**HEDIS®**

**2016 Volume 1**

Narrative



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1100 13th Street, NW, Suite 1000  
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*Item #10283-100-16*

Acknowledgments

NCQA is proud to release the HEDIS 2016 Healthcare Effectiveness Data and Information Set for the   
2015 measurement year. HEDIS 2016 would not have been possible without the contributions of many stakeholders, external and internal to NCQA. In particular, the members of the Committee on Performance Measurement (CPM) generously donated their time, energy and intellect toward developing the final HEDIS 2016 specifications.

Improvements and enhancements to this volume are the result of a team effort of staff from the NCQA Analysis Department, the Measure Validation Department, the Policy Measures Department, and the Performance Measurement Department.

HEDIS is produced with contributions of a wide range of collaborators. The members of NCQA’s Measurement Advisory Panels (MAP), Technical Measurement Advisory Panel (TMAP) and HEDIS Expert Panels contributed greatly to the 2016 version of HEDIS.

Sincerely,



Margaret E. O’Kane  
President

# 

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# Overview

HEDIS 2016

The Healthcare Effectiveness Data and Information Set (HEDIS) is the most widely used health care quality measurement tool in the United States. The term “HEDIS” originated in the late 1980s as the product of a group of forward-thinking employers and quality experts, and was entrusted to NCQA in the early 1990s. NCQA has expanded the size and scope of HEDIS to include measures for physicians, preferred provider organizations (PPO) and other organizations.HEDIS 2016 is published across a number of volumes and includes 88 measures across 7 domains of care:

|  |  |  |
| --- | --- | --- |
| * Effectiveness of Care. * Access/Availability of Care. * Experience of Care. * Utilization and Risk Adjusted Utilization. | | * Relative Resource Use. * Health Plan Descriptive Information. * Measures Collected Using Electronic Clinical Data Systems. |
| Volume 1: **Narrative** | A general overview of the HEDIS measurement set and how the data are used. | |
| Volume 2: **Technical  Specifications for Health Plans** | Technical specifications for the HEDIS nonsurvey measures for organizations; collecting data for the measures; general guidelines for calculations and sampling. | |
| *Technical Specifications for Physician Measurement* | Technical specifications for the HEDIS quality and cost-of-care measures for physician-level measurement. | |
| *Technical Specifications for ACO Measurement* | The technical specifications for the HEDIS quality measures for Accountable Care Organizations. | |
| Volume 3: *Specifications for Survey Measures* | Technical specifications for HEDIS survey measures and standardized surveys from the Consumer Assessment of Healthcare Providers and Systems (CAHPS®1) program. | |
| S*pecifications for the CAHPS PCMH Survey* | The technical specifications and standardized questionnaires for the CAHPS survey for the patient-centered medical home (PCMH). | |
| Volume 5: *HEDIS Compliance Audit™: Standards, Policies and Procedures* | The accepted method for auditing the HEDIS production process, including an information systems (IS) capabilities assessment, an evaluation of compliance with HEDIS specifications and standards that Certified HEDIS Compliance Auditors must use when conducting a HEDIS audit. | |
| Volume 6: *Specifications for the Medicare Health Outcomes Survey* | The technical specifications for the Health Outcomes Survey (HOS). | |

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How HEDIS Is Developed

NCQA’s Committee on Performance Measurement (CPM) oversees the evolution of the measurement set and includes representation by purchasers, consumers, health plans, health care providers and policy makers. Measurement Advisory Panels (MAP) provide the clinical and technical knowledge required to develop the measures. Additional HEDIS Expert Panels and the Technical Measurement Advisory Panel (TMAP) provide invaluable assistance by identifying methodological issues and giving feedback on new and existing measures.

How This Volume Is Organized

|  |  |
| --- | --- |
| Introduction | NCQA and the history of HEDIS and its importance. |
| HEDIS Measure Development | The HEDIS measure development, life cycle and management process. |
| Using HEDIS | HEDIS as a component of the accreditation process; a brief overview of the data collection and reporting process; the HEDIS Compliance Audit. |
| Interpreting HEDIS Results | NCQA products that help interpret data results. |
| HEDIS Measures | Measures discussed individually. |
| Appendices | Including a glossary and list of contributors. |

Other Important Information

Policy Clarification Support

NCQA provides different types of policy support to customers, including a function that allows customers to submit specific policy interpretation questions to NCQA staff: the Policy Clarification Support (PCS) system. The PCS system can be accessed through the NCQA Web site at http://my.ncqa.org.

FAQs and Policy Updates

The FAQs and Policy Updates clarify HEDIS use and specifications, and are posted to the NCQA Web site (www.ncqa.org) on the 15th of each month.

Additional Resources

In addition to the specification volumes, NCQA provides a variety of resources to help organizations understand measure specifications, collect HEDIS data and report results.

* Each organization implementing HEDIS is strongly encouraged to join the NCQA HEDIS Users Group (HUG) for technical assistance and guidance on interpreting measure specifications. Membership benefits include NCQA HEDIS and accreditation publications, newsletters, Internet seminars, discount vouchers for HEDIS conferences and publications and up-to-date technical information. For more information, e-mail hug@ncqa.org.
* Organizations that are involved in NCQA Accreditation and Certification activities are encouraged to join the Accreditation and Certification Users Group (ACUG). The ACUG provides a learning and development platform for members to discuss updates applicable to their organization’s procedures. Membership benefits include a monthly newsletter, WebEx discussions, and vouchers for publications, educational conferences and Quality Compass. For more information, e-mail acug@ncqa.org or go to http://www.ncqa.org/Programs/Accreditation/AccreditationUsersGroupAUG.aspx for a full description   
  of the program.
* All HEDIS publications are available as easy-to-use electronic publications (“e-pubs”), which contain the complete text of NCQA printed publications and are sold by user license. E-pubs are protected Microsoft Word and Excel files sent to the purchaser via e-mail. They are simple to download onto a PC, network or intranet.
* NCQA produces many publications that are relevant to organizations and physicians interested in improving the quality of health care. To obtain a list or to order publications, go to the NCQA Publications Center at [www.ncqa.org/publications](http://www.ncqa.org/publications) or call Customer Support at 888-275-7585.
* NCQA educational seminars provide valuable information on NCQA standards and the survey   
  process. Several course offerings range from a basic introduction to HEDIS and NCQA standards to advanced techniques for quality improvement. For information about NCQA conferences, go to <http://www.ncqa.org/education/> or call NCQA Customer Support at 888-275-7585.

Reporting Hotline for Fraud and Misconduct

NCQA does not tolerate submission of fraudulent, misleading or improper information by organizations as part of their survey process or for any NCQA program.

NCQA has created a confidential and anonymous Reporting Hotline to provide a secure method for reporting perceived fraud or misconduct, including submission of falsified documents or fraudulent information to NCQA that could affect NCQA-related operations (including, but not limited to, the survey process, the HEDIS measures and determination of NCQA status and level).

### How to Report

* **Toll-Free Telephone:**
* English-speaking USA and Canada: **855-840-0070** (not available from Mexico).
* Spanish-speaking North America: **800-216-1288** (from Mexico, user must dial 001-800-216-1288).
* **Web Site:** <https://www.lighthouse-services.com/ncqa>
* **E-Mail:** [reports@lighthouse-services.com](mailto:reports@lighthouse-services.com) (must include NCQA’s name with the report).
* **Fax:** 215-689-3885 (must include NCQA’s name with the report).

Introduction

Introduction

NCQA is a private, not-for-profit organization dedicated to improving health care quality and is active in quality oversight and improvement initiatives at all levels of the health care system, from evaluating entire systems of care to recognizing individual providers that demonstrate excellence.

NCQA is best known for assessing and reporting on the quality of the nation’s managed care plans through accreditation and performance-measurement programs. NCQA’s voluntary Accreditation programs are complementary strategies for producing information about quality and value that consumers, employers and other stakeholders can use to make informed decisions about their health care.

Having realized the potential of accreditation and certification, NCQA’s model includes other large health care entities—such as managed behavioral healthcare organizations (MBHO), PPOs, physician organizations (PO) and credentials verification organizations (CVO)—with similar results.

Quality must be monitored at all levels if it is to improve across the health care system. With this in mind, NCQA’s broad agenda promotes improvement among many health care sectors, including programs for disease management (DM) organizations and initiatives that track performance at the physician level (Pay for Performance [P4P], Bridges to Excellence [BTE], recognition programs). NCQA’s work offers health care organizations and individual practitioners the opportunity to differentiate themselves within a competitive market and continual improvement of care.

What Is HEDIS?

The Healthcare Effectiveness Data and Information Set (HEDIS) is a set of standardized performance measures designed to ensure that the public has the information it needs to compare organization performance. HEDIS results are based on statistically valid samples of members. Certified auditors rigorously audit HEDIS results, using a process designed by NCQA. HEDIS is one component of a larger accountability system and complements the NCQA Accreditation Program. When combined, the results of NCQA Accreditation and HEDIS provide the most complete view of organization quality available to purchasers and consumers.

HEDIS 2.0, the first HEDIS set of measures, was released in 1993 and became the national standard for health plan performance reporting. HEDIS 2.0 represented a milestone in national efforts to hold organizations accountable for achieving important results. In addition to a focus on prevention and screening, HEDIS 2016 examines care provided for a number of conditions across all body systems; addresses members’ access to and satisfaction with various health care services; and measures utilization for specific procedures and care settings.

NCQA believes that health care sectors beyond managed care can significantly benefit from a meaningful performance measurement program that aids quality improvement and provides significant information about health care quality.

HEDIS Measure Domains

|  |  |
| --- | --- |
| Effectiveness of Care | Measures in this domain provide information about the quality of clinical care that the organization provides: how well the organization incorporates widely accepted preventive practices and recommended screening for common diseases. This domain has been expanded to include some overuse and patient safety measures. |
| Access/Availability  of Care | Measures in this domain provide information about member services: how easy it is for an organization’s members to access health care providers and whether care is available to those who need it, without inappropriate barriers or delay. |
| Experience of Care | Measures in this domain provide information on members’ experiences with their health care organization and give a general indication of how well the organization meets member expectations. |
| Utilization and Risk Adjusted Utilization | Measures in this domain provide information about how the organization manages and expends resources, and provide information about how efficiently and effectively the organization uses available health services and resources. The risk adjusted measures account for the underlying characteristics of the patient population to allow for more meaningful comparisons across health plans. |
| Relative Resource Use | Measures in this domain indicate how intensively plans use physician visits, hospital stays and other resources to care for members identified as having one of five chronic diseases; cardiovascular disease, COPD, diabetes, hypertension and asthma. |
| Health Plan Descriptive Information | Measures in this domain provide information about the organization’s structure, staffing and enrollment characteristics, and how these factors contribute to the organization’s ability to provide effective health care for its members*.* |
| Measures Collected Using ECDS | Measures in this domain provide information about the organization’s comprehensive patient care through the use of electronic clinical data systems (ECDS) that allow automated access at the point of care to comprehensive information and can create data files for quality reporting. ECDS may also support other care-related activities directly or indirectly through various interfaces, including evidence-based decision support, quality management and outcome reporting*.* |

Why We Need HEDIS

Health care costs are escalating. As costs have increased, purchasers of health benefits—large corporations that purchase care on behalf of their employees and the public, and Medicare and Medicaid programs that purchase care on behalf of the senior and low-income populations—have become increasingly concerned that health care value has not risen proportionately. As health benefits consume an ever-larger percentage of expenses, purchasers seek ways to assess the relative value of care. HEDIS offers a way to make an “apples-to-apples” comparison of organizations.

To help purchasers understand fully how to use HEDIS information, some organizations have formed local HEDIS coalitions or business groups to share best practices. How purchasers use this information varies: some use HEDIS data to select health plans; some have instituted contracts with performance guarantees and rebates, where an organization must demonstrate a certain level of performance or return a percentage of the premium at the end of the benefit year (an organization that meets or exceeds expectations receives a bonus).

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| ***Case Study:* MVP Health Care**  At MVP Health Care, we strive to offer our members solutions for living a healthier life. To ensure that we meet our goal to educate members on preventive care and help members with chronic conditions manage their conditions better, we monitor and trend HEDIS Effectiveness of Care measures. These population-based measures enable us to examine the performance of our Quality Improvement outreach activities and specific programs with related measures:  ***Antidepressant Medication Management.*** We use the HEDIS *Antidepressant Medication Management* measure as a performance indicator for our health management program. Our Depression Care program offers education and tools to members with depression, and also offers individualized health coaching for high-risk members (i.e., with moderate to severe depression). Health coaching techniques incorporate patient-centric strategies to achieve goals. We assess the member’s stage of change, select specific behaviors and set improvement goals.  Although one-on-one health coaching is the program’s key component, education is also tailored to individual needs. The program addresses self-management and problem-solving skills, recognizing triggers and symptoms, identifying personal goals and barriers, diet and exercise, follow-up visits, adherence to treatment plans and medications, developing social supports, benefits of psychotherapy and social activities. MVP has experienced significant increases in the *Effective Acute Phase* measure and the *Effective Continuation Phase* measure for its Medicare population with depression.  ***Comprehensive Diabetes Care.*** Our Diabetes Care program is comprised of education and support for all members identified with diabetes, as well as an individualized health coaching component for members with the highest risk of complications. Over the years, MVP has seen increasing rates in many of the *Comprehensive Diabetes Care* submeasures as we have expanded our program and outreach. As is true with many health plans, the measure that has presented the greatest challenge is the percentage of members who receive an annual dilated eye exam.  Each year, members with diabetes who have not had a dilated eye exam according to HEDIS specifications are targeted for outreach. The goals of the initiative are:   * Improve the rate of dilated eye exams among diabetics. * Identify barriers to members obtaining this important exam. * Educate members about the importance of the key American Diabetes Association (ADA) recommended tests.   MVP has found that many members are unaware of the benefit that allows a yearly eye exam for diabetics. The consequences of expanding the education of our diabetic population about this benefit and emphasizing the importance of an annual eye exam will be reflected in HEDIS results in the years to come. |

How HEDIS Reporting Adds Value

HEDIS provides value on three fronts—all equally important. First, HEDIS measures give the public an unprecedented ability to understand how well organizations achieve results, by answering questions such as:

* How effective and satisfying is the care and service delivered?
* How accessible is care?
* How well does the organization help its members make informed choices about their health?

Second, HEDIS measures ensure that results are comparable across *all* organizations. Much of HEDIS development consists of turning a straightforward concept into a set of rules that can be unambiguously interpreted and consistently applied across organizations, accounting for differences in data systems (and population risk) that might affect results independently of performance. NCQA learned that this translation is not nearly as simple as it seems, and that without awareness of operational details, conceptually attractive measures offer no useful information. An important—and unique—component of HEDIS is its attention to statistical details.

Third, HEDIS is a component of a larger system that encourages accountability and quality improvement in health care. Quality professionals in health care strongly believe that managed care can provide better care, and HEDIS can help prove them right.

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| *Case Study:* National Business Coalition on Health The National Business Coalition on Health (NBCH) is a non-profit organization of nearly 60 employer-based health care coalitions dedicated to value-based purchasing of health care services. Representing more than 7,000 employers and approximately 25 million employees and their dependents, NBCH member business coalitions are composed of mostly mid-sized and large employers in both the private and public sectors across the United States.  NBCH member coalitions are committed to community health reform, including improvement in the value of health care provided through employer-sponsored health plans, and to the entire community. One of the many NBCH initiatives is *eValue8*, created by business coalitions and employers like Marriott and General Motors to measure and evaluate health plan performance. *eValue8* asks health plans probing questions about how they manage critical processes that control costs, reduce and eliminate waste, ensure patient safety, close gaps in care and improve health and health care.  Health plans provide detail on how they educate, engage and incent consumers to promote health and manage disease, as well as measure and pay providers. Plans and purchasers receive objective scores enabling comparison of plans against regional and national benchmarks and a roadmap for improvement. As a result of face-to-face discussion of findings and roadmap, plans learn what they need to do to align their strategies with purchaser expectations to maximize the value of the health care investment and ultimately, improve health and quality of care.  NBCH supports the use of HEDIS by asking plans to report the most recent HEDIS results and by using the *eValue8* program to credit health plans that report results to NCQA. Actual results (i.e., percentiles) reported in Quality Compass® are used to score an organization’s request for information. For example, an organization that meets the 90th percentile in HEDIS (i.e., the top 10 percent) receives the highest score for that measure. For conditions like diabetes, *eValue8* automatically grants credit toward other *eValue8* process measures if plans score in the top 10 percent for all diabetes HEDIS measures. For specific measures, health plans are given “bonus credit” for improvement over the previous reporting year.  NBCH is one of many organizations that demonstrate the value of HEDIS in order to encourage quality improvement and establish accountability. |

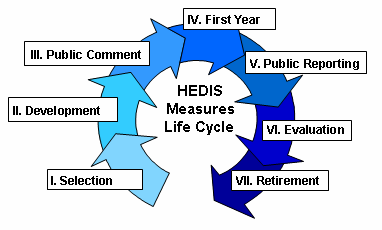
# HEDIS Measure Development

HEDIS Measure Development

HEDIS Measure Life Cycle

The Committee on Performance Measurement (CPM) is organized and managed by NCQA, and is responsible for advising NCQA staff on the development and maintenance of performance measures. The CPM recommends measures to the NCQA Board of Directors for inclusion in HEDIS. CPM members reflect the diversity of constituencies that performance measurement serves; some bring other perspectives and additional expertise in quality management and the science of measurement.

