025, 82105, 82106, 82143, 82731, 83632, 83661-83664, 84702-84703, 86592-86593, 86631-86632, 87110, 87164, 87166, 87270, 87320, 87490-87492, 87590-87592, 87620-87622, 87800, 87801, 87810, 87850, 88141-88145, 88147, 88148, 88150, 88152-88155, 88164-88167, 88174-88175, 88235, 88267, 88269) LOINC Codes: *Pregnancy tests:* 2106-	2110-5, 2111-3, 2112-1, 2113-9, 2114-7, 2115-4, 2118-8, 2119-6, 19080-1, 19180-9, 20415-6, 20994-0, 21198-7, 25372-4, 25373-2, 34670-0) UB-92 (0925) AND ONE OF THE FOLLOWING Diagnostic Radiology: CPT (70010-76499); UB-92 (032X) OR Prescription for Accutane (isotretinion)	

PREVENTION, IMMUNIZATION AND SCREENING - SCREENING					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			3, 2107-1, 2110-5, 2111-3, 2112-1, 2113-9, 2114-7, 2115-4, 2118-8, 2119-6, 19080-1, 19180-9, 20415-6, 20994-0, 21198-7, 25372-4, 25373-2, 34670-0 *Alpha-fetoprotein tests:* 1832-5, 1834-1, 15019-3, 19171-8, 19176-7, 19177-5, 31993-9 *Fibrinonectin tests:* 20403-2, 20404-0 *Syphilis tests:* 660-1, 5291-0, 5292-8, 5392-6, 5393-4, 5394-2, 6561-5, 6562-3, 8041-6, 11084-1, 11597-2, 17723-8, 17724-6, 17725-3, 17726-1, 17727-9, 17728-7, 17729-5, 20507-0, 20508-8, 22461-8, 22462-6, 22587-0, 22590-4, 22592-0, 22594-6, 24110-9, 24312-1, 26009-1, 31147-2, 34382-2 *Chlamydia trachomatis tests:* 4993-2, 6349-5, 6354-5, 6355-2, 6356-0, 6357-8, 14470-9, 14471-7, 14463-4, 14464-2, 14467-5, 14474-1, 14509-4, 14510-2, 14513-6, 16600-9, 16601-7, 16602-5, 20993-2, 21189-6, 21190-4, 21191-2, 21192-0, 21613-5, 23838-6, 31771-9, 31772-7, 31775-0, 31777-6 *Chlamydia species tests:* 557-9, 560-3, 561-1, 6343-8, 6345-3, 6346-1, 6347-9, 16593-6, 31765-1, 32001-0, 32003-6, 32004-4, 32671-0, 32774-2, 34708-8, 35713-7, 35714-5, 35715-2, 35716-0, 35717-8, 35722-8, 35726-9, 35727-7, 35728-5, 35729-3, 35730-1 *Neiserria gonorrhoeae tests:* 688-2, 690-8, 691-6, 692-4, 693-2, 698-1, 5028-6, 6487-3, 6488-1, 6489-9, 21414-8, 21415-5, 21416-3, 23908-7, 24111-7, 29311-8, 31905-3, 31906-1, 32198-4, 32199-2, 32705-6 *Chlamydia trachmatis and Neiserria gonorrhoeae tests:* 36902-5, 36903-3 *HPV tests:* 6510-2, 6511-0, 6514-4, 6516-9, 7975-6, 10705-2, 11083-3,		

PREVENTION, IMMUNIZATION AND SCREENING - SCREENING					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			11481-9, 12222-6, 12223-4, 14499-8, 14500-3, 14502-9, 14503-7, 14504-5, 14506-0, 16280-0, 17398-9, 17399-7, 17400-3, 17401-1, 17402-9, 17403-7, 17404-5, 17405-2, 17406-0, 17407-8, 17408-6, 17409-4, 17410-2, 17411-0, 17412-8, 21440-3, 21441-1, 30167-1, 38372-9 *Pap tests:* 10524-7, 18500-9, 19762-4, 19764-0, 19765-7, 19766-5, 19774-9, 33717-0 *Amniotic fluid cytogenetics tests:* 33773-3, 34493-7, 34656-9, 34718-7, 35457-1 *Obstetric panel:* 24364-2 ICD-9 Codes: 042, 054.10, 054.11, 054.12, 054.19, 078.1, 078.88, 079.4, 079.51-079.53, 079.88, 079.98, 091.0-098.0, 098.10, 098.11, 098.15-098.19, 098.2, 098.30, 098.31, 098.35-098.39, 098.4-099.9, 131.00, 614-616, 622.3, 623.4, 626.7, 628, 630-677, 795.0 *V Codes:* V01.6, V02.7, V02.8, V08, V22-V28, V45.5, V61.5, V72.3, V72.4, V74.5, V73.88, V73.98, V76.2 *UB92 Revenue Codes:* 923, 925 <u>Medical Record Collection:</u> Electronic Health Record (EHR) users may opt to use this methodology or the electronic data collection methodology described above. EHR users who have information on drugs prescribed and not dispensed may opt to follow the medical record specifications below but produce data on 100% of their denominator population instead of a sample.		