NCQA identified and refined measure management into a standardized process called the *HEDIS measure life cycle.* There are seven distinct steps in this cycle, as depicted in the figure below.



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| *Step 1* | **Topic selection** is the process of identifying measures that meet criteria for further development consistent with the overall model for performance measurement. There is a large universe of potential performance measures for future versions of HEDIS.  NCQA staff identify areas of interest or gaps in care. Measurement Advisory Panels (MAP—whose members are authorities on clinical priorities for measurement) participate in this process. A literature review is conducted on identified topics to find supporting guidelines and documentation on their importance, scientific soundness and feasibility of measurement. This information is synthesized into a measure work-up. (Refer to *What Makes a Measure “Desirable”?*)The work-up is reviewed by NCQA’s MAPs, the Technical Measurement Advisory Panel (TMAP—whose members are authorities on measure implementation and feasibility) and various other expert panels, and revised accordingly.  ***Example:*** A suite of schizophrenia measures were developed in response to a growing concern about the lack of health care in this particular population. NCQA’s Performance Measurement Department and Behavioral Health MAP worked together to assess the most appropriate tools for monitoring clinical interventions for schizophrenia. | |
| *Step 2* | **Development** ensures that measures are fully defined and tested before the organization collects them. MAPs participate in this process by helping identify the best measures for assessing health care performance in clinical areas identified in the topic selection phase. Examples of MAPs convened by NCQA: | |
|  | * Cardiovascular health. * Diabetes. * Efficiency. * Respiratory health. | * Child health. * Behavioral health. * Childhood and adolescent obesity. * Geriatric health. |

|  |  |
| --- | --- |
|  | Development includes the following tasks:   * Prepare a detailed conceptual and operational work-up that includes a testing proposal. * Collaborate with data vendors and health plans to conduct tests to assess the feasibility, reliability and validity of potential measures.   The CPM uses testing results and proposed final specifications to determine if the measure will move forward to Public Comment.  ***Example:*** The suite of schizophrenia measures were written, field-tested and presented to the CPM in 2011. The *Diabetes Screening for People With Schizophrenia or Bipolar Disorder Who Are Using Antipsychotic Medications (SSD), Diabetes Monitoring for People With Diabetes and Schizophrenia (SMD), Cardiovascular Monitoring for People With Cardiovascular Disease and Schizophrenia (SMC),* and *Adherence to Antipsychotic Medications for Individuals With Schizophrenia (SAA*) measures were approved for inclusion in HEDIS 2013. |
| *Step 3* | **Public Comment** is a 30-day period of review that allows the public and interested parties to offer feedback to NCQA about new measures or significant changes to existing measures.  NCQA MAPs and technical panels consider all comments and advise NCQA staff on appropriate recommendations brought to the CPM. The CPM reviews all comments before making a final decision about Public Comment measures. New measures and changes to existing measures approved by the CPM will be included in the next HEDIS year and reported as first-year measures.  ***Example:*** The schizophrenia measures were released for Public Comment in spring 2012 before being included in HEDIS 2013. |
| *Step 4* | **First-year data collection** requires organizations to collect, be audited on and report these measures; however, results are not publicly reported in the first year and are not included in NCQA’s Quality Compass, the *State of Health Care Quality* *Report* or in accreditation scoring.  The first-year distinction guarantees that a measure can be efficiently collected, reported and audited before it is used for public accountability or accreditation. This is not testing—the measure was already tested as part of its development—rather, it ensures that there are no unforeseen problems when the measure is implemented in the real world. NCQA’s experience is that the first year of large-scale data collection can reveal unanticipated issues.  After collection, reporting and auditing on an introductory basis, NCQA conducts a detailed evaluation of first-year data. The CPM uses evaluation results to decide whether the measure should be publicly reported or whether it needs further modifications.  ***Example:*** The suite of schizophrenia measures were introduced in HEDIS 2013. Organizations reported the measures in the first year and the results were analyzed for public reporting in the following year. |
| *Step 5* | **Public reporting**is based on the first-year measure evaluation results. If the measure is approved, it will be reported in *Quality Compass* andthe *State of Health Care Quality Report,* and may be used for scoring in accreditation.  ***Example*:** The suite of schizophrenia measures were eligible for public reporting for HEDIS 2014. |
| *Step 6* | **Evaluation** is the ongoing review of a measure’s performance and recommendations for its modification or retirement. NCQA staff continually monitor the performance of publicly reported measures, and keep abreast of new guidelines or recommendations from evidence-review bodies. Statistical analysis, audit result review and user comments contribute to ongoing measure evaluation.  Each year, guided by an assessment of the environment and internal resources, measures are scheduled for a complete reevaluation based on changes in clinical guidelines, health care delivery systems, related measurement approaches and the results from previous years’ analyses. |
|  | Measure work-ups are updated with information gathered from an environmental scan, literature review and performance data, and are presented to the appropriate MAPs for review. If necessary, the measure specification may be updated or the measure may be recommended for retirement. Any changes or recommendations for retirement are posted for Public Comment. The CPM reviews recommendations from the evaluation process and approves or rejects the recommendation. If approved, the change is included in the next year’s HEDIS Volume 2. Information derived from analyzing the performance of existing measures is used to improve development of the next generation of measures.  ***Example:*** The *Controlling High Blood Pressure (CBP)* and *Comprehensive Diabetes Care (CDC)* measures were reevaluated in 2014 in response to updated guidelines for appropriate care. Changes included in HEDIS 2015 reflect the most recent standards of care for those with high blood pressure or diabetes. |
| *Step 7* | **Retirement** ends a measure’s life cycle. There are several reasons why a measure is retired:   * Overall performance on the measure is very high, with little variation between health plans. * The measure no longer produces useful information because of changes in science or health care delivery. * As the measure becomes less meaningful, it no longer rates high for desirable attributes.   ***Example:*** After reevaluation of the *Glaucoma Screening in Older Adults (GSO)* measure, NCQA staff recommended retirement of the measure from HEDIS 2015 because the guidelines and evidence were outdated. Stakeholder feedback also indicated the measure was no longer meaningful. |

What Makes a Measure “Desirable”?

Whether considering the value of a new measure or the continuing worth of an existing one, we must define what makes a measure useful. HEDIS measures encourage improvement. The defining question for all performance measurement—“Where can measurement make a difference?”—can be answered only after considering many factors. NCQA has established three areas of desirable characteristics for HEDIS measures.

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| 1. Relevance: | Measures should address features that apply to purchasers, consumers or clinicians, or which will stimulate efforts toward quality improvement, transparency and accountability. More specifically, relevance includes the following attributes. |
| *Meaningful* | *What is the significance of the measure to the different groups concerned with health care? Is the measure easily interpreted? Are the results meaningful to target audiences?*  Measures should be meaningful to at least one HEDIS audience (e.g., individual consumers, purchasers or health care systems). Decision makers should be able to understand a measure’s clinical, public health and economic significance. |
| *Important to health* | *What is the prevalence and overall impact of the condition in the U.S. population? What significant health care aspects will the measure address?*  We should consider the type of measure (e.g., outcome, intermediate outcome or process), the prevalence of the medical condition addressed by the measure and the seriousness of affected health outcomes. |
| *Financially important* | *What financial implications result from actions evaluated by the measure? Does the measure relate to activities with high financial impact?*  Measures should relate to activities that have significant financial impact. |

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| *Cost effective* | *What is the cost benefit of implementing the change in the health care system?*  Measures should encourage the use of more cost-effective approaches or discourage the use of approaches that are less cost-effective. |
| *Strategically important* | *What are the policy implications? Does the measure encourage activities that use resources efficiently?*  Measures should encourage activities that use resources most efficiently to maximize member health. |
| *Controllable* | *What impact can the organization have on the condition or disease? What impact can the organization have on the measure?*  Health care systems should be able to improve their performance. For outcome measures, at least one process should be controlled and have an important effect on outcome. For process measures, there should be a strong link between the process and desired outcome. |
| *Variation across systems* | *Will there be variation across systems?*  There should be the potential for wide variation across systems. |
| *Potential for improvement* | *Will organizations be able to improve performance?*  There should be substantial room for performance improvement. |
| 2. Scientific soundness: | Perhaps in no other industry is scientific soundness as important as in health care. Scientific soundness must be a core value of our health care system—a system that has extended and improved the lives of countless individuals. |
| *Clinical evidence* | *Is there strong evidence to support the measure? Are there published guidelines for the condition? Do the guidelines discuss aspects of the measure? Does evidence document a link between clinical processes and outcomes addressed by the measure?*  There should be evidence documenting a link between clinical processes and outcomes. |
| *Reliable* | *Are results consistent and reproducible?*  Measures should produce the same results when repeated in the same population and setting. |
| *Valid* | *Does the measure make sense?*  Measures should make sense logically and clinically, and should correlate well with other measures of the same aspects of care. |
| *Accurate* | *How well does the measure evaluate what is happening?*  Measures should correctly evaluate what is actually happening. |
| *Risk adjustment* | *Is it necessary to stratify the measure by age or another variable?*  Measure variables should not differ appreciably beyond the health care system’s control, or variables should be known and measurable. Risk stratification or a validated model for calculating an adjusted result can be used for measures with confounding variables or that focus on outcomes. |
| *Comparability of data sources* | *How do different systems affect accuracy, reliability and validity?*  Accuracy, reliability and validity should not be affected if different data systems are used for a measure. |

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| 3. Feasibility: | The goal is not only to include feasible measures, but also to catalyze a process whereby relevant measures can be *made* feasible. |
| *Precise specifications* | *Are there clear specifications for data sources and methods for data collection and reporting?*  Measures should have clear specifications for data sources and methods for data collection and reporting. |
| *Reasonable cost* | *Does the measure impose a burden on health care systems?*  Measures should not impose an inappropriate burden on health care systems. |
| *Confidentiality* | *Does data collection meet accepted standards of member confidentiality?*  Data collection should not violate accepted standards of member confidentiality. |
| *Logistical feasibility* | *Are the required data available?*  Data needed for measurement are reasonably accessible. |
| *Auditability* | *Is the measure susceptible to exploitation or “gaming” that would be undetectable in an audit?*  Measures should not be susceptible to manipulation that would be undetectable in an audit. |

Standardizing Measurement

NCQA endeavors to adhere to the following principles to create standardized, reliable performance measures; some are directly addressed in this publication and others are explicit in our measure development process.

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| Engage in consensus | * Involve multiple health care stakeholders. * Model national organizations’ best-practice processes. * Review measures against explicit criteria. * Include Public Comment mechanisms to enrich perspectives on measures proposed for consensus. |
| Technical construction  of rates | * Ensure that measures reflect evidence-based medicine. * Define the eligible population as the denominator (age, gender, diagnoses, exclusions). * Define the desired event as the numerator (processes, outcomes, time windows). * Define data elements (electronic codes, diagnoses, clinical procedures/tests, medications). * Test to refine measure reliability and validity. * Define audit or data validation specifications. |
| Define implementation rules and guidelines | * Specify accountable parties and to whom measures apply. * Define units of observation (groups, sites, individuals, specialties). * Define how patients are assigned to observation units. * Specify required statistical and technical considerations. |

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| Analyze information | * Use descriptive statistics (distribution, confidence intervals, benchmarking) in reporting. * Promote understanding through analytical statistics (correlation, regression, modeling). |
| Maintain and review measures and guidelines | * Perform regular refinement (updating codes, clinical logic, evidence re-review, evidence-based medicine). * Perform ad hoc review (take action based on emerging, ground-breaking evidence). * Maintain and update technical specifications and data collection tools. |

# Using HEDIS

Using HEDIS

Different Users, Different Objectives

HEDIS was designed for a number of uses and users.

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| Private and public purchasers | Private and public purchasers use HEDIS data to compare organizations. Significant differences among organizations should help direct selection and support contracting and performance target-setting initiatives that depend largely on price. |
| Health plans | Health plans use HEDIS data to identify opportunities for improvement and to monitor the success of their efforts to improve. HEDIS data provide a means to track improvement internally, and as a set of measurement standards, let organizations compare their results with other plans’ results to identify performance gaps and set realistic targets for improvement. |
| State and federal regulators | State and federal regulators may use HEDIS data as part of their oversight process. There is clear potential for regulators to use available performance information to eliminate burdensome regulations. NCQA is working with a number of states to incorporate HEDIS and performance measurement into streamlined, cost-effective oversight processes. |
| Consumers | Consumers use HEDIS data to help them choose a health plan. Some information may come to consumers directly; some may come from another source (e.g., their employer, the media); some may come as raw data.  Each use is appropriate and requires thoughtful interpretation, which should be made by drawing on the most complete data set available. HEDIS exists as one component of a larger system for providing information about organization quality and performance. Adding NCQA Accreditation results to HEDIS data provides an important complementary view. |

***Note:*** *A subset of HEDIS measures are collected and reported for the Marketplace product line. For reporting requirements and measure specifications for Marketplace reporting, refer to the Quality Reporting System (QRS) 2016 Reporting Requirements and Guidance on the CMS Web site.*

HEDIS as a Component of Accreditation

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| Measuring quality | NCQA began accrediting MCOs in 1991, in response to the need for standardized, objective information about the quality of health care organizations. Many large employers will not conduct business with an organization that has not earned the NCQA seal of approval.  NCQA Accreditation and HEDIS have an effect on health care decisions. NCQA Accreditation uses organization surveys to measure quality—experts take a detailed look at an organization’s structure and operations. HEDIS measures quality by determining if an organization achieves its goals. Even if consumers approach a health care decision armed only with an organization’s accreditation or HEDIS results, they are still more informed than most people—but the strategies are complementary, and what emerges when *both* accreditation and HEDIS are considered is a more complete and coherent view of the organization.  Through accreditation, NCQA evaluates patient safety, confidentiality, consumer protection, access, service and continuous improvement. 75 percent of all health plan members are in an organization that has been reviewed by NCQA. |

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| Health Plan Report Card | NCQA’s Web-based Health Plan Report Card provides accreditation status and summary performance information in an easy-to-understand framework. Find the Report Card at [www.ncqa.org](http://www.ncqa.org). |
| Accreditation uses | The NCQA Accreditation process incorporates select HEDIS performance measures. For organizations, this means greater recognition of successful efforts to deliver excellent care and services. All new NCQA Accreditation decisions are based on audited HEDIS results and performance on standards and all organizations that participate in the accreditation process submit annual audited HEDIS data. Required HEDIS results include measures of clinical quality and member experience. The standards are demanding, but NCQA purposely sets high goals to encourage organizations to strive for continual quality enhancement. |

Clinical Measures Scored for Accreditation 2016

**Note:** These measures are applicable to organizations surveyed on the 2015 Health Plan Accreditation Standards at their annual reevaluation in 2016, and applies to organizations surveyed on the 2016 Health Plan Accreditation Standards.

| HEDIS Measure | Commercial | Medicare | Medicaid |
| --- | --- | --- | --- |
| Adult BMI Assessment | ✓ | ✓ | ✓ |
| Annual Dental Visit |  |  | ✓ |
| Antidepressant Medication Management (Both Rates) | ✓ | ✓ | ✓ |
| Appropriate Testing for Children With Pharyngitis | ✓ |  | ✓ |
| Appropriate Treatment for Children With Upper Respiratory Infection | ✓ |  | ✓ |
| Asthma Medication Ratio | ✓ |  | ✓ |
| Avoidance of Antibiotic Treatment in Adults With Acute Bronchitis | ✓ |  | ✓ |
| Breast Cancer Screening | ✓ | ✓ | ✓ |
| Cervical Cancer Screening | ✓ |  | ✓ |
| Childhood Immunization Status (Combination 10) | ✓ |  | ✓ |
| Chlamydia Screening in Women (Total Rate) | ✓ |  | ✓ |
| Colorectal Cancer Screening | ✓ | ✓ |  |
| Comprehensive Diabetes Care (BP Control [<140/90 mm/Hg], Eye Exam, HbA1c Control [<8%], HbA1c Poorly Controlled [>9%], Medical Attention for Nephropathy) | ✓ | ✓ | ✓ |
| Controlling High Blood Pressure | ✓ | ✓ | ✓ |
| Diabetes Screening for People With Schizophrenia or Bipolar Disorder Who Are Using Antipsychotic Medications |  |  | ✓ |
| Flu Vaccinations for Adults Ages 18-64 | ✓ |  | ✓ |
| Flu Vaccinations for Adults Ages 65 and Older |  | ✓ |  |
| Follow-Up After Hospitalization for Mental Illness (7-Day Rate only) | ✓ | ✓ | ✓ |
| Follow-Up for Children Prescribed ADHD Medication (Both Rates) | ✓ |  | ✓ |
| Frequency of Ongoing Prenatal Care (>81% of expected visits only) |  |  | ✓ |
| Human Papillomavirus Vaccine for Female Adolescents | ✓ |  | ✓ |
| Immunizations for Adolescents (Combination 1) | ✓ |  | ✓ |
| Initiation and Engagement in Alcohol and Other Drug Dependence Treatment (Engagement of AOD Treatment Rate only) | ✓ | ✓ | ✓ |