PREVENTION, IMMUNIZATION AND SCREENING - SCREENING					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			Denominator- A systematic sample of women 16-25 years of age (reported in stratifications of 16-20, 21-25 and overall) as of December 31 of the measurement year who are sexually active. Two methods are provided to identify sexually active women: prescriptions and diagnoses. Use both methods to identify the eligible population, although a patient must appear in only one method to be eligible for the measure. • Prescriptions: Documentation of patients prescribed contraceptives (oral contraceptives, IUD, diaphragm or other prescribed contraceptive) during the measurement year. • Diagnoses: Documentation of patients who had at least one encounter during the measurement year with any of the diagnoses or procedures listed below: • Pregnancy tests, Alpha-fetoprotein tests, Fibrinonectin tests, Syphilis tests, Chlamydia trachomatis test, Chlamydia species tests, Neiserria gonorrhoeae tests, Chlamydia trachomatis and Neiserria gonorrhoeae tests, HPV tests, Pap testsAmniotic fluid cytogenetics tests,Obstetric		

PREVENTION, IMMUNIZATION AND SCREENING - SCREENING					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
			panel The denominator (patients for inclusion): A sample should be determined using the most accurate data available in the settings in which the measure will be implemented. The measure developer recommends that in most settings office visit claims (see list of codes) or other codified encounter data should be used to identify patients who have had at least one office visit in the prior (12) months from which a purposeful sample (random, consecutive retrospective or prospective from a specific date) can then be chosen for the denominator. In other uses of the measure, insurer level claims (pooled or single insurer) data can be used to identify the denominator.		
Colorectal Cancer Screening	NCQA[2,4]	Electronic Collection: Numerator- One or more screenings for colorectal cancer. Appropriate screenings are defined by any one of the four criteria below: • fecal occult blood test (FOBT) during the measurement year • flexible sigmoidoscopy during the measurement year or the four years prior to the measurement year • double contrast barium enema (DCBE) during the measurement	Administrative Data: Denominator- Patients 51–80 years of age during the measurement year. *Note:* Given the measurement look back period, adults 50-80 will be captured in this measure. Medical Record Data Electronic Health Record (EHR) users may opt to use this methodology or the electronic data collection methodology described above. EHR users may opt to follow the medical record specifications	**Exclusions:** Patients with a diagnosis of colorectal cancer or total colectomy. Look for evidence of colorectal cancer or total colectomy as far back as possible in the patient's history, through either administrative data or medical record review. Exclusionary evidence in the medical record must include a note indicating a diagnosis of colorectal	Electronic data (i.e., claims or encounter data for visits, diagnoses laboratory and procedures) or medical record review

PREVENTION, IMMUNIZATION AND SCREENING - SCREENING					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		year or the four years prior to the measurement year. • colonoscopy during the measurement year or the nine years prior to the measurement year. A patient had an appropriate screening if a submitted claim/encounter contains any one of the following codes: • *Fecal occult blood test (FOBT)* CPT codes (82270,82274); LOINC (2335-8, 12503-9, 12504-7, 14563-1, 14564-9, 14565-6, 27396-1, 27401-9, 27925-7, 27926-5, 29771-3) • *Flexible sigmoidoscopy* CPT codes (45330, 45331, 45332, 45333, 45334, 45335, 45337, 45338, 45339, 45340, 45341, 45342, 45345) • ICD-9-CM (45.24, 45.42) • *Double contrast barium enema* (DCBE) CPT codes (74280) • *Colonoscopy* CPT codes (44388, 44389, 44390, 44391, 44392, 44393, 44394, 44397, 45355, 45378, 45379, 45380, 45381, 45382, 45383, 45384, 45385, 45386, 45387, 45391, 45392) • ICD-9-CM (45.22, 45.23, 45.25, 45.43, V76.51) <u>Medical Record Collection:</u> Electronic Health Record (EHR) users may opt to use this methodology or the electronic data collection methodology described above. EHR users may opt to	below but produce data on 100% of their denominator population instead of a sample. **Denominator-** A systematic sample of patients 51–80 years of age during the measurement year (*Note:* Given the measurement look back period, adults 50-80 will be captured in this measure.)	cancer or total colectomy, which must have occurred by December 31 of the measurement year. Use the following codes or descriptions of the codes to identify allowable exclusions: Malignant neoplasm of colon and other specified sites of colon and large intestine ICD-9-CM codes (153.X, 154.0, 154.1, 197.5, V10.05) Total colectomy CPT codes (44150-44153, 44155-44156, 44210-44212) ICD-9-CM codes (45.8)	

PREVENTION, IMMUNIZATION AND SCREENING - SCREENING					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		follow the medical record specifications below but produce data on 100% of their denominator population instead of a sample. Numerator- One or more screenings for colorectal cancer. Appropriate screenings are defined by any one of the four criteria below: • fecal occult blood test (FOBT; both guaiac and immunochemical FOBT is acceptable) during the measurement year • flexible sigmoidoscopy during the measurement year or the four years prior to the measurement year • double contrast barium enema (DCBE) during the measurement year or the four years prior to the measurement year. Air contrast enema is a clinical synonym. • colonoscopy during the measurement year or the nine years prior to the measurement year. Documentation in the medical record must include both of the following: • a note indicating the date the colorectal cancer screening was performed, and · • for a notation in the progress notes, the result or finding (this ensures the screening was			

PREVENTION, IMMUNIZATION AND SCREENING - SCREENING					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		performed and not merely ordered). For a notation in the medical history, a result is not required. Documentation in the medical history pertains to screenings that occurred in the past and it is assumed that the result was negative (a positive result would have been noted as such). A notation in the medical history must include a date reference that meets the timeline outlined in the specifications.			
Fall Risk Management in Older Adults	NCQA[2,4]	**Numerator a- Discussing Fall Risk:** The number of patients in the denominator a who responded "yes" to the question, "A fall is when your body goes to the ground without being pushed. In the past 12 months, did your doctor or other health provider talk with you about falling or problems with balance or walking?"--**Q1** **Numerator b- Managing Fall Risk:** The number of patients in the denominatorb who responded "yes" to the question, "Has your doctor or other health provider done these or anything else to help prevent falls or treat problems with balance or walking? " Some examples of things they might do include: • Suggest that you use a cane or walker • Check your blood pressure lying	**Denominator a- Discussing Fall Risk:** All patients 75 years and older as of December 31 of the measurement year, **AND** patients 65 years to 74 years as of December 31 of the measurement year who responded "yes" to either of the questions, "Did you fall in the past 12 months?" - - **Q2** OR "yes" to the question**,** "In the past 12 months, have you had problems with balance or walking?" - - **Q3** and who indicated they were seen by a provider during the measurement year. **Denominator b- Managing Fall Risk:** Patients 65 years and older as of December 31 of the measurement year who responded "yes" to either of the questions, "Did you fall in the past 12 months?" - - **Q2** OR "yes" to	None	Patient survey.

PREVENTION, IMMUNIZATION AND SCREENING - SCREENING					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		or standing • Suggest that you do an exercise or physical therapy program • Suggest a vision or hearing testing	the question, "In the past 12 months, have you had problems with balance or walking?" - - **Q3** and who indicated they were seen by a provider during the measurement year.		
Osteoporosis Testing in Older Women	NCQA[2,4]	**Numerator:** The number of patients in the denominator who responded "yes" to the question, "Have you ever had a bone density test to check for osteoporosis, sometimes thought of as "brittle bones"? This test may have been done to your back, hip, wrist, heel, or finger."	**Denominator:** Women 65 and older as of December 31 of the measurement year who answered "yes" or "no" to the question, "Have you ever had a bone density test to check for osteoporosis, sometimes thought of as "brittle bones"? This test may have been done to your back, hip, wrist, heel, or finger."	None	Patient survey.