### Clinical Measures Scored for Accreditation 2016 *(continued)*

| HEDIS Measure | | Commercial | | Medicare | | Medicaid | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Medical Assistance With Smoking and Tobacco Use Cessation (Advising Smokers to Quit Rate only) | ✓ | | ✓ | | ✓ | |
| Medication Management for People With Asthma (75% Compliance Rate only) | ✓ | |  | | ✓ | |
| Osteoporosis Management in Women Who Had a Fracture |  | | ✓ | |  | |
| Persistence of Beta-Blocker Treatment After a Heart Attack | ✓ | | ✓ | |  | |
| Pharmacotherapy Management of COPD Exacerbation (Both Rates) | ✓ | | ✓ | | ✓ | |
| Plan All-Cause Readmissions | | ✓ | | ✓ | |  | |
| Potentially Harmful Drug-Disease Interactions in the Elderly | |  | | ✓ | |  | |
| Pneumococcal Vaccination Status for Older Adults | |  | | ✓ | |  | |
| Prenatal and Postpartum Care | | ✓ (Postpartum Rate only) | |  | | ✓ | |
| Use of High-Risk Medications in the Elderly (Rate 1 only) | |  | | ✓ | |  | |
| Use of Imaging Studies for Low Back Pain | | ✓ | |  | | ✓ | |
| Weight Assessment and Counseling for Nutrition, Physical Activity for Children/Adolescents (the total of all ages for each of the three rates) | | ✓ | |  | | ✓ | |
| CAHPS Measure | | Commercial | | Medicare | | Medicaid | |
| Getting Care Quickly | | ✓ | | ✓ | | ✓ | |
| Getting Needed Care | | ✓ | | ✓ | | ✓ | |
| Claims Processing | | ✓ | |  | |  | |
| Customer Service | | ✓ | |  | | ✓ | |
| Coordination of Care | | ✓ | | ✓ | | ✓ | |
| Rating of Health Plan | | ✓ | | ✓ | | ✓ | |
| Rating of All Health Care | | ✓ | | ✓ | | ✓ | |
| Rating of Personal Doctor | | ✓ | | ✓ | | ✓ | |
| Rating of Specialist Seen Most Often | | ✓ | | ✓ | | ✓ | |

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| Accreditation standards that use HEDIS reporting | * QI 5: Accessibility of Services. * Element A: Assessment Against Access Standards. * QI 6: Member Satisfaction. * Element B: Opportunities for Improvement. * QI 7: Complex Case Management. * Element J: Measuring Effectiveness. * QI 8: Disease Management. * Element K: Measuring Effectiveness. * QI 9: Clinical Practice Guidelines. * Element C: Performance Measurement. * QI 11: Continuity and Coordination Between Medical Care and Behavioral Healthcare. * Element A: Data Collection. * UM 11: Satisfaction With the UM Process. * Element A: Assessing Satisfaction With the UM Process. |

CAHPS Health Plan Survey

Today’s competitive health care environment has generated an unprecedented demand for standardized information about consumers’ experiences with their health plans. The HEDIS 2016 CAHPS Health Plan Survey 5.0H reflects state-of-the-art consumer research that considers:

* Key components of health care quality.
* Eliciting a broad range of consumer experience with these components.
* Reporting information to the public in a meaningful way.

The overarching goal of the CAHPS 5.0H survey is to obtain standardized information about member experiences. HEDIS includes adult and child versions of the CAHPS 5.0H survey. Survey sampling and administration follow specifications contained in *HEDIS 2016* *Volume 3: Specifications for Survey Measures.* Organizations must contract with an NCQA Certified HEDIS Survey Vendor to administer the survey and must submit results according to HEDIS survey specifications. Vendor certification ensures that all survey vendors administer the survey consistently, which improves comparability of results.

Measurement for Physicians and Ambulatory Care Organizations

Both *Technical Specifications for Physician Measurement* and *Technical Specifications for ACO Measurement* support standardized measurement of physician performance. In most cases, measures were adapted from HEDIS health plan measures. Health plans, physician groups, offices, community coalitions, employers, the public sector and others will find *Physician Measurement* a useful resource, while accountable care organizations will benefit most from *ACO Measurement*. The *Technical Specifications for Physician Measurement* contain standards and recommendations for episode grouping and population risk-adjustment software commonly used by health insurers and purchasers for physician cost of care measurement. Standards are intended to establish common rules for a wide array of technical issues.

Technical Specifications for Physician Measurement

HEDIS Physician Measurement assesses clinical performance of ambulatory practices. Both process and intermediate outcome measures are influenced by the actions of the physician, other clinicians and office staff. A physician, practice site or medical group that adopts a care-team approach to managing patient care is ultimately responsible for the quality of that care; consequently, performance results may reflect the impact of the care team while being aggregated by physician, practice site or medical group. Actions of patients and others may also influence performance measurement results.

Physicians, practice sites or medical groups to which the measure applies should be identified for each measure used. A measure may be used if the physician (or group of physicians) treats the condition or group of patients specified in the denominator criteria, and if there is an adequate number of patients who meet the denominator criteria.

Although broad application of quality measurement across a wide range of different types of specialties and conditions is encouraged, in most instances, measures are useful only in physician practices where the prevalence of a condition is relatively high. The number of required observations (e.g., patient visits, services) determines the measures that can be used with a given specialty or specific physician, and consequently, the physicians who can be included in the analysis.

***Example:*** Assuming that a full-time primary care practitioner’s practice has 1,500 active patients,   
a disease would have to be present in at least 2 percent of patients in order to generate approximately   
30 patients with that disease. Thus, only measures pertaining to relatively common conditions (coronary heart disease [CHD], diabetes, asthma, osteoarthritis) or preventive health care services (screenings and immunizations)—cohorts that exceed 2 percent of the patients in most practices—will probably meet a   
sample size of 30.

Specialists serve more patients with a different mix of clinical conditions than do primary care practitioners; thus, while there may not be enough patients for a certain performance measure or episode (e.g., patients with myocardial infarction) in a primary care practice, there might be in specific physician specialty practices (e.g., cardiology).

**Note:** This example is intended only to illustrate the impact on physician inclusion of condition prevalence and sample size requirements for physician measurement programs.

Technical Specifications for ACO Measurement

**Accountable care organizations (ACO)** are provider-based entities that have come together with the shared goal of improving quality of care and reducing cost growth. Today, most health care is organized around a site of care and the services provided there. ACOs should transcend the boundaries of particular sites to care for populations over time and across settings. Key to this approach are careful analysis of patterns of care, to identify high-risk populations and opportunities for improvement, and targeting resources devoted to care management. These will help drive out waste and unnecessary care by identifying and addressing unwarranted variation. Successful ACOs will have committed leaders who set aligned goals and incentives across diverse providers of care and actively engage their patient population.

Although ACOs have the potential to attain better quality at lower cost by aligning incentives to promote coordination and transform health care delivery, not every group of providers that wants to call itself an ACO has what it takes to accomplish this vital mission. That is why NCQA, working with a broad array of expert stakeholders, has developed clear criteria and standards for guiding ACOs to success. ACO accreditation provides independent evaluation of organizations’ abilities to coordinate and be accountable for the high-quality, efficient, patient-centered care expected from ACOs. The NCQA ACO Accreditation program aligns with many of the expectations that the Centers for Medicare & Medicaid Services (CMS) has for the Medicare Shared Savings Program, as well as with common expectations of private purchasers and consumers.

NCQA ACO Accreditation will help organizations meet the needs of multiple payers, both public and   
private. NCQA identified 40 core measures for initial reporting. To reflect the early stages of ACO development, NCQA allows ACOs flexibility in the measures they can report. ACOs may substitute some NCQA measures if it is required by the initiatives in which they are involved and if the ACOs can demonstrate their initiatives’ sophistication and rigor. NCQA plans to move to standardized measures and performance-based scoring (where results and standards are used together to score performance) over time.

Recognition Programs

Objective performance data have been a staple of quality improvement and marketing efforts for the better part of the past two decades, but until recently, measurement was comparatively rare at the medical group or individual clinician level. Most performance measurement still takes place at the system level, but clinicians and medical groups are embracing the ability to measure clinical and service performance, report results and use data to improve quality.

NCQA and other professional groups are working to encourage and reward change. Business groups such as the Bridges to Excellence (BTE) Coalition have gone even farther, establishing programs to reward doctors and other medical professionals through “pay for quality” programs that tie performance to financial incentives. NCQA’s Recognition programs, which draw heavily on the existing measure and knowledge base built around HEDIS, are the foundation of such efforts. Additionally, the American Board of Family Medicine (ABFM) allows its physicians to use these recognition programs when they apply for Maintenance of Certification. NCQA’s online Recognition Directory identifies clinicians and practices that demonstrate high levels of performance in provider care.

Diabetes Recognition Program

The voluntary Diabetes Recognition Program (DRP) highlights clinicians or medical groups that provide excellent care to a diabetic population. Clinicians report on their performance in key clinical areas (e.g., blood pressure, hemoglobin) for a sample of their patients.

The names of clinicians or groups that earn NCQA Recognition are available to interested consumers. Some organizations, such as Aetna, CIGNA and United Healthcare, acknowledge DRP recognized clinicians in their online provider directories. The program assesses six key required clinical measures:

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| 1. Hemoglobin (HbA1c) Control. 2. Eye Examination or Assessment. 3. Nephropathy Assessment.   4. Tobacco Use and Cessation Advice or Treatment. | 1. Blood Pressure Control. 2. Foot Examination. |

Heart/Stroke Recognition Program\*

The Heart/Stroke Recognition Program (HSRP) was launched in 2003 and was modeled after the DRP. The standards are based on AHA/ASA and American College of Cardiology guidelines for secondary prevention of heart disease and stroke. The program is voluntary for individual clinicians or medical groups who care for people with cardiovascular disease or who have had a stroke (a diagnosis of ischemic vascular disease [IVD]).

Clinicians in all settings can achieve NCQA Recognition by submitting data demonstrating that they provide quality care in secondary prevention of heart disease and stroke. The program assesses five key measures of cardiovascular care and stroke prevention:

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| 1. Completion of a Lipid Profile.\*\*  2. LDL Control.\*\*  3. Tobacco Use and Cessation Advice or Treatment.  \*Updated standards for HSRP 2015 will be released in November 2015.  \*\*Retired in HSRP 2015 | 4. Blood Pressure Control.  5. Use of Aspirin or Other Antithrombotic. |

Patient-Centered Medical Home Program

The NCQA Patient-Centered Medical Home (PCMH) program is an enhancement of the 2006 Physician Practice Connections (PPC) program and an updated version of the PPC-PCMH program. A medical home is a care setting that helps create a partnership between a patient and the patient’s personal practitioner, and, when appropriate, with the patient’s family. The joint principles endorsed by the American College of Physicians (ACP), the American Academy of Family Physicians (AAFP), the American Academy of Pediatrics (AAP) and the American Osteopathic Association (AOA) define the key characteristics of the PCMH program: whole-person, coordinated care integrated across the spectrum of the health care system over time, directed by the patient’s personal clinician, enhanced access, quality of care and patient safety. PCMH comprises six standards for evaluation:

* *PCMH 1: Patient-Centered Access.*
* *PCMH 2: Team-Based Care.*
* *PCMH 3: Population Health Management.*
* *PCMH 4: Care Management and Support.*
* *PCMH 5: Care Coordination and Care Transitions.*
* *PCMH 6: Performance Measurement and Quality Improvement.*

Patient-Centered Specialty Practice Program

The NCQA Patient-Centered Specialty Practice (PCSP) program, released in March 2013, is an enhancement of the 2006 PPC program and an extension of the PCMH program. The program recognizes specialty practices that successfully coordinate care with their primary care colleagues and with each other, and that meet the goals of providing timely access to care and continuous quality improvement.

The program also addresses reducing test duplication, measuring performance and improving communication with patients. PCSP comprises six standards for evaluation:

* *PCSP 1: Track and Coordinate Referrals.*
* *PCSP 2: Provide Access and Communication.*
* *PCSP 3: Identify and Coordinate Patient Populations.*
* *PCSP 4: Plan and Manage Care.*
* *PCSP 5: Track and Coordinate Care.*
* *PCSP 6: Measure and Improve Performance.*

Patient-Centered Connected Care Program™

The NCQA Patient-Centered Connected Care program, released in April 2015, was built on concepts in NCQA PCMH and PCSP Recognition programs. The program recognizes sites that deliver intermittent or outpatient treatment (but do not act as a primary care provider for the majority of patients), that can effectively communicate and connect with primary care and that fit into the medical home “neighborhood.”

Patient-Centered Connected Care comprises five standards for evaluation:

* *Connected Care 1: Connecting With Primary Care.*
* *Connected Care 2: Identifying Patient Needs.*
* *Connected Care 3: Patient Care and Support.*
* *Connected Care 4: System Capabilities.*
* *Connected Care 5: Measure and Improve Performance.*

Other Physician-Level Quality Evaluation Programs and Products

***California Value Based Pay-for-Performance (P4P).*** This collaborative program is led by the Integrated Healthcare Association (IHA), a statewide, multi-stakeholder leadership group that promotes quality improvement, accountability and health care affordability in California through cross-sector collaboration. The P4P program, which began in 2001, features common measures, data aggregation, public reporting, public recognition through awards and health plan incentive payments to physician organizations (PO). The measures used by the program include Clinical Quality, Patient Experience, Meaningful Use of Health IT (MUHIT), Appropriate Resource Use and Total Cost of care.

Ten California health plans, representing over 9 million commercial HMO/POS members, participate in P4P: Aetna; Anthem Blue Cross; Blue Shield of California; Chinese Community Health Plan; Cigna Health Care of California; Health Net; Sharp Health Plan; UnitedHealthcare; Western Health Advantage; Kaiser Permanente (Kaiser participates in public reporting only). More than 200 California physician organizations are included in reporting.

IHA also leads a PO-level performance measurement initiative for the Medicare population. Clinical results are collected from seven Medicare Advantage plans (Anthem Blue Cross; Blue Shield; Health Net; Humana; Kaiser Permanente; SCAN Health Plan; UnitedHealthcare). The results are aggregated and reported for the plans’ roughly 190 contracted physician organizations, which together serve over 1.5 million Medicare Advantage beneficiaries.

NCQA provides technical assistance for P4P measure development, testing and implementation, and also collects data for the MUHIT domain on behalf of IHA.

***Physician and Hospital Quality Standards.***The NCQA Physician and Hospital Quality (PHQ) standards define how organizations can report differences among providers in a way that is accurate, fair to providers and useful to customers (i.e., consumers and purchasers). The technical complexity of measuring the performance of physicians and hospitals continues to present challenges for those creating and using programs; in addition, measurement methodologies are rapidly evolving. Customers need to understand how an organization evaluates cost and quality; providers need to understand how an organization uses data on quality and cost. PHQ standards evaluate key elements of eligible programs to certify that measurement results are accurate.

To remain current with the health care industry’s changing capabilities and priorities, NCQA regularly updates its accreditation and certification requirements.

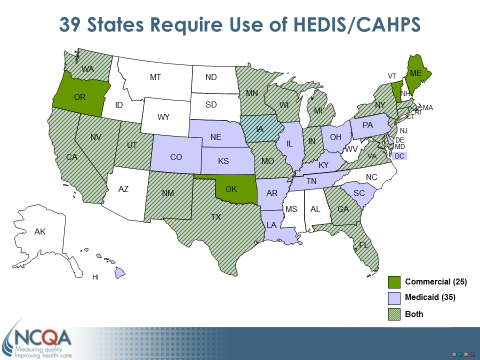
Both P4P and PHQ reflect the mandate for rigorous measurement criteria; options for overcoming the methodological and logistical challenges associated with obtaining meaningful physician-specific measurement; and the need for data to support informed decision making and pay-for-performance efforts.

HEDIS Serves Public Policy Needs

Many regulatory bodies accept (or require) NCQA Accreditation to satisfy state and federal rules. An increasing number of regulatory agencies use HEDIS as part of their oversight or consumer education activities. Regulator use of these tools can substantially reduce oversight costs while improving consumer welfare. HEDIS data are easy to use for organization comparison to support policy goals, guide improvement efforts and inform consumers. Data also provide regulatory bodies with a ready-made, systematic approach to outcomes-based oversight. The figure on the next page highlights states that currently require HEDIS. Other programs, such as the CMS MA Program, also require HEDIS.