PREVENTION, IMMUNIZATION AND SCREENING - IMMUNIZATION					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
Childhood Immunization Status	NCQA[2,4]	**<u>Electronic Collection:</u>** **Numerator-** For all antigens, count any of the following: • evidence of the antigen, **or** documented history of the illness, **or** a seropositive test result. For combination vaccinations that require more than one antigen (i.e., DTaP and MMR), find evidence of all of the antigens. **DTaP/DT:** An initial DTaP vaccination followed by at least three DTaP, DT or individual diphtheria and tetanus shots, on or before the child's second birthday. Any vaccination administered prior to 42 days after birth cannot be counted. (DTP vaccinations are no longer manufactured;	**<u>Electronic collection</u>** **Denominator-** Children who turn two years of age during the measurement year. **Medical record collection** **Denominator-** A systematic sample drawn from children who turn two years of age during the measurement year. The denominator (patients for inclusion): A sample should be determined using the most accurate data available in the settings in which the measure will be implemented. The measure	**Exclusions:** Children who had a contraindication for a specific vaccine should be excluded from the denominator for all antigen rates and the combination rates. The denominator for all rates must be the same. In excluding contraindicated children, this may only be done for those children where the administrative data does not indicate that the contraindicated immunization was rendered. The exclusion	

PREVENTION, IMMUNIZATION AND SCREENING - IMMUNIZATION					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		however, notations of DTP in medical records count toward the numerator.) In states where the law allows an exception to a child who receives a pertussis vaccination, the child is compliant if he or she has four diphtheria and four tetanus vaccinations. **IPV:** At least three polio vaccinations (IPV) with different dates of service on or before the child's second birthday. IPV administered prior to 42 days after birth cannot be counted. **MMR:** At least one measles, mumps and rubella (MMR) vaccination, with a date of service falling on or between the child's second birthday. **HiB:** Three H influenza type B (HiB) vaccinations, with different dates of service on or before the child's second birthday. HiB administered prior to 42 days after birth cannot be counted. Note: Because use of one particular type of HiB vaccine requires only three doses, the measure requires meeting the minimum possible standard of three doses, rather than the recommended four doses. **Hepatitis B:** Three hepatitis B vaccinations, with different dates of service on or before the child's second birthday. **VZV:** At least one chicken pox vaccination (VZV), with a date of service falling on or between the child's first and second	developer recommends that in most settings office visit claims (see list of codes) or other codified encounter data should be used to identify patients who have had at least one office visit in the prior (12) months from which a purposeful sample (random, consecutive retrospective or prospective from a specific date) can then be chosen for the denominator. In other uses of the measure, insurer level claims (pooled or single insurer) data can be used to identify the denominator.	must have occurred by the patient's 2nd birthday. Contraindications should be looked for as far back as possible in the patient's history. The following may be used to identify allowable exclusions: Immunization: Any particular vaccine, Contraindication: Anaphylactic reaction to the vaccine or its components ICD-9: 999.4 Immunization: DTaP Contraindication: Encephalopathy ICD-9: 323.5 (must include E948.4 or E948.5 or E948.6 to identify the vaccine) Immunization: VZV and MMR Contraindication: Immunodeficiency, including genetic (congenital) immunodeficiency syndromes ICD-9: 279 Immunization: VZV and MMR Contraindication: HIV-infected or household contact with HIV infection ICD-9: Infection V08, symptomatic 042 Immunization: VZV and MMR	