# HEDIS Reporting by State

***39 States Collect or Require HEDIS/CAHPS***



*Current as of June 2015.*

19. Minnesota\*

20. Missouri\*

21. Nebraska\*

22. Nevada\*

23. New Jersey

24. New Mexico\*

25. New York\*

26. Ohio\*

27. Pennsylvania

28. Rhode Island\*

29. South Carolina\*

30. Tennessee\*

31. Texas

32. Utah\*

33. Virginia\*

34. Washington\*

35. Wisconsin

\**Audited HEDIS required*

***Medicaid***

1. Arkansas

2. California\*

3. Colorado

4. Connecticut\*

5. Delaware

6. District of Columbia\*

7. Florida\*

8. Georgia\*

9. Hawaii\*

10. Illinois\*

11. Indiana\*

12. Iowa

13. Kansas\*

14. Kentucky\*

15. Louisiana

16. Maryland

17. Massachusetts\*

18. Michigan\*

14. New Jersey\*

15. New Mexico

16. New York

17. Oklahoma

18. Oregon

19. Rhode Island\*

20. Texas\*

21. Utah\*

22. Vermont\*

23. Virginia\*

24. Washington

25. Wisconsin

***Commercial***

1. California

2. Connecticut

3. Florida

4 Georgia\*

5. Indiana\*

6. Iowa

7. Maine\*

8. Maryland\*

9.Massachusetts\*

10. Michigan\*

11. Minnesota\*

12. Missouri\*

13. Nevada\*

HEDIS Data Collection

HEDIS measures are specified for one of three data collection methods:

1. Administrative (i.e., gathered from claims, encounter, enrollment and provider systems).
2. Hybrid (i.e., gathered from administrative and medical record data).
3. Survey (i.e., gathered from a survey).

Data derived purely from administrative sources reflect rates that consider every eligible member and occurrence of the event calculated by a measure. All other data are based on members and services drawn in a systematic sample specified by NCQA. Sample size and rules for handling exclusions and replacements ensure a high degree of confidence and reliability in HEDIS results.

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| IDSS | Interactive Data Submission System. Organizations are responsible for annual completion of the IDSS and submission to NCQA by the HEDIS reporting deadline, and use the IDSS to indicate rotated measures. Refer to the *IDSS User’s Guide* for detailed instructions on completing the IDSS*.* |
| Data Collection Department | NCQA’s Data Collection Department provides technical support on the Health Organization Questionnaire (HOQ) and the IDSS, and guides organizations through the submission process. NCQA reviews the information and creates submission IDs for organizations submitting HEDIS and survey measures. |
| Data Submission Web Page | The Data Submission Web Page provides links to the CMS Web site; downloadable resources such as the Data Quality Checks and the Medicare Patient-Level File Submission Instructions and Specifications; and key dates for data submission. |

Maximizing Efficiency

Data collection is expensive for organizations, especially in start-up—getting systems in place that allow meaningful and relevant measurement. It is essential to ensure that the cost of producing HEDIS results is commensurate with the value provided by those results.

Minimizing future data collection cost is a core component of managing HEDIS measures. Cost can be reduced by rotating measures, reporting schedule modification, rewarding high levels of performance and retiring measures that are no longer useful. Efficiency can be increased by creating incentives for developing information systems that help facilitate data collection.

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HEDIS Compliance Audit

NCQA developed a precise, standardized methodology for verifying the integrity of HEDIS collection and calculation processes: the HEDIS Compliance Audit™. Audited HEDIS data are the most reliable, accurate and scientifically sound in health care today. HEDIS measures have been developed and refined with an eye toward accuracy. For HEDIS to achieve its full potential, an independent audit of HEDIS data collection and reporting processes—and of the data manipulated by those processes—is necessary. The audit ensures that HEDIS specifications are met and results are consistent and comparable.

The initial focus of the audit is on actions that an organization can take to correct its results. The final audit report indicates which measures are reportable and which are not. Licensed Organizations use NCQA Certified Auditors to lead a team that compares organization HEDIS reporting practices with published standards. Refer to *HEDIS 2016 Volume 5: HEDIS Compliance Audit* for a full description of the audit process*.*

To allow an auditor to recommend reporting, an organization must provide an audit trail of its data collection methods and HEDIS reporting. The audit trail consists of documentation indicating that the organization has adhered to HEDIS practices that ensure accuracy. These practices include appropriate handling of information contained in administrative databases, medical records and member surveys.

Interpreting HEDIS Results

Interpreting HEDIS Results

People look at HEDIS in different ways. For example, when Medicare beneficiaries select a health plan, they are probably more interested in HEDIS measures that relate to people 65 years of age and older. Similarly, an employee benefits manager, a self-employed individual, a couple starting a family or a person with chronic asthma will look at HEDIS data from the perspective of their particular needs.

Despite the diverse requirements of HEDIS users, there are common ground rules. First, no single statistic should be interpreted in isolation from others. Because there are so many influencing factors, it can be misleading to make simple comparisons based on a single measure. Many HEDIS measures are best understood in the context of other measures. Examining data patterns can provide a complete picture. The power of the data is increased by grouping measures that consider related aspects of health care.

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| Interpreting results… |  |
| *…by domain* | We can view measures as a set within a single domain. Organizations that perform consistently in one domain may demonstrate that they have solved—or have failed to solve—some basic problems. For example, high scores on Effectiveness of Care measures imply a practitioner network that provides clinically sound care and communicates with the organization. Low scores on Access/Availability of Care measures imply that the organization might have too small a network or might unduly restrict care management programs and create inappropriate barriers to access.  A consistent pattern of performance within a domain says something important about how well an organization achieves results that define the need for measurement. That pattern is far more meaningful than isolated performance excellence or deficit. |
| *…by type of care* | We can view measures as a subset that represents an important aspect of a health care system. For example, a number of measures address how well an organization works at keeping its members healthy. We can examine immunization rates, cancer screening and counseling measures for an indication of how well the organization implements effective preventive medicine initiatives. |
| *…by population* | We can view measures through the eyes of a specific population by selecting measures across domains that emphasize the health care needs of that population. For example, a couple starting a family might be interested in a set of measures that includes maternity length of hospital stay, prenatal and postpartum care, immunization rates, CAHPS Health Plan Survey results (Child Version), appropriate antibiotic use and well-child visit rates. Viewed as a group, these measures tell the family a great deal about an organization. |
| *…by clinical condition* | A more specific set of measures might be of interest to a population of consumers who share a common clinical condition. Individuals with diabetes, asthma or heart disease have a small number of specific measures that can be grouped to give a multi-dimensional view of the care rendered to people with similar conditions. |
| Comparing organizations | Health care purchasers are likely to want to look at subsets of data that allow them to compare organizations. For example, by looking at correlations between the Effectiveness of Care and Experience of Care domains, basic information about value becomes evident.  Sophisticated purchasers may look at specific measures that concern bottom-line impact and service. For example, chicken pox immunization and effective treatment of depression may have an effect on employee absenteeism rate. |

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|  | Astute purchasers look for issues beyond premium. If employees must take time or make extra effort to obtain what they perceive as necessary health care services, their productivity is likely to be directly affected. For example, if a member must telephone the organization’s Member Services Department during working hours, and must call back several times in order to speak to a representative; job performance can suffer. |

Why Results Differ

NCQA looks for differences in how organizations deliver care to consumers, and is continuously developing strategies to reduce the effect of confounding factors. It is important to keep in mind the multiple reasons (besides true difference in quality of care or service) that could explain differing results among organizations.

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| Random chance | We live in a world of random chance; simply selecting a sample introduces chance into the measurement process. Because of the design of HEDIS measures and the systematic sampling process, the odds are against random chance causing significant differences in HEDIS results.  Random chance is more likely to cause small differences than large ones. Differences of less than 10 percent among organizations are more likely to be due to chance than are differences of 50 percent. Confidence intervals help tell us whether an observed difference is likely to be caused by chance.  Although random chance may account for a single, unusually high or low measure result, the odds are statistically greater against multiple measures being affected in the same fashion. Unusually high or low measure results for a single year are much more likely to be due to random variation than to sustained high or low results. This reinforces the need to look at measures as a group. For example, it would be unlikely that all measures concerning the health of seniors were unfavorably affected by random chance within an organization. Similarly, examining an organization’s experience with a measure over time may indicate the extent of random chance. |
| Small sample | A small sample can dramatically increase the chance that measure results will be unusually high or low. Although sample sizes are drawn according to HEDIS specifications, organizations with small enrollments may have a small number of individuals on which the measure is calculated. Notes about actual number of members or a small cell size, or information from the Health Plan Descriptive Information domain, can all indicate whether small numbers are a problem in a specific measure. |
| Different member populations | Every practitioner and organization provides care for a distinct subset of health care consumers. Some consumers are older; some are younger. Some are healthy; some have been chronically ill since birth. Some adhere closely to recommendations given by their health care professionals; some may be “noncompliant.” This is why organizations may have different results even if they deliver identical care. In addition, geography, marketing strategies to enroll employers from a specific industry, benefit design and provider network might all heavily influence the gender, ethnicity or educational status of the member population. |
| Risk adjustment | The process of using a mathematical model to correct for differing characteristics of a population is known as **risk adjustment**. Risk adjustment can look at the case mix  of a population, at an individual’s severity of illness or at the presence of coexisting illnesses. Numerous models have been developed or are under development to perform risk-adjustment tasks; many have been designed to perform risk adjustment for a specific purpose and are not readily applied to another use, such as comparing performance measurements among organizations. The degree of agreement between various models of risk adjustment can vary. | |

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|  | To control for major differences in populations, HEDIS specifies that results must be reported separately for the commercial, Medicaid and Medicare populations. The Medicare Health Outcomes Survey (HOS) is designed to incorporate a specific risk-adjustment strategy. Other HEDIS measures focus on a specific denominator, such as individuals with asthma of a specific severity who are more likely to be similar in important ways than they are likely to be different. Some HEDIS measures, such as the Plan All-Cause Readmissions and Relative Resource Use measures, use risk stratification in reporting. Rates are broken out by age and gender, with separate rates calculated for each group. For some measures, like *Controlling High Blood Pressure,* risk-adjustment strategies were evaluated and found to be unnecessary.  NCQA considers the ability to account for risk as one of the desirable attributes of a measure. Nevertheless, virtually any statistic can be affected by differences in an organization’s population if the differences are large enough. Once again, it is worthwhile to look at more than a single measure. Does a picture emerge of the population that the organization serves? Is there a risk factor in the population that displays the potential to affect HEDIS results? |
| Data issues | Each HEDIS measure has clearly defined calculation instructions, but the instructions are complex. Programmers, medical record reviewers and quality managers can—and do—make mistakes. The only protection against errors is to have HEDIS production systems audited by an independent third party.  The HEDIS Compliance Audit™ is designed to address data issues as much as it is designed to detect fraud or gaming. The audit includes a model of recommended corrective actions that the organization can take to make its HEDIS data reportable. One of the most important steps when considering whether data issues may have affected results is to check if results were subjected to a HEDIS Compliance Audit™. |
| Clinical significance | Distinct from the concept of statistical significance is clinical significance. Even if we are certain that a difference exists, does it really matter? For example, good data may be able to pick up statistically significant differences in mammography rates of only a few percentage points, though it is unlikely that such a difference is meaningful in any one year. Of course, small improvements from year to year can add up to meaningful differences in the number of women whose breast cancer is detected at earlier stages. |
| Continuous quality improvement | Perhaps the most important attribute of a high-quality, accountable organization is its ability to improve the quality of its care and service. When measures have been collected consistently from year to year, trends of improvement or deterioration can become evident. A Commendable or Excellent accreditation status provides evidence of an organization’s commitment to quality improvement, as does demonstrated improvement in HEDIS rates over time.  When looking at time trends of an organization’s performance, consider the effect of changing specifications on performance. Mixing audited and unaudited data, changing the method of data collection or mergers or acquisitions may all be confounding variables when trying to compare organization performance over time. |

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| A Checklist for the HEDIS User There are some things that all users must consider when examining HEDIS data. HEDIS users would be wise to follow an orderly approach when looking at HEDIS data. NCQA suggests the following steps:   * *Are data complete, real, audited HEDIS data?* “Look-alike,” unaudited or “cherry-picked” data can give vastly different results than HEDIS data that have gone through a HEDIS Compliance Audit. * *What measures are important to the organization?* A review of each measure’s narrative can help determine its importance. * *Can measures be grouped in way that makes sense?* Look at measures together, rather than individually, for a better picture of the organization. * *What is the organization’s population?* Looking at descriptive and enrollment information can tell you whether an organization’s members have a lot in common with you and are likely to share similar needs. * *How does the organization perform?* Look at the organization’s performance on the selected groups of measures. Does a pattern emerge? Is it favorable, unfavorable or mixed? * *Are there likely explanations for differences between organizations?* * *Are differences large enough to be significant?* * *Is there a time trend that shows performance improvement?* * *What efforts does the organization make to improve its scores through quality improvement initiatives?*   By considering each issue systematically, a HEDIS user is less likely to miss valuable information or to reach an unwarranted conclusion. |

HEDIS Reporting

HEDIS results are reported separately for each reporting unit, as defined by NCQA for accreditation   
and HEDIS. Results must be collected and reported separately for populations covered by commercial insurance, Medicaid and Medicare. Organizations may report results for HMO, point-of-service (POS) and PPO products separately or as a combined rate.

The previous calendar year is the standard measurement year for HEDIS data. For HEDIS 2016, commercial organizations that want to report publicly must submit data to NCQA on or before June 15, 2016.

State Medicaid agencies will notify a Medicaid-contracting organization of the submission date for Medicaid HEDIS 2016 data, but an organization with a Medicaid product in the accreditation process or that wants to be reported publicly must meet the submission deadline of June 15, 2016*.*

CMS requires a Medicare-contracting organization to submit data for Medicare HEDIS 2016. All Medicare-contracting organizations and organizations with a Medicare product in the accreditation process must meet the submission deadline of June 15, 2016*.*

Health plans and NCQA communicate HEDIS results in a variety of ways. NCQA’s *Quality Compass* is an interactive database that includes HEDIS and accreditation results for hundreds of health plans nationwide, as well as national and regional benchmarks. This online tool is used by customers to track plan performance over time, conduct competitor analysis, examine quality improvement and review benchmark data. NCQA publishes summary data from Quality Compass in its annual *State of Health Care Quality* *Report* and on its Web site ([www.ncqa.org](http://www.ncqa.org)).

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# HEDIS Measures

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Effectiveness of Care Measures

### *Prevention and Screening*

*ABA* Adult BMI Assessment

*WCC* Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents

*CIS* Childhood Immunization Status

*IMA* Immunizations for Adolescents

*HPV* Human Papillomavirus Vaccine for Female Adolescents

*LSC* Lead Screening in Children

*BCS* Breast Cancer Screening

*CCS* Cervical Cancer Screening

*COL* Colorectal Cancer Screening

*CHL* Chlamydia Screening in Women

*COA* Care for Older Adults

### *Respiratory Conditions*

*CWP* Appropriate Testing for Children With Pharyngitis

*SPR* Use of Spirometry Testing in the Assessment and Diagnosis of COPD

*PCE* Pharmacotherapy Management of COPD Exacerbation

*MMA* Medication Management for People With Asthma

*AMR* Asthma Medication Ratio

### *Cardiovascular Conditions*

*CBP* Controlling High Blood Pressure

*PBH* Persistence of Beta-Blocker Treatment After a Heart Attack

*SPC* Statin Therapy for Patients With Cardiovascular Disease ***(new measure)***

### *Diabetes*

*CDC* Comprehensive Diabetes Care

*SPD* Statin Therapy for Patients With Diabetes ***(new measure)***

### *Musculoskeletal Conditions*

*ART* Disease-Modifying Anti-Rheumatic Drug Therapy for Rheumatoid Arthritis

*OMW* Osteoporosis Management in Women Who Had a Fracture

### *Behavioral Health*

*AMM* Antidepressant Medication Management

*ADD* Follow-Up Care for Children Prescribed ADHD Medication

*FUH* Follow-Up After Hospitalization for Mental Illness

*SSD* Diabetes Screening for People With Schizophrenia or Bipolar Disorder Who Are Using  
 Antipsychotic Medications

*SMD* Diabetes Monitoring for People With Diabetes and Schizophrenia

*SMC* Cardiovascular Monitoring for People With Cardiovascular Disease and Schizophrenia

*SAA* Adherence to Antipsychotic Medications for Individuals With Schizophrenia

*APM* Metabolic Monitoring for Children and Adolescents on Antipsychotics

### *Medication Management*

*MPM* Annual Monitoring for Patients on Persistent Medications

*MRP* Medication Reconciliation Post-Discharge

### *Overuse/Appropriateness*

*NCS* Non-Recommended Cervical Cancer Screening in Adolescent Females

*PSA* Non-Recommended PSA-Based Screening in Older Men

*URI* Appropriate Treatment for Children With Upper Respiratory Infection

*AAB* Avoidance of Antibiotic Treatment in Adults With Acute Bronchitis

*LBP* Use of Imaging Studies for Low Back Pain

*APC* Use of Multiple Concurrent Antipsychotics in Children and Adolescents

*DDE* Potentially Harmful Drug-Disease Interactions in the Elderly

*DAE* Use of High-Risk Medications in the Elderly

### *Measures Collected Through the Medicare Health Outcomes Survey*

*HOS* The Medicare Health Outcomes Survey

*FRM* Fall Risk Management

*MUI* Management of Urinary Incontinence in Older Adults

*OTO* Osteoporosis Testing in Older Women

*PAO* Physical Activity in Older Adults

### *Measures Collected Through the CAHPS Health Plan Survey*

*ASP* Aspirin Use and Discussion

*FVA* Flu Vaccinations for Adults Ages 18–64

*FVO* Flu Vaccinations for Adults Ages 65 and Older

*MSC* Medical Assistance With Smoking and Tobacco Use Cessation

*PNU* Pneumococcal Vaccination Status for Older Adults

Access/Availability of Care Measures

*AAP* Adults’ Access to Preventive/Ambulatory Health Services

*CAP* Children and Adolescents’ Access to Primary Care Practitioners

*ADV* Annual Dental Visit

*IET* Initiation and Engagement of Alcohol and Other Drug Dependence Treatment

*PPC* Prenatal and Postpartum Care

*CAT* Call Answer Timeliness

*APP* Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics

Experience of Care Measures

*CPA* CAHPS Health Plan Survey 5.0H, Adult Version

*CPC* CAHPS Health Plan Survey 5.0H, Child Version

*CCC* Children With Chronic Conditions

Utilization and Risk Adjusted Utilization Measures

***Utilization Measures***

*FPC* Frequency of Ongoing Prenatal Care

*W15* Well-Child Visits in the First 15 Months of Life

*W34* Well-Child Visits in the Third, Fourth, Fifth and Sixth Years of Life

*AWC* Adolescent Well-Care Visits

*FSP* Frequency of Selected Procedures

*AMB* Ambulatory Care

*IPU* Inpatient Utilization—General Hospital/Acute Care

*IAD* Identification of Alcohol and Other Drug Services

*MPT* Mental Health Utilization

*ABX* Antibiotic Utilization

***Risk Adjusted Utilization Measures***

*PCR* Plan All-Cause Readmissions

*IHU* Inpatient Hospital Utilization ***(new measure)***

*EDU* Emergency Department Utilization ***(new measure)***

*HPC* Hospitalization for Potentially Preventable Complications ***(new measure)***

Relative Resource Use Measures

*RDI* Relative Resource Use for People With Diabetes

*RCA* Relative Resource Use for People With Cardiovascular Conditions

*RHY* Relative Resource Use for People With Hypertension

*RCO* Relative Resource Use for People With COPD

*RAS* Relative Resource Use for People With Asthma

Health Plan Descriptive Information Measures

*BCR* Board Certification

*ENP* Enrollment by Product Line

*EBS* Enrollment by State

*LDM* Language Diversity of Membership

*RDM* Race/Ethnicity Diversity of Membership

*WOP* Weeks of Pregnancy at Time of Enrollment

*TLM* Total Membership

Measures Collected Using Electronic Clinical Data Systems

*DMS* Utilization of the PHQ-9 to Monitor Depression Systems for Adolescents and Adults  
 ***(new measure)***

Effectiveness of Care Measures

The Effectiveness of Care domain contains measures that use a variety of perspectives to look at the clinical quality of care an organization provides. One group of measures examines how well the organization delivers preventive services and keeps its members healthy. One group is concerned with whether the most up-to-date treatments are offered to treat acute episodes of illness and help members get better. One group looks at care delivered to people with chronic diseases to see how well the organization’s health care delivery system helps members cope with illness. Another looks at whether members can get appropriate tests.

Adult BMI Assessment (ABA)

This measure assesses the percentage of members 18–74 years of age who had an outpatient office visit and had their body mass index (BMI) documented during the measurement year or the year before the measurement year.

Obesity is the second leading cause of preventable death in the United States. It is a complex, multifaceted, chronic disease that is affected by environmental, genetic, physiological, metabolic, behavioral and psychological components. Approximately 127 million American adults are overweight, 60 million are obese and 9 million are severely obese.[[1]](#footnote-2) Obesity affects every ethnicity, socioeconomic class and geographic region in the U.S. This disease has been growing by epidemic proportions, with the prevalence increasing by approximately 50 percent per decade. Obesity’s impact on individual overall health has drastically increased, as well. It increases both morbidity and mortality rates and the risk of conditions such as diabetes, CHD and cancer. It has a substantial negative effect on longevity, reducing the length of life of people who are severely obese by an estimated 5–20 years.[[2]](#footnote-3) Overweight and obesity are also contributing causes to more than  
50 percent of all-cause mortality among American adults aged 20–74, which results in a significant economic impact—approximately $99.2 billion is spent annually on obesity-related medical care and disability in   
the U.S.[[3]](#footnote-4)

It is estimated that the aggregate cost of obesity ranges from 5 percent–7 percent of the total of annual medical expenditures in the U.S. ($75 billion per year).[[4]](#footnote-5),[[5]](#footnote-6) In 1994 the estimated cost of obesity to U.S. business was $12.7 billion ($10.1 billion due to moderate or severe obesity; $2.6 billion due to mild obesity). Obesity-attributable business expenditures include paid sick leave, life insurance and health insurance, totaling $2.4 billion, $1.8 billion and $800 million, respectively.[[6]](#footnote-7) Not only is the prevalence of obesity increasing, but the relative per capita spending among obese Americans is also increasing. That increase accounted for 27 percent of the growth in real per capita spending between 1987 and 2001. Within that period, the prevalence of obesity increased by 10.3 percentage points, to almost 24 percent of the adult population.[[7]](#footnote-8) The rise in obesity is directly correlated to drastic increases in three major conditions: diabetes, hyperlipidemia and heart disease. The increase in per capita spending is caused by the increase in obesity prevalence and the increase in spending on the obese, relative to those of normal weight.6

Guidelines from various organizations, including the Institute for Clinical Systems Improvement (ICSI); the U.S. Preventive Services Task Force (USPSTF); the National Heart, Lung, and Blood Institute (NHLBI); and the Michigan Quality Improvement Consortium, indicate that the first step in weight management is assessment of height and weight in order to calculate a patient’s BMI.

BMI is considered the most efficient and effective method for assessing excess body fat; it is a starting point for assessing the relationship between weight and height; and it is the most conducive method of assessment in the primary care setting.[[8]](#footnote-9)

Weight Assessment and Counseling for Nutrition and Physical Activity for Children/ Adolescents (WCC)

This measure assesses the percentage of members 3–17 years of age who had an outpatient visit with a primary care practitioner/OB-GYN and who had evidence of BMI percentile documentation, counseling for nutrition and counseling for physical activity during the measurement year.

One of the most important developments in pediatrics in thepast two decades has been the emergence of a new chronic disease:obesity in childhood and adolescence. The rapidly increasing prevalence of obesity among childrenis one of the most challenging dilemmas currently facing pediatricians. In addition to the growing prevalence of obesity in children and adolescents, overweight children at risk of becoming obese are also of great concern. The Centers for Disease Control and Prevention (CDC) states that overweight children and adolescents are more likely to become obese as adults. For example, one study found that approximately 80 percent of children who were overweight at 10–15 years of age were obese adults at age 25.[[9]](#footnote-10) Another study found that 25 percent of obese adults were overweight as children; it also found that if overweight begins before 8 years of age, obesity in adulthood is likely to be more severe.[[10]](#footnote-11)

BMI is a useful screening tool for assessing and tracking the degree of obesity among adolescents. Screening for overweight or obesity begins in the provider’s office with the calculation of BMI. Providers can estimate a child’s BMI percentile for age and gender by plotting the calculated value of BMI on growth curves published and distributed by the CDC.[[11]](#footnote-12) Medical evaluations should include investigation into possible endogenous causes of obesity that may be amenable to treatment, and identification of any obesity-related health complications.[[12]](#footnote-13)

Because BMI norms for youth vary with age and gender, BMI percentiles rather than absolute BMI must be determined. The cut-off values to define the heaviest children are the 85th and 95th percentiles. In adolescence, as maturity is approached, the 85th percentile roughly approximates a BMI of 25, which is the cut-off for overweight in adults. The 95th percentile roughly approximates a BMI of 30 in the adolescent near

maturity, which is the cut-off for obesity in adults. The cut-off recommended by an expert committee to define overweight (BMI >95th percentile) is a conservative choice designed to minimize the risk of misclassifying non-obese children.[[13]](#footnote-14)

About two-thirds of young people in grades 9–12 do not engage in recommended levels of physical activity. Daily participation in high school physical education classes dropped from 42 percent in 1991 to 33 percent in 2005.[[14]](#footnote-15) In the past 30 years, the prevalence of overweight and obesity has increased sharply for children. Among young people, the prevalence of overweight increased from 5.0 percent to 13.9 percent for those aged 2–5 years; from 6.5 percent to 18.8 percent for those aged 6–11 years; and from 5.0 percent to 17.4 percent for those aged 12–19 years. In 2000, the estimated total cost of obesity in the U.S. was about $117 billion. Promoting regular physical activity and healthy eating, as well as creating an environment that supports these behaviors, is essential to addressing the problem.17

Childhood Immunization Status (CIS)

This measure assesses the percentage of children who became 2 years old during the measurement year and who had received these vaccinations on or before 2 years of age: four diphtheria-tetanus-acellular pertussis (DTAP); three polio (IPV); one measles, mumps, and rubella (MMR); three H influenza type B (HiB); three hepatitis B (HepB); one chicken pox (VZV); four doses of pneumococcal conjugate (PCV); one hepatitis A (HepA); two or three rotavirus (RV); and two influenza (flu) vaccines. This measure follows the CDC Advisory Committee on Immunization Practices (ACIP) guidelines for immunizations.[[15]](#footnote-16)

A basic method for prevention of illness is immunization. Childhood immunizations help prevent serious illnesses such as polio, tetanus and hepatitis. Vaccines are a proven way to help a child stay healthy and avoid the potentially harmful effects of childhood diseases like mumps and measles. Even preventing “mild” diseases saves hundreds of lost school days and work days, and millions of dollars.

Many organizations improve immunization rates by developing electronic systems that track immunization status and notify physicians or parents when an immunization is due. Other organizations have found that weekend or evening hours, aggressive efforts to educate parents and collective efforts to improve rates at the community level have increased immunization performance.

Immunizations for Adolescents (IMA)

This measure assesses the percentage of adolescents who became 13 years old during the measurement year and who had received the following vaccinations on or before their 13th birthday: one dose of meningococcal vaccine, and one tetanus, diphtheria toxoids, acellular pertussis vaccine (Tdap) or one tetanus, diphtheria toxoids vaccine (Td). This measure follows the CDC/ACIP guidelines for immunizations.18

Adolescent immunization rates have historically lagged behind early childhood immunization rates in   
the U.S. In 2000, the AAP reported that 3 million adolescents failed to receive at least one recommended vaccination.15 Low immunization rates among adolescents have the potential to cause outbreaks of preventable diseases and to establish reservoirs of disease in adolescents that can affect other populations including infants, the elderly and individuals with chronic conditions. Immunization recommendations for adolescents have changed in recent years. In addition to assessing for immunizations that may have been missed, there are new vaccines targeted specifically to adolescents.

Immunization rates can be improved through the development and use of electronic systems that track immunization status and notify physicians or parents when an immunization is due. Additionally, expanded hours, parent education and community outreach have also helped to increase immunization performance.

Human Papillomavirus Vaccine for Female Adolescents (HPV)

This measure assesses the percentage of female adolescents who became 13 years old during the measurement year and who received the three-dose human papillomavirus (HPV) vaccine series, with different dates of administration, by their 13th birthday. Organizations that use the Hybrid Method to report the *Immunizations for Adolescents (IMA)* measure may use the female members from the IMA sample as a start for this measure and may draw enough additional female members from the remaining HPV eligible population until the full sample size and appropriate oversample are reached. Refer to the *Guidelines for Calculations and Sampling* section in the *Volume 2 Technical Specifications* for additional information.

Genital HPV is the most common sexually transmitted virus in the United States.[[16]](#footnote-17) According to the CDC, at least 50 percent of all sexually active people will have genital HPV at some point during their lifetime.[[17]](#footnote-18) Approximately 20 million Americans are infected with genital HPV, which is responsible for nearly 70 percent of cases of cervical cancer and 90 percent of cases of anogenital warts. This is a growing global concern, especially considering that the number of morbidities and deaths associated with HPV infections could be prevented through vaccination.21

Administering widespread vaccination for HPV could reduce cervical cancer deaths around the world by as much as two-thirds if all young, sexually active women received the vaccine and if protection turns out to be long-term. The HPV vaccine could reduce the need for medical care, biopsies and invasive procedures associated with follow-up from abnormal Pap tests, therefore reducing health care costs from abnormal Pap tests and follow-up procedures.[[18]](#footnote-19)

Lead Screening in Children (LSC)

This measure assesses the percentage of children 2 years of age who received one or more capillary or venous blood tests for lead poisoning on or before their second birthday.

The National Health and Nutrition Examination Survey, an ongoing series of cross-sectional surveys on the health and nutrition of the U.S. population, reports on the blood lead levels of children and adults. Children   
1–5 years of age have the highest prevalence of elevated blood lead levels of any age group in the U.S., although the prevalence has declined over the past several decades. Even with these decreases, an estimated 310,000 children in this country remain at risk for exposure to harmful levels of lead.[[19]](#footnote-20) Blood lead levels of African American children and among low-income families remain significantly higher than those of other races and those of other income status.

Lead poisoning in childhood primarily affects the central nervous system, the kidneys and the blood-forming organs. Adverse effects in young children have been noted at levels as low as 10 µg/dL and include impairments in cognitive function and initiation of various behavioral disorders.[[20]](#footnote-21) Recent studies have noted effects of lead on cognitive ability at levels even below the level of concern of 10 µg/dL.

Elevated blood lead levels (BLL) are not just important from a health standpoint; they also have significant financial impact. One study estimated the economic benefit of decreased lead exposure in a 3.8 million person cohort of children aged 2 years in 2000. Based on the reduction in lead exposure since the 1970s, the estimated increase in earnings for the cohort of children would be between $110 billion and $319 billion over their lifetimes.[[21]](#footnote-22) Another study estimated that the avoidable medical costs per child with an elevated blood lead level to be $1,300. In addition, an elevated BLL was associated with avoidable special education costs of $3,331 per child and a 1 µg/dL increase in BLL resulted in a decreased lifetime earnings of $1,147.[[22]](#footnote-23)

Breast Cancer Screening (BCS)

This measure looks at whether female members are being screened for breast cancer. It assesses the percentage of women between 50 and 74 years of age who had a mammogram to screen for breast cancer.

Breast cancer is the second most common type of cancer among American women, with approximately 178,000 new cases reported each year.[[23]](#footnote-24) It is most common in women over 50. Women whose breast cancer is detected early have more treatment choices and better chances for survival. Mammography screening has been shown to reduce mortality by 20 percent–30 percent among women 40 and older. A mammogram can reveal tumors too small to be felt by hand; it can also show other changes in the breast that may suggest cancer.

The USPSTF, the American Academy of Family Physicians and the American College of Preventive Medicine recommend mammograms as the most effective method for detecting breast cancer when it is most treatable.[[24]](#footnote-25),[[25]](#footnote-26),[[26]](#footnote-27) When high-quality equipment is used and well-trained radiologists read the x-rays, 85 percent–90 percent of cancers are detectable.

Some women fear mammograms; others do not understand why they are important; still others may simply need a reminder when they are due for a mammogram. Organizations should work to educate women about the importance of regular mammograms and make mammograms more convenient. Some organizations regularly provide their practitioners with lists of members who have not received recommended mammograms and allow practitioners to deliver targeted reminders during office visits. Organizations can also consider sending mirrors or shower cards to female members that instruct them on breast self-examination techniques and mammography guidelines.

Mammography rates can be improved by increasing patient awareness, but provider awareness is also important. Trained x-ray technicians can help reduce the discomfort associated with mammograms. Expanded hours, better geographic distribution of mammography sites, mobile mammography and streamlining or eliminating the referral process have all been recommended to remove obstacles.

Cervical Cancer Screening (CCS)

The percentage of women 21–64 years of age who were appropriately screened for cervical cancer using either of the following criteria:

* Women age 21–64 who had cervical cytology performed every 3 years.
* Women age 30–64 who had cervical cytology/human papillomavirus (HPV) co-testing performed every 5 years.