PREVENTION, IMMUNIZATION AND SCREENING - IMMUNIZATION					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		birthdays. **Pneumococcal conjugate:** At least four pneumococcal conjugate vaccinations on or before the child's second birthday. **Combination 2 (DtaP, IPV, MMR, HiB, hepatitis B, VZV):** Children who received four DTaP/DT vaccinations; three IPV vaccinations; one MMR vaccination; three HiB vaccinations; three hepatitis B; and one VZV vaccination. **Combination 3 (DtaP, IPV, MMR, HiB, hepatitis B, VZV, pneumococcal conjugate)**: Children who received all of the antigens listed in Combination 2 and four pneumococcal conjugate vaccinations. DTaP: CPT (90698, 90700, 90701, 90720, 90721, 90723 ; ICD-9 (99.39) Diphtheria and tetanus: CPT (90702) Diphtheria: CPT (90719); ICD-9 (V02.4*, 032*, 99.36) Tetanus : CPT (90703) ; ICD-9 (037*, 99.38) Pertussis : ICD-9(033*, 99.37) ; IPV : CPT (90698, 90713, 90723); ICD-9 (V12.02*, 045*, 99.41) MMR : CPT (90707, 90710) ; ICD-9 (99.48) Measles : CPT (90705, 90708) ; ICD-9 (055*, 99.45) Mumps : CPT (90704, 90709) : ICD-9 (072*, 99.46) Rubella : CPT (90706, 90708, 90709) ; ICD-9 (056*, 99.47) HiB : CPT (90645, 90646, 90647, 90648, 90698, 90720, 90721, 90748) ; ICD-9 (041.5*, 038.41*, 320.0*, 482.2*)		Contraindication: Cancer of lymphoreticular or histiocytic tissue ICD-9: 200-202 Immunization: VZV and MMR Contraindication: Multiple myeloma ICD-9: 203 Immunization: VZV and MMR Contraindication: Leukemia ICD-9: 204-208 Immunization: IPV Contraindication: Anaphylactic reaction to streptomycin, polymyxin B or neomycin Immunization: HiB Contraindication: None Immunization: Hepatitis B Contraindication: Anaphylactic reaction to common baker's yeast Immunization: VZV and MMR Contraindication: Anaphylactic reaction to neomycin Immunization: Pneumococcal conjugate Contraindication: None *MMWR January 16, 1998, Volume 47(01): 8-12	

PREVENTION, IMMUNIZATION AND SCREENING - IMMUNIZATION					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		Hepatitis B* : CPT (90723, 90740, 90744, 90747, 90748) ; ICD-9 (V02.61*, 070.2*, 070.3*) VZV : CPT (90710, 90716) ; ICD-9 (052*, 053*) Pneuomococcal conjugatge: CPT (90669); *Indicates evidence of the disease. A patient who has evidence of the disease during the numerator event time is compliant for the antigen. ** The 2-dose hepatitis B antigen Recombivax is recommended for children between the ages of 11 and 14 years of age only. **Medical Record Collection:** Electronic Health Record (EHR) users may opt to use this methodology or the electronic data collection methodology described above. EHR users may opt to follow the medical record specifications below but produce data on 100% of their denominator population instead of a sample. **Numerator-** For all antigens, count any of the following: • evidence of the antigen or combination vaccine, **or** • documented history of the illness, **or** • a seropositive test result. For combination vaccinations that require			

PREVENTION, IMMUNIZATION AND SCREENING - IMMUNIZATION					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
		more than one antigen (i.e., MMR), find evidence of all of the antigens. For immunization information obtained from the medical record, count patients where there is evidence that the antigen was rendered from: • a note indicating the name of the specific antigen and the date of the immunization, **or** • a certificate of immunization prepared by an authorized health care provider or agency including the specific dates and types of immunizations administered. For documented history of illness or a seropositive test result, find a note indicating the date of the event. The event must have occurred by the patient's second birthday. Notes in the medical record indicating that the patient received the immunization "at delivery" or "in the hospital" may be counted toward the numerator. This applies only to immunizations that do not have minimum age restrictions (e.g., prior to 42 days after birth). A note that the "patient is up-to-date" with all immunizations that does not list the dates of all immunizations and the names of the immunization agents does not constitute sufficient evidence of immunization for this measure.			
Flu Shots for Adults Ages 50-64	NCQA[2,4]	The number of patients in the denominator who responded, "Yes" to the question "Have you had a flu shot since September 1,YYYY?	The number of patients 50-64 years who responded "Yes" or "No" to the question "Have you had a flu shot since September 1, YYYY?"	No Exclusions listed	Patient survey.