Cervical cancer can be detected in its early stages by regular screening using a Pap (cervical cytology) test. A number of organizations, including the American College of Obstetricians and Gynecologists (ACOG), the American Medical Association (AMA) and the American Cancer Society (ACS), recommend Pap testing every one to three years for all women who have been sexually active or who are over 21.[[27]](#footnote-28),[[28]](#footnote-29),[[29]](#footnote-30)

Efforts to improve care tend to build on past efforts. For example, after moderately successful efforts to improve cervical cancer screening rates by educating patients, reducing barriers to care and revising practice guidelines, a subsequent effort to develop a reminder system might prove especially effective, but only because of the groundwork laid by previous efforts. The same reminder system established prior to the other efforts might not be as effective.

Organizations need to educate women about the importance of Pap tests, provide information and counseling on the procedure to reduce anxiety and fear and make the tests convenient and accessible. Many organizations encourage women to have a Pap test during their gynecologic visit by providing them with notification cards that are filled out during the visit and mailed back to them with the test results. Other   
organizations send reminder “thinking of you” cards encouraging women to receive recommended Pap tests. Allowing an annual well-women visit without a referral also removes one potential barrier to cervical cancer screening, and may help boost screening rates.

Colorectal Cancer Screening (COL)

This measure is based on several organizations’ clinical guidelines—USPSTF,[[30]](#footnote-31) ACS[[31]](#footnote-32) and AHRQ/American Gastroenterological Association.[[32]](#footnote-33) It assesses whether adults 50–75 years of age have had appropriate screening for colorectal cancer (CRC). “Appropriate screening” is defined by meeting any one of the screening methods below:

* Fecal occult blood test (FOBT) during the measurement year.
* Flexible sigmoidoscopy during the measurement year or the four years before the measurement year.
* Colonoscopy during the measurement year or the nine years before the measurement year.

CRC is the second leading cause of cancer-related deaths in the U.S.33 It places significant economic burden on society: treatment costs over $6.5 billion per year. Unlike other screening tests that only detect disease, some methods of CRC screening can detect premalignant polyps and guide their removal, which in theory can prevent the cancer from developing.

Health plans are particularly well positioned to measure and influence the use of preventive services like CRC screening.[[33]](#footnote-34),[[34]](#footnote-35) Some have made special efforts to improve screening rates among enrolled populations and have demonstrated that CRC detected during screening is associated with being diagnosed with early-stage disease.[[35]](#footnote-36)

Compelling evidence gathered during the past decade shows that systematic screening can reduce mortality from CRC. Colorectal screening may also lower mortality by allowing detection of cancer at earlier stages, when treatment is more effective.[[36]](#footnote-37)

Chlamydia Screening in Women (CHL)

This measure assesses the percentage of sexually active women 16–24 years of age who were screened for chlamydia. Screening is essential because the majority of women who have the condition do not experience symptoms. The main objective of chlamydia screening is to prevent pelvic inflammatory disease (PID), infertility and ectopic pregnancy, all of which have very high rates of occurrence among women with untreated chlamydia infection. The specifications for this measure are consistent with current clinical guidelines, such as those of the USPSTF.[[37]](#footnote-38)

Chlamydia trachomatis is the most common sexually transmitted disease (STD) in the U.S. The CDC estimates that approximately three million people are infected with chlamydia each year. Risk factors associated with becoming infected with chlamydia are the same as risks for contracting other STDs (e.g., multiple sex partners). Chlamydia is more prevalent among adolescent (15–19) and young adult (20–24) women.

Organizations continue to register weak performance in chlamydia screening, with commercial rates remaining below 35 percent. Even the best-performing commercial plans screen only a third of eligible women—a significant missed opportunity for early diagnosis and treatment.

Both practitioner and patient may be unaware of the extent to which annual screenings prevent the spread of this disease. The organization should educate practitioners about the value and cost effectiveness of chlamydia screening, and provide incentives to encourage screening and clinical practice guidelines and other decision support tools that help practitioners identify members at risk.

Care for Older Adults (COA)

This measure assesses the percentage of adults 66 years and older who had each of the following during the measurement year:

|  |  |
| --- | --- |
| * Advance care planning. * Medication review. | * Functional status assessment. * Pain assessment. |

According to U.S. Census statistics, there were almost 38 million people over the age of 65 in 2009. The population 85 years of age and older was projected to increase to 5.7 million by 2010—a 36 percent increase from the total in 2000.[[38]](#footnote-39) As the elderly population ages, physical function decreases, pain increases and cognitive ability can decrease. Older adults can become increasingly depressed or have medication regimens of increased complexity. As people age, consideration should be given to their choices for end-of-life care and an advance care plan should be executed. Assessing functional status and pain, medication review and advance care planning can ensure that older adults receive comprehensive care that prevents further health status decline and considers their wishes.

|  |  |
| --- | --- |
| Functional status assessment | Screening is effective in identifying functional decline.[[39]](#footnote-40) Physical ability is an important indicator for health and well-being in old age, as it decreases with age. Physical functional decline is often an initial symptom of illness in older people, and early detection of functional decline allows earlier treatment or intervention.[[40]](#footnote-41) |
| Pain assessment | Pain is also a frequent symptom of illness and disease in older ambulatory and hospitalized patients.[[41]](#footnote-42) Elderly individuals are more likely to have arthritis, bone  and joint disorders, cancer and other chronic disorders associated with pain.[[42]](#footnote-43) Additionally, the consequences of under-treating pain can have a negative effect on the health and quality of life in the elderly, with the onset of depression, anxiety, reduced socialization, sleep disturbance and impaired mobility. The American Geriatrics Society (AGS) Panel on Persistent Pain in Older Adults (2002) suggests that a health care professional should assess a patient for evidence of persistent pain, on initial presentation or admission to any health care service.45 |
| Advance care planning | As people age, consideration should be given to their treatment wishes if they lose the ability to manage their care. A large discrepancy exists between the wishes of dying patients and their actual end-of-life care. Advance directives are widely recommended as a strategy to improve compliance with patient wishes at the end of life and thereby ensure appropriate use of health care resources. There is expert consensus on the need for advance directives, as well as a regulatory mandate, but only 15 percent–25 percent of adults complete them, usually after a serious illness or hospitalization.[[43]](#footnote-44),[[44]](#footnote-45),[[45]](#footnote-46) It has been found that most adults would prefer to discuss advance directives while they are well, preferably with a doctor who has known them over time. Most say they look to their doctors to initiate the discussion. |
| Medication review | The vast majority of older adults take medications to address at least three or more chronic conditions. Many have multiple prescribing physicians and use more than one pharmacy, necessitating regular review of medications. The Task Force on Medications Partnership recommends that all community-dwelling older adults have a medication review performed at least yearly.[[46]](#footnote-47)  A medication list should include prescriptions and over-the-counter (OTC) medications (including herbals, supplements), dose, frequency and reason for taking the medication. Poor medication management can lead to adverse drug events, overdoses and underutilization of drugs, all of which can result in increased hospitalizations.[[47]](#footnote-48) |

Appropriate Testing for Children With Pharyngitis (CWP)

This measure reports the percentage of children between 2 and 18 years of age who were diagnosed with pharyngitis, prescribed an antibiotic at an outpatient visit and received a group A strep test. A higher rate indicates better performance.

Pharyngitis is the only condition among upper respiratory infections (URI) where diagnosis is validated easily and objectively through administrative and laboratory data, and it can serve as an important indicator of appropriate antibiotic use among all respiratory tract infections. Overuse of antibiotics has been directly linked to the prevalence of antibiotic resistance; promoting judicious use of antibiotics is important to reducing levels of antibiotic resistance.[[48]](#footnote-49) Pediatric clinical practice guidelines[[49]](#footnote-50) recommend that only children diagnosed with group A streptococcus (strep) pharyngitis, based on appropriate lab tests, be treated with antibiotics. A strep test (rapid assay or throat culture) is the definitive test of group A strep pharyngitis. Excess use of antibiotics is highly prevalent for pharyngitis: about 35 percent of the total 9 million antibiotics prescribed for pharyngitis in 1998 were estimated to be in excess.[[50]](#footnote-51)

Organizations have shown effective ways of targeting physicians and patients to reduce inappropriate antibiotic prescribing at past HEDIS conferences. Organizations can also work with national and state public health agencies—such as the CDC—to educate and raise awareness with patients and physicians on inappropriate antibiotic use. In 1995, the CDC initiated a national health campaign in 1995 to reduce antibiotic resistance by promoting judicious use of antibiotics for infectious respiratory diseases through media outreach, guideline dissemination to physicians, cold prescription pads and patient education materials.

Use of Spirometry Testing in the Assessment and Diagnosis of COPD (SPR)

This measure looks at the percentage of members 40 years of age and older during the measurement year with a new diagnosis of chronic obstructive pulmonary disease (COPD) who received spirometry testing to confirm the diagnosis within a reasonable period of time.

COPD is a major cause of chronic morbidity and mortality throughout the world and in the U.S. COPD defines a group of diseases characterized by airflow obstruction, and includes chronic bronchitis and emphysema.[[51]](#footnote-52) Symptoms of COPD range from chronic cough and sputum production to severe, disabling shortness of breath, leading to significant impairment of quality of life. COPD afflicts nearly 16 million adults in the U.S. COPD is the fourth leading cause of death in the U.S., and is projected to move to third place by 2020.[[52]](#footnote-53),[[53]](#footnote-54)

Spirometry is a simple test that measures the amount of air a person can breathe out and the amount of  
time it takes to do so.[[54]](#footnote-55) Both symptomatic and asymptomatic patients suspected of COPD should have spirometry performed to establish airway limitation and severity.[[55]](#footnote-56) Though several scientific guidelines and specialty societies[[56]](#footnote-57),[[57]](#footnote-58),[[58]](#footnote-59),[[59]](#footnote-60) recommend use of spirometry testing to confirm COPD diagnosis and determine severity of airflow limitation, spirometry tests are largely underutilized.

Because of the significant number of Medicare recipients enrolled in managed care plans, these organizations will garner long-term benefits from accurate disease diagnosis through use of diagnostic testing (such as spirometry). Proper diagnosis is needed to ensure that members receive appropriate short- and long-term treatment. Organizations can educate their providers about spirometry testing and provide access to spirometers to facilitate comprehensive disease assessment and diagnosis.

Pharmacotherapy Management of COPD Exacerbation (PCE)

This measure assesses the percentage of COPD exacerbations for members 40 years of age and older who had an acute inpatient discharge or emergency department (ED) visit and who received appropriate medications. Two rates are reported:

* Dispensed a systemic corticosteroid (or there is evidence of an active prescription) within 14 days of the event.
* Dispensed a bronchodilator (or there is evidence of an active prescription) within 30 days of the event.

While other major causes of death have been decreasing, COPD mortality has risen, making it the fourth leading cause of death in the U.S.[[60]](#footnote-61) COPD is characterized by airflow limitation that is not fully reversible, is usually progressive and is associated with an abnormal inflammatory response of the lung to noxious particles or gases.[[61]](#footnote-62) COPD defines a group of diseases that includes chronic bronchitis and emphysema, and patients are prone to frequent exacerbations of symptoms that range from chronic cough and sputum production to severe disabling shortness of breath, leading to significant impairment of quality of life.[[62]](#footnote-63),[[63]](#footnote-64)

In addition to being a major cause of chronic disability, COPD is a driver of significant health care service use. The disease results in both high direct and high indirect costs, and exacerbations of COPD account for the greatest burden on the health care system,63 though studies have shown that proper management of exacerbations may have the greatest potential to reduce the clinical, social and economic impact of the disease. Pharmacotherapy is an essential component of proper management.

Medication Management for People With Asthma (MMA)

This measure assesses the percentage of members 5–85 years of age during the measurement year who were identified as having persistent asthma and who were dispensed appropriate medications that they remained on during the treatment period. Two rates are reported:

* The percentage of members who remained on an asthma controller medication for at least 50 percent of the treatment period.
* The percentage of members who remained on an asthma controller medication for at least 75 percent of the treatment period.

Appropriate medication adherence could ameliorate the severity of many asthma-related symptoms.[[64]](#footnote-65) According to the Asthma Regional Council, two-thirds of adults and children who display asthma symptoms are considered “not well controlled” or “very poorly controlled” as defined by clinical practice guidelines.[[65]](#footnote-66) Pharmacologic therapy is used to prevent and control asthma symptoms, improve quality of life, reduce the frequency and severity of asthma exacerbations, and reverse airflow obstruction.[[66]](#footnote-67)

**Note:** For Medicaid, only members 5–64 years of age are reported. For Medicare, only members 18–85 years of age are reported.

Asthma Medication Ratio (AMR)

This measure assesses the percentage of members 5–85 years of age who were identified as having persistent asthma and had a ratio of controller medications to total asthma medications of ≥0.50 during the measurement year.

Medications for asthma are usually categorized into long-term controller medications used to achieve and maintain control of persistent asthma and quick-reliever medications used to treat acute symptoms and exacerbations.[[67]](#footnote-68) Appropriate ratios for these medications could potentially prevent a significant proportion of asthma-related costs (hospitalizations, emergency room visits, missed work and school days).67

**Note:** For Medicaid, only members 5–64 years of age are reported. For Medicare, only members 18–85 years of age are reported.

Controlling High Blood Pressure (CBP)

This intermediate-outcome measure looks at whether blood pressure was controlled among adults 18–85 years of age who were diagnosed with hypertension. Control is demonstrated by the following criteria:

* Members 18–59 years of age whose BP was <140/90 mm Hg.
* Members 60–85 years of age with a diagnosis of diabetes whose BP was <140/90 mm Hg.
* Members 60–85 years of age without a diagnosis of diabetes whose BP was <150/90 mm Hg.

The specifications for this measure are consistent with current clinical guidelines, such as those of the USPSTF and the Joint National Committee.[[68]](#footnote-69) Approximately 67 million Americans have high blood pressure.[[69]](#footnote-70) Treatment to improve hypertension includes dietary and lifestyle changes, as well as appropriate use of medications. The organization can use educational programs and newsletters to increase practitioner and patient awareness of different treatment options, and must work with patients to develop appropriate medical regimens and feasible lifestyle-modification plans to reduce the future impact of this common condition.

Persistence of Beta-Blocker Treatment After a Heart Attack (PBH)

This measure examines the use of beta-blockers as a way to prevent a second heart attack.

According to results of large-scale clinical trials, beta-blockers consistently reduce subsequent coronary events, cardiovascular mortality and all-cause mortality by 20 percent–30 percent after an acute myocardial infarction (AMI) *when taken indefinitely*.[[70]](#footnote-71),[[71]](#footnote-72) Literature suggests that adherence to beta-blockers declines significantly within the first year.[[72]](#footnote-73),[[73]](#footnote-74),[[74]](#footnote-75)

About half of AMI survivors who are eligible for beta-blocker therapy do not receive it. Test data reveal significant underutilization of beta-blockers 180 days post-MI. There is evidence suggesting that around 2,900–5,000 lives are lost in the United States in the first year following AMI, from under-prescribing of beta-blockers.[[75]](#footnote-76)

In 2004, the ACC/AHA updated the *Guidelines for the Management of Patients With Acute Myocardial Infarction* and indicated that long-term beta-blocker therapy should begin as early as possible after the event for all patients without a contraindication to beta-blockers and continue indefinitely.[[76]](#footnote-77)

The key to improving rate of use of beta-blockers is for organizations to educate providers about the value of these agents, to offer incentives to encourage their appropriate and timely use and to provide physicians with guidelines and other decision support tools that will help them prescribe drugs appropriately. In addition, organizations can ensure that beta-blocker medications are available on their prescription drug formularies.

Statin Therapy for Patients With Cardiovascular Disease (SPC)

This measure assesses the percentage of males 21–75 years of age and females 40–75 years of age during the measurement year, who were identified as having clinical atherosclerotic cardiovascular disease (ASCVD) who met the following criteria. The following rates are reported:

1. *Received Statin Therapy.* Members who were dispensed at least one high or moderate-intensity statin medication during the measurement year.
2. *Statin Adherence 80%.* Members who remained on a high or moderate-intensity statin medication for at least 80% of the treatment period.

Cardiovascular disease is the leading cause of death in the United States. More than 85 million American adults have one or more types of cardiovascular disease.[[77]](#footnote-78) It is estimated that by 2030, more than 43 percent of Americans will have a form of cardiovascular disease.[[78]](#footnote-79) In 2011, the total cost of cardiovascular disease and stroke in the United States was estimated to be $320 billion. This total includes direct costs such as the cost of physicians and other health professionals, hospital services, prescribed medications and home health care, as well as indirect costs due to loss of productivity from premature mortality.

Interventions to address cardiovascular disease are increasing: since 2000, the number of inpatient cardiovascular operations and procedures increased by 28 percent, from 5,939,000 to 7,588,000.80 By 2030, direct medical costs for cardiovascular disease are projected to increase to nearly $918 billion.81

Statins (HMG CoA reductase inhibitors) are a class of drugs that lower blood cholesterol. Statins work in the liver by preventing the formation of cholesterol, thus lowering the amount of cholesterol in the blood.[[79]](#footnote-80) Statins are most effective in lowering low-density lipoprotein cholesterol (LDL-C). The amount of cholesterol-lowering effect is based on statin intensity, which is classified as either high, moderate or low.

Statins are among the most commonly prescribed medications in the United States, accumulating $17 billion in sales in 2012.[[80]](#footnote-81) According to recent blood cholesterol treatment guidelines from the American College of Cardiology and American Heart Association (ACC/AHA), statins of moderate or high intensity are recommended for adults with established clinical ASCVD. Many studies support the use of statins to reduce ASCVD events in primary and secondary prevention.

One meta-analysis of data from 170,000 patients in 26 randomized controlled trials found that intensive statin therapy reduces major vascular events by 15 percent.[[81]](#footnote-82) (The study also found a 13 percent reduction in coronary death or nonfatal myocardial infarction, a 19 percent reduction in coronary revascularization and a 16 percent reduction in ischemic stroke.84

Another systematic review and meta-analysis estimates that long term statin therapy reduces the risk for ASCVD events by 25 percent–45 percent.[[82]](#footnote-83)

Comprehensive Diabetes Care (CDC)

This composite measure, with 7 different rates, looks at how well an organization cares for the common and serious chronic disease of diabetes. It uses a single sample of diabetic members 18–75 years of age to evaluate organization performance on aspects of diabetes care. As a set, the rates provide a comprehensive picture of the clinical management of patients with diabetes. This measure looks at the percentage of individuals with diabetes who meet the following criteria:

Had a hemoglobin (HbA1c) blood test.

Have poorly controlled diabetes (HbA1c >9.0%).

Have controlled diabetes (HbA1c <8.0%).

Have controlled diabetes (HbA1c <7.0% for a selected population)\*.

Had a retinal or dilated eye examination.

* Have been screened or monitored for kidney disease.

Have blood pressure <140/90 mm Hg.

Diabetes is one of the most costly and highly prevalent chronic diseases in the U.S. Approximately 26.5 million Americans have diabetes, and seven million of these cases are undiagnosed. Complications from the disease cost the country nearly $245 billion annually. In addition, diabetes is the seventh leading cause of death in the United States.[[83]](#footnote-84) Many complications, such as amputation, blindness and kidney failure, can be prevented if detected and addressed in the early stages.

Many organizations have developed comprehensive diabetes management programs that help members with diabetes maintain control over their blood sugar and minimize the risk of complications. These programs can benefit quality of life and be cost-effective in the end. The challenge faced by organizations is to bring more members with diabetes into these programs and help them incorporate healthy behaviors and monitoring practices into their lifestyle. Organizations can learn from higher-performing organizations and develop integrated approaches to treating members with diabetes.

\*This criterion refers to a subset of the diabetic population. Because of concerns about patient safety related to aggressive HbA1c management, NCQA refined the indicator for HbA1c <7.0% for a Selected Population by adding exclusions for members within a specific age cohort and with certain comorbid conditions. Therefore, the denominator for the HbA1c <7.0% for a Selected Population indicator is different from the other indicators.

Statin Therapy for Patients With Diabetes (SPD)

This measure assesses the percentage of members 40–75 years of age with diabetes who do not have clinical atherosclerotic cardiovascular disease (ASCVD) who met the following criteria. Two rates are reported:

1. *Received Statin Therapy.* Members who were dispensed at least one statin medication of any intensity during the measurement year.

2. *Statin Adherence 80%.* Members who remained on a statin medication of any intensity for at least 80% of the treatment period.

Diabetes is a complex group of diseases marked by high blood sugar due to the body’s inability to make or use insulin. Diabetes can lead to serious complications.[[84]](#footnote-85) Twenty nine million (9.3 percent) of Americans had diabetes in 2012 and 1.7 million adults were newly diagnosed with diabetes.[[85]](#footnote-86) Patients with diabetes have elevated cardiovascular risk, thought to be due in part to elevations in unhealthy cholesterol levels. Having unhealthy cholesterol levels places patients at a significant risk for developing ASCVD.[[86]](#footnote-87)

Primary prevention for cardiovascular disease is an important aspect of diabetes management. The risk of an adult with diabetes developing cardiovascular disease is two to four times higher than that of an adult without diabetes.[[87]](#footnote-88) In addition to being at a higher risk for developing cardiovascular disease, patients with diabetes tend to have worse survival after the onset of cardiovascular disease.[[88]](#footnote-89) The Centers for Disease Control and Prevention estimates that adults with diabetes are 1.7 times more likely to die from cardiovascular disease than adults without diabetes.87

Numerous studies have demonstrated the efficacy of statins in reducing cardiovascular risk. The use of statins for primary prevention of cardiovascular disease in patients with diabetes, based on their age and other risk factors, is recommended by guidelines from the American Diabetes Association (ADA) and the American College of Cardiology/American Heart Association (ACC/AHA). Cholesterol lowering medications, such as statins, are among the most commonly prescribed drugs in America, accumulating $17 billion in sales in 2012. In the United States, 22 percent of adults (45 and older) take statins.87 Evidence shows statin use decreases cardiovascular mortality in patients with established cardiovascular disease, and total mortality rates. Primary and secondary prevention trial data strongly support starting lipid-lowering therapy with a statin in most patients with type 2 diabetes.[[89]](#footnote-90)

Disease-Modifying Anti-Rheumatic Drug Therapy for Rheumatoid Arthritis (ART)

This measure assesses whether patients diagnosed with rheumatoid arthritis (RA) have been prescribed a disease modifying anti-rheumatic drug (DMARD). DMARDs modify the disease course of rheumatoid arthritis through attenuation of the progression of bony erosions, reduction of inflammation and long-term structural damage. The utilization of DMARDs is also expected to provide improvement in functional status.

RA is a chronic autoimmune disorder often characterized by progressive joint destruction and multisystem involvement. It affects approximately 2.5 million Americans, and affects women disproportionately.[[90]](#footnote-91),[[91]](#footnote-92),[[92]](#footnote-93) There is no cure; consequently, the goal of treatment is to slow the progression of the disease and thereby delay or prevent joint destruction, relieve pain and maintain functional capacity.

Evidence-based guidelines support early initiation of DMARD therapy in patients diagnosed with RA. These guidelines include the American College of Rheumatology Subcommittee on Rheumatoid Arthritis Guidelines: *Guidelines for the Management of Rheumatoid Arthritis.*[[93]](#footnote-94) All patients with RA are candidates for DMARD therapy, and the majority of the newly diagnosed should be started on DMARD therapy within three months of diagnosis.

The American Pain Society’s *Guideline for the Management of Pain in Osteoarthritis, Rheumatoid Arthritis, and Juvenile Chronic Arthritis* notes that almost all people with RA require pharmacotherapy with a DMARD.[[94]](#footnote-95) An important desirable attribute of a HEDIS measure is the ability of organizations and providers to take action to improve performance on a measure. Providers can convey the importance of a particular course of therapy to their patients and subsequently follow compliance as part of condition management. Individuals experiencing pain and functional limitations may be more likely to comply with recommended therapy. In addition, organizations can ensure that members and providers have the necessary information to assure that benefits and treatment options are readily available to members seeking treatment.

Osteoporosis Management in Women Who Had a Fracture (OMW)

This measure assesses how well the organization manages women who are at high risk for a second fracture. It studies whether female members who suffered a fracture had evidence of either a bone mineral density (BMD) test or prescription for a drug to treat osteoporosis in the six months after date of the fracture.

Osteoporosis is a skeletal disorder characterized by compromised bone strength that puts a person at increased risk for fractures. Morbidity and mortality related to osteoporotic fractures are a major health issue. Ten million Americans have osteoporosis, and another 18 million are at risk for osteoporosis due to low bone mass.[[95]](#footnote-96) 80 percent of people with osteoporosis are women.98 Women who suffer a fracture are at increased risk of suffering additional fractures.

Treatment of osteoporotic fractures is estimated at $10–$15 billion annually in the U.S. In 1995, osteoporotic fractures caused 432,000 hospital admissions, 2.5 million physician visits and 180,000 nursing home admissions.[[96]](#footnote-97) The aging U.S. population is likely to increase the future financial cost of osteoporosis care.

One study showed that less than 5 percent of patients with osteoporotic fractures are referred for medical evaluation and treatment.98 Another retrospective study of over 1,000 postmenopausal women who sustained a fracture of the distal radius found that only 24 percent received either a diagnostic evaluation or treatment for the condition.[[97]](#footnote-98) This and other research suggests a high potential for organizations to improve how well they manage women at an increased risk for fracture. The organization can improve its performance on this measure by both educating practitioners on follow-up care after fracture and by tracking administrative data for the occurrence of fracture and following up to ensure that appropriate care was provided.

Antidepressant Medication Management (AMM)

This two-part measure looks at:

* The percentage of members with major depression who were initiated on an antidepressant drug and who received an adequate acute-phase trial of medications (three months).
* The percentage of members with major depression who were initiated on an antidepressant drug and who completed a period of continuous medication treatment (six months).

In a given year, an estimated 20.9 million American adults suffer from a depressive disorder or depression.[[98]](#footnote-99) Without treatment, symptoms associated with these disorders can last for years, or can eventually lead to death by suicide or other causes. Fortunately, many people can improve through treatment with appropriate medications.

According to the American Psychiatric Association,[[99]](#footnote-100) successful treatment of patients with major depressive disorder is promoted by a thorough assessment of the patient and close adherence to treatment plans. Treatment consists of an *acute phase,* during which remission is induced; a *continuation phase,* during which remission is preserved; and a *maintenance phase,* during which the susceptible patient is protected against the recurrence of a subsequent major depressive episode.

When pharmacotherapy is part of the treatment plan, it must be integrated with the psychiatric management and any other treatments that are being provided. Patients who have started taking an antidepressant medication should be carefully monitored to assess their response to pharmacotherapy as well as the emergence of side effects, clinical condition and safety. Factors to consider when determining the frequency of patient monitoring include the severity of illness, the patient’s cooperation with treatment, the availability of social supports and the presence of comorbid general medical problems. In practice, the frequency of monitoring during the acute phase of pharmacotherapy can vary from once a week in routine cases to multiple times per week in more complex cases.

Patients who have been treated with antidepressant medications in the acute phase should be maintained on these agents to prevent relapse.102 Organizations and providers have an opportunity to track antidepressant use in patients and provide appropriate follow-up care to monitor clinical worsening and suicide risk. Monitoring should include continuing appropriate use of antidepressants in patients progressing toward remission. In addition, organizations can foster programs and system changes that would help primary care physicians and other providers ensure success in the identification and ongoing care of patients with depression. Organizations can address the lack of member knowledge and understanding of depression and the use of antidepressant medication by developing and distributing patient educational materials.

Follow-Up Care for Children Prescribed ADHD Medication (ADD)

The two rates of this measure assess follow-up care for children prescribed an attention deficit/hyperactivity disorder (ADHD) medication.

ADHD is one of the more common chronic conditions of childhood. Children with ADHD may experience significant functional problems, such as school difficulties; academic underachievement; troublesome relationships with family members and peers; and behavioral problems.[[100]](#footnote-101)Given the high prevalence of ADHD among school-aged children (4 percent–12 percent), primary care clinicians will regularly encounter children with ADHD and should have a strategy for diagnosing and long-term management of this condition.[[101]](#footnote-102)

Practitioners can convey the efficacy of pharmacotherapy to their patients. American Academy of Pediatrics (AAP) guidelines103 recommend that once a child is stable, an office visit every three to six months allows assessment of learning and behavior. Follow-up appointments should be made at least monthly until the child’s symptoms have been stabilized.

Organizations and providers have an opportunity to track medication use in patients and provide the appropriate follow-up care to monitor clinical symptoms and potential adverse events. In addition, organizations can foster programs and system changes that would help primary care practitioners and other providers ensure success in the ongoing care of patients with ADHD.

Follow-Up After Hospitalization for Mental Illness (FUH)

This measure looks at continuity of care for mental illness. It measures the percentage of organization members 6 years of age and older who were hospitalized for selected mental disorders and who were seen on an outpatient basis by a mental health provider within 30 days, or within 7 days after their discharge from the hospital. The specifications for this measure are consistent with guidelines of the National Institute of Mental Health and the Centers for Mental Health Services.

It is important to provide regular follow-up therapy to patients after they have been hospitalized for mental illness. An outpatient visit with a mental health practitioner after discharge is recommended to make sure that the patient’s transition to the home or work environment is supported and that gains made during hospitalization are not lost. It also helps health care providers detect early post-hospitalization reactions or medication problems and provide continuing care. According to a guideline developed by the American Academy of Child and Adolescent Psychiatry and the American Psychiatric Association, there is a need for regular and timely assessments and documentation of the patient’s response to all treatments.[[102]](#footnote-103)

The organization should make a practice of helping schedule follow-up appointments when a patient is discharged, as part of the treatment or case management plan, and should educate patients and practitioners about the importance of follow-up visits. Systems should be established to generate reminder or “reschedule” notices that are mailed to patients in the event that a follow-up visit is missed or canceled. In many cases, it may also be necessary to develop outreach systems or assign case managers to encourage recently released patients to keep follow-up appointments or reschedule missed appointments.

Diabetes Screening for People With Schizophrenia or Bipolar Disorder Who Are Using Antipsychotic Medications (SSD)

This measure assesses the percentage of members 18–64 years of age with schizophrenia or bipolar disorder who were dispensed an antipsychotic medication and had a diabetes screening during the measurement year.

People with schizophrenia are at greater risk of metabolic syndrome due to their serious mental illness.[[103]](#footnote-104) Diabetes screening is important for anyone with schizophrenia or bipolar disorder, and the added risk associated with antipsychotic medications contributes to the need to screen people with schizophrenia for diabetes. Diabetes screening for individuals with schizophrenia or bipolar disorder who are prescribed an antipsychotic medication may lead to earlier identification and treatment of diabetes.

Diabetes Monitoring for People With Diabetes and Schizophrenia (SMD)

This measure assesses the percentage of members 18–64 years of age with schizophrenia and diabetes, who had both an LDL-C test and an HbA1c test during the measurement year.

Prevalence rates of metabolic syndrome in people with schizophrenia is 42.6 percent for males and 48.5 percent for females, compared with rates in the general population (24 percent for males, 23 percent for females).106

Among patients with co-occurring schizophrenia and metabolic disorders, the nontreatment rate for diabetes is approximately 32 percent.[[104]](#footnote-105) In addition to general diabetes risk factors, diabetes is promoted in patients with schizophrenia by initial and current treatment with olanzapine and mid-potency first-generation antipsychotics (FGA), as well as by current treatment with low-potency FGAs and clozapine.[[105]](#footnote-106)

Improving blood sugar control has shown to lead to lower use of health care services and better overall satisfaction with diabetes treatment.[[106]](#footnote-107) People who control their diabetes also report improved quality of life and emotional well-being.[[107]](#footnote-108)

Cardiovascular Monitoring for People With Cardiovascular Disease and Schizophrenia (SMC)

This measure assesses the percentage of members 18–64 years of age with schizophrenia and cardiovascular disease, who had an LDL-C test during the measurement year.

Patients with schizophrenia are likely to have higher levels of blood cholesterol and are more likely to receive less treatment. Patients with schizophrenia and elevated blood cholesterol levels are prescribed statins at approximately a quarter of the rate of the general population. Furthermore, certain atypical antipsychotic drugs increase total and low-density lipoprotein (LDL) cholesterol and triglycerides, and decrease high-density lipoprotein (HDL) cholesterol, which increases the risk of coronary heart disease.[[108]](#footnote-109)

Among patients with co-occurring schizophrenia and metabolic disorders, rates of nontreatment for hyperlipidemia and hypertension were 62.4 percent for hypertension and 88.0 percent for hyperlipidemia.107 Atypical antipsychotic medications elevate the risk of metabolic conditions, relative to typical antipsychotic medications.[[109]](#footnote-110)

Adherence to Antipsychotic Medications for Individuals With Schizophrenia (SAA)

This measure assesses the percentage of members with schizophrenia who were 19–64 years of age during the measurement year and were dispensed and remained on an antipsychotic medication for at least 80 percent of the treatment period.

For people with schizophrenia, nonadherence to treatment with antipsychotics is common, and medication nonadherence is a significant cause of relapse.[[110]](#footnote-111),[[111]](#footnote-112) Measuring antipsychotic medication adherence may lead to less relapse and fewer hospitalizations. Additionally, there is potential to lead to interventions to improve adherence and help close the gap in care between people with schizophrenia and the general population.