PREVENTION, IMMUNIZATION AND SCREENING - IMMUNIZATION					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
Flu Shots for Older Adults	NCQA[2,4]	Numerator: The number of patients in the denominator who responded "Yes" to the question, "Have you had a flu shot since September 1, YYYY?"	**Denominator:** The number of patients 65 years or older who responded "Yes" or "No" to the question, "Have you had a flu shot since September 1, YYYY?"	None	Patient survey.
Adult Influenza Immunization	AMA PCPI[2,3]	Patients who received influenza vaccination from September through February of the year prior to the measurement period ICD-9-CM codes for need vaccine: V04.81 *Or* CPT procedure codes for adult influenza vaccine: 90656, 90657, 90658, 90660 *Or* HCDCS code: G0008 *Or* Medical record includes documentation of patient report of having received the vaccination	All patients ≥ 50 years of age at the beginning of the one-year measurement period Patient Selection: CPT codes for patient visits: 99201-99205, 99212-99215, 99241-99245, 99354-99355, 99386-99387, 99396-99397, 99401-99404, 90471-90474 *And* Patient's age is ≥ 50 years at the beginning of the one-year measurement period	Exclusions: • Egg allergy (ICD-9-CM codes: 693.1, V15.03, 995.68) • Adverse reaction to influenza vaccine (995.0 and E949.6, 995.1 and E949.6, 995.2 and E949.6) • Other medical reason(s) documented by the practitioner for not receiving an influenza vaccination Patient reason(s) (eg, economic, social, religious)	In order to obtain the required data elements for the AMA/PCPI measures, implementers must utilize medical record data (either EHRS, paper medical records, or prospective flow sheets).
Pneumo-coccal vaccine needed for all adults aged 65 years or older	RHI	Numerator = Adults aged 65 to 67 years who have not received a pneumococcal vaccine Pneumococcal Vac Polyvalent CPT 90471 Immunization Admin 90472 Immunization Admin, Each Add 90732 Pneumococcal Vaccine HCPCS: G0009 Admin Pneumococcal Vaccine	Denominator = Adults aged 65 to 67 years old	Inclusion criteria: Patients must be between 65 and 67 years old and eligible to receive services during the past 2 years. Exclusion criteria: None (Claims data does not currently include clinical information)	This measure uses data from one or more health plans to derive information at the physician level. Set of procedure codes (e.g., CPT, HCPCS) for an influenza vaccine. Only the presence or

PREVENTION, IMMUNIZATION AND SCREENING - IMMUNIZATION					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
					absence of the relevant codes is evaluated. Administrative medical (inpatient and outpatient) and pharmacy claims data. Eligibility data from health plan. At least two years of historical claims data are requested.
Pneumonia Vaccination Status for Older Adults	NCQA[2,4]	Numerator- The number of patients in the denominator who responded "Yes" to the question "Have you ever had a pneumonia shot? This shot is usually given only once or twice in the person's lifetime and is different from the flu shot. It is also called the pneumococcal vaccine."	Denominator- The number of patients 65 years and older as of January 1 of the measurement year who responded, "Yes" or "No" to the questions "Have you ever had a pneumonia shot? This shot is usually given only once or twice in the person's lifetime and is different from the flu shot. It is also called the pneumococcal vaccine."	None given	Patient survey
Pneumonia Vaccination	CMS/ NCQA[2,4]	Patients who have ever received a pneumococcal vaccination (CPT procedure code for adult pneumococcal vaccination: 90732) (HCDCS code: G0009)	All patients ≥ 65 years of age in the measurement year.	Exclusions: • Previous anaphylactic reaction to the vaccine or any of its components • Other medical reason(s) documented by the practitioner for	Paper medical record, flowsheet, electronic health record system.

PREVENTION, IMMUNIZATION AND SCREENING - IMMUNIZATION					
MEASURE	IP OWNER	NUMERATOR	DENOMINATOR	EXCLUSIONS	DATA SOURCE
				not receiving a pneumococcal vaccination (ICD-9-CM exclusion codes for PC-8 Pneumonia Vaccination: 995.0 and E949.6, 995.1 and E949.6, 995.2 and E949.6 • Patient reason(s) (eg, economic, social, religious)	

[i] Otto CM, Lind BK, Kitzman DW, et al for the Cardiovascular Health Study. Association of aortic valve sclerosis with cardiovascular mortality and morbidity in the elderly. *N Engl J Med.* 1999;341:142-147

[ii] National Center of Physical Activity and Disability, General Exercise Guidelines, http://www.ncpad.org/ Factshthtml/GenExGuide.htm [viewed 9/26/2005] (NCPAD, 2004).

[iii] CDC, Functional Limitation by Sex, Race—1983–1996 [10-year age groups], National Health Interview Survey.