Metabolic Monitoring for Children and Adolescents on Antipsychotics (APM)

This measure assesses the percentage of members 0–17 years of age who had two or more antipsychotic prescriptions and had metabolic monitoring.

Antipsychotic medications offer the potential for effective treatment of psychiatric disorders in children; however, they can also increase a child’s risk for developing serious health concerns, including metabolic health complications. Antipsychotic medications are associated with a number of potentially adverse impacts, including weight gain[[112]](#footnote-113) and diabetes.[[113]](#footnote-114),[[114]](#footnote-115)

A multi-year study of youth enrolled in three HMOs found that exposure to atypical antipsychotics was associated with a fourfold risk of diabetes in the following year, compared with children not prescribed a psychotropic medication, the broader class of medications under which antipsychotics fall.116 Another study of youth enrolled in a state Medicaid plan found that those starting an antipsychotic had three times the risk of developing diabetes, compared with youth starting other psychotropic medications.117 The association of atypical antipsychotics with diabetes has been found to be greater among children and adolescents than among adults.[[115]](#footnote-116)

Research suggests that metabolic problems in childhood and adolescence are associated with poor cardiometabolic outcomes in adulthood.[[116]](#footnote-117) The long-term consequences of pediatric obesity and other metabolic disturbances include higher risk of heart disease in adulthood.[[117]](#footnote-118) Due to the potential negative health consequences associated with children developing cardiometabolic side effects from an antipsychotic medication, it is important to both establish a baseline and continuously monitor metabolic indices to ensure appropriate management of side-effects.

The American Academy of Child and Adolescent Psychiatry guidelines recommend metabolic monitoring, including monitoring of glucose and cholesterol levels, for children and adolescents on antipsychotic medications.117

Annual Monitoring for Patients on Persistent Medications (MPM)

This measure looks at the percentage of members 18 years and older on persistent medications who received annual monitoring for the drugs of interest, reported as three separate rates and as a total rate.

Patient safety is highly important, especially for patients at increased risk of adverse drug events from long-term medication use. Persistent use of these drugs warrants monitoring and follow-up by the prescribing physician to assess for side-effects and adjust drug dosage/therapeutic decisions accordingly. The drugs included in this measure have deleterious effects in the elderly.

The costs of annual monitoring are offset by the reduction in health care costs associated with complications arising from lack of monitoring and follow-up of patients on long-term medications. The total costs of drug-related problems due to misuse of drugs in the ambulatory setting has been estimated to exceed $76 billion annually.[[118]](#footnote-119)

Appropriate monitoring of drug therapy remains a significant issue to guide therapeutic decision making and provides largely unmet opportunities for improvement in care for patients on persistent medications.[[119]](#footnote-120) Although there are no specific clinical guideline recommendations on the frequency of monitoring for the drugs identified in the measure, annual monitoring represents a conservative standard of care and is supported by FDA drug labeling recommendations for each drug.

Organization interventions, such as reminder systems, can help improve monitoring of patients on persistent medications and educating clinicians and patients can be cost-effective due to the high costs associated with adverse drug events.[[120]](#footnote-121)

Medication Reconciliation Post-Discharge (MRP)

This measure assesses the percentage of discharges from January 1–December 1 of the measurement year for Medicare members 18 years of age and older, for whom medications were reconciled the date of discharge through 30 days after discharge (31 total days).

Medication reconciliation is a critical piece of care coordination post-discharge for all individuals who use prescription medications. Prescription medication use is common among adults of all ages. On average,   
82 percent of adults in the U.S. take at least 1 medication (prescription or nonprescription, vitamin/mineral, herbal/natural supplement); 29 percent take 5 or more.

Older adults are the biggest consumers of medications: 17 percent–19 percent of people 65 and older take at least 10 medications in a given week.[[121]](#footnote-122) 62 percent of adults 65 and older have multiple chronic conditions; the higher number of chronic conditions they experience, the more providers are involved in their care. As the number of providers who are involved increases, the less likely patients are to understand, remember and reconcile the multiple instructions.[[122]](#footnote-123) Patients who have more than 1 chronic condition are likely to take more medications; therefore, ensuring proper medication reconciliation is imperative to preventing unintended complications.

The high prevalence of prescription medications can result in potentially negative consequences for patients if not used and monitored appropriately. Approximately 1.5 million preventable adverse drug events occur in the United States each year.[[123]](#footnote-124) Many of these result from medication errors, drug interactions or inappropriate use of medications.

Hospitalization is a specific risk event where medication errors may occur. Hospital medication records for admitted patients are often incomplete when they are admitted. A comparison of medication histories maintained by the hospital for admitted patients with community pharmacy records revealed that the hospital’s records omitted 25 percent of the medications in use. As a result, patients are discharged from the hospital without being continued on some chronic medications.[[124]](#footnote-125)

Significant changes can occur to a patient’s medications during hospitalization. A study by Beers et al. found that 45 percent of all discharge medications were initiated during hospitalization.[[125]](#footnote-126) Provider errors and patient misunderstanding of discharge medications is also common. One observational study found that   
81.4 percent of patients experienced a provider error or had no understanding of at least one intended medication change upon discharge. Providers were more likely to make an error on a medication that was unrelated to the primary diagnosis, which emphasizes the importance of knowing the patient’s current medications upon admission and discharge so that they are properly reconciled. Patients were more likely to misunderstand medication changes that were unrelated to the primary diagnosis, which stresses the importance of proper communication to the patient prior to and following discharge.[[126]](#footnote-127)

Implementing routine medication reconciliation after discharge from an inpatient facility is an important step to ensuring that medication errors are addressed and patients understand new medications. The process of resolving discrepancies on a patient’s medication list reduces the risk of adverse drug interactions being overlooked and helps physicians minimize duplication and complexity of a medication regimen,[[127]](#footnote-128) which in turn may increase patient adherence to the regimen and reduce hospital readmission rates.

Non-Recommended Cervical Cancer Screening in Adolescent Females (NCS)

This measure assesses the percentage of female adolescents 16–20 years of age who were unnecessarily screened for cervical cancer. A lower rate indicates better performance for this measure.

There are multiple medical societies and evidence-based guidelines which recommend against cervical cancer screening in a general population of females under 21 years of age; however, fewer than 25 percent of clinicians provide care consistent with guidelines.[[128]](#footnote-129),[[129]](#footnote-130) Although screening has been shown to be highly effective in the 21–65 age group, the USPSTF determined there is adequate evidence that screening women younger than 21—regardless of sexual history—does not reduce the incidence and mortality of cervical cancer, compared with beginning screening at 21. The USPSTF found evidence that screening in the younger age group leads to more harm than benefit because abnormal test results are likely to be transient and to resolve on their own, and resulting treatment may have an adverse effect on future child-bearing. Thus, the USPSTF specifically recommends against screening women under 21 years of age.

This measure has the potential to decrease the use of non-recommended cervical cancer screening in adolescent females and to ensure that providers follow recommended guidelines. Adherence to guidelines could prevent adolescent females from experiencing harm, including more-frequent testing and invasive diagnostic procedures (such as colposcopy and cervical biopsy), in addition to short-term increase in anxiety and distress that results from abnormal test results. Additionally, this measure has the potential to decrease the financial burden associated with inappropriate screening practices.29

Non-Recommended PSA-Based Screening in Older Men (PSA)

This measure assesses the percentage of men 70 years and older who were screened unnecessarily for prostate cancer using prostate-specific antigen (PSA)-based screening. For this measure, a lower rate indicates better performance.

Prostate cancer is the most commonly diagnosed form of non-skin cancer among men in the United States.[[130]](#footnote-131),[[131]](#footnote-132) The current lifetime risk for a male to develop prostate cancer is 15.9 percent;[[132]](#footnote-133) however, the risk of dying from it is 2.9 percent.[[133]](#footnote-134) According to the National Cancer Institute’s Surveillance Epidemiology and End Results data (2005–2009), the median age at diagnosis for men is 67 years of age.[[134]](#footnote-135), Because diagnosis is closely linked to screening, the apparent incidence of prostate cancer increases with increasing age until 84, after which it declines. Although prostate cancer is the fifth leading cause of all cancer deaths in the U.S., the survival rates are relatively high, with 23 deaths per 100,000 per year. Localized prostate cancer has a five-year survival rate of 100 percent, and approximately 81 percent of prostate cancers are diagnosed at the local stage.[[135]](#footnote-136)

The primary tests used to screen for prostate cancer are the digital rectal exam (DRE), which allows for physical examination of the prostate, and the PSA blood test, which evaluates presence of an antigen in a patient’s blood.[[136]](#footnote-137) PSA-based screening is commonly used in lieu of DRE. The cost of a PSA test can range from $70–$400. Approximately 30 million men undergo PSA testing in the U.S. annually, translating to an estimated $3 billion in associated direct costs.[[137]](#footnote-138),[[138]](#footnote-139)

However, there are a variety of issues associated with PSA-based screening. Research has shown PSA-based screening is not focal, which can result in misdiagnoses and unnecessary performance of diagnostic procedures.137 The likelihood of PSA tests producing false-positive results is also relatively high, with some studies yielding 80 percent false-positive results when the cut-off range used is between 2.5 and 4.0 ng/mL.[[139]](#footnote-140) Men with false-positive results not only experience negative psychological effects, but are also more likely to have follow-up testing in the following year, including one or more biopsies.140

In addition to issues of test specificity and sensitivity, prostate cancer is subject to over-diagnosis, the detection of a condition that would have remained silent and caused no morbidity during a patient’s lifetime. Two large-scale PSA-based screening studies reveal over-diagnosis rates ranging from 17 percent–50 percent.140,141 The main harms result from complications due to biopsies and treatment that typically follow abnormal results. Studies have shown that out of 1,000 men screened, 110 (11 percent) would be diagnosed with prostate cancer, and roughly half of those diagnosed experience complications from treatment.[[140]](#footnote-141) Complications include erectile dysfunction, urinary incontinence, serious cardiovascular events, deep vein thrombosis and pulmonary embolism.143

The American Urological Association (AUA) recommends against routine PSA screening in men age 70 and older or any man with a life expectancy of less than 10–15 years.137 The United States Preventive Services Task Force (USPSTF), however, recommends against PSA-based screening for prostate cancer in men in the general U.S. population, regardless of age,[[141]](#footnote-142) stating that the overall benefits do not outweigh the associated harms with testing, subsequent diagnosis, procedures and treatment. This recommendation updates the previous (2008) USPSTF recommendation against PSA-based screening among men 75 and older. Evidence supporting the performance of screening among men younger than 75 was limited at the time.

Appropriate Treatment for Children With Upper Respiratory Infection (URI)

This measure calculates the rate of antibiotic prescribing in children with URI. It examines the proportion of children between 3 months and 18 years of age who were given a single diagnosis of URI at an outpatient visit and who *did not* receive an antibiotic prescription for that episode of care within three days of the visit. Only the first eligible episode of URI for each child during the measurement year will be counted. A higher rate indicates better performance.

The common cold (or URI) is a frequent reason for children visiting the doctor’s office. Though existing clinical guidelines do not support the use of antibiotics for the common cold, physicians often prescribe them for   
this ailment.[[142]](#footnote-143) Pediatric clinical practice guidelines145 do not recommend antibiotics for a majority of upper respiratory tract infections because of the viral etiology of these infections, including the common cold.   
A performance measure of antibiotic use for URI sheds light on the prevalence of inappropriate antibiotic prescribing in clinical practice and raises awareness of the importance of reducing inappropriate antibiotic use to combat antibiotic resistance in the community.

Avoidance of Antibiotic Treatment in Adults With Acute Bronchitis (AAB)

Antibiotics are most often inappropriately prescribed for adults with acute bronchitis.51 This measure assesses whether antibiotics were inappropriately prescribed for healthy adults 18–64 years of age with bronchitis and builds on an existing HEDIS measure that targets inappropriate antibiotic prescribing for children with URI.

Antibiotics are not indicated in clinical guidelines for treating adults with acute bronchitis who do not have a comorbidity or other infection for which antibiotics may be appropriate.[[143]](#footnote-144),[[144]](#footnote-145) Inappropriate antibiotic treatment of adults with acute bronchitis is of clinical concern, especially since misuse and overuse of antibiotics lead to antibiotic drug resistance.[[145]](#footnote-146) Acute bronchitis consistently ranks among the 10 conditions that account for most ambulatory office visits to U.S. physicians; furthermore, while the vast majority of acute bronchitis cases (more than 90 percent) have a nonbacterial cause, antibiotics are inappropriately prescribed 65 percent–  
80 percent of the time.51,[[146]](#footnote-147)

For all three inappropriate antibiotic use measures, the organization can influence physicians’ antibiotic prescribing behavior through interventions such as reminders of guideline recommendations, contracting and reimbursement based on physician profiles and claims payment. It can change clinical practice by monitoring and providing feedback to physicians about their prescribing behaviors. In addition, the organization can develop patient education interventions to discourage seeking antibiotics for viral conditions (such as the common cold), or without confirmatory tests such as group A strep test for pharyngitis, and to educate members about the importance of appropriate antibiotic use.

Use of Imaging Studies for Low Back Pain (LBP)

This measure assesses whether imaging studies (plain x-ray, MRI, CT scan) are overused to evaluate patients with acute low back pain.

Low back pain is a pervasive problem that affects two thirds of adults at some time in their lives. It ranks among the top 10 reasons for patient visits to internists and is the most common and expensive reason for work disability in the U.S.[[147]](#footnote-148) Back problems are second only to cough among symptoms of people who seek medical care at physician offices, outpatient departments or emergency rooms.[[148]](#footnote-149)

Back pain is among the most common musculoskeletal conditions, afflicting approximately 31 million Americans, and is the number one cause of activity limitation in young adults. For most individuals, back pain quickly improves. Nevertheless, approximately 15 percent of the U.S. population reports having frequent low back pain that lasted for at least two weeks during the previous year. Persistent pain that lasts beyond 3–6 months occurs in only 5 percent–10 percent of patients with low back pain.[[149]](#footnote-150) According to the American College of Radiology,[[150]](#footnote-151) uncomplicated low back pain is a benign, self-limited condition that does not warrant imaging studies. The majority of patients are back to their usual activities in 30 days.

There is no compelling evidence to justify substantial deviation from the diagnostic strategy published in clinical guidelines, which indicate that for most patients with acute low back pain, diagnostic imaging is usually unnecessary. Although patients may have a perceived need for imaging studies, efforts to educate patients on appropriate indications for imaging are within a provider’s capacity. Organizations can provide information, best-care practice models and other support to providers, imaging centers and members to increase knowledge and ensure that imaging studies are used appropriately for evaluation of lower back pain patients, based on the duration of symptoms and the presence of red flags.

Use of Multiple Concurrent Antipsychotics in Children and Adolescents (APC)

This measure assesses the percentage of children and adolescents 0–17 years of age who were on two or more concurrent antipsychotic medications. For this measure, a lower rate indicates better performance.

Antipsychotic prescribing for children has increased rapidly in recent decades, driven by new prescriptions and by longer duration of use.[[151]](#footnote-152) The frequency of prescribing antipsychotics among youth increased almost fivefold from 1996–2002, from 8.6 per 1,000 children to 39.4 per 1,000.[[152]](#footnote-153) Although some evidence supports the efficacy of antipsychotics in youth for certain narrowly defined conditions, less is known about the safety and effectiveness of antipsychotic prescribing patterns in community use (e.g., combinations of medications, off-label prescribing, dosing outside of recommended ranges).

Both the efficacy and side effects of antipsychotic medications vary by age. Children and adolescents prescribed antipsychotics are more at risk for serious health concerns, including weight gain, extrapyramidal side effects, hyperprolactinemia and some metabolic effects.[[153]](#footnote-154) This suggests that use of multiple concurrent antipsychotics may pose differing risks for children and adolescents compared with adults. While there is no research on long-term effects of multiple concurrent antipsychotics on children’s health, the increased side effect burden of certain antipsychotic medications for youth has implications for future physical health concerns including obesity and diabetes. Girls treated with certain antipsychotics may also be at increased risk for gynecological problems[[154]](#footnote-155) and osteoporosis.[[155]](#footnote-156) Risks of multiple concurrent antipsychotics, compared with monotherapy, have not been systematically investigated; existing evidence appears largely in case reports.[[156]](#footnote-157) In general, the field also lacks high-quality studies of side effects associated with the use of multiple concurrent antipsychotic medications in adults.[[157]](#footnote-158)

The American Academy of Child and Adolescent Psychiatry recommends that clinicians avoid the simultaneous use of multiple concurrent antipsychotic medications for children and adolescents.[[158]](#footnote-159)

Potentially Harmful Drug-Disease Interactions in the Elderly (DDE)

This measure assesses the percentage of Medicare members 65 years of age and older who have evidence of an underlying disease, condition or health concern and who were dispensed an ambulatory prescription for a potentially harmful medication, concurrent with or after the diagnosis.

Pharmacotherapy is an essential component of medical treatment for older patients, but medications are also responsible for many adverse events in this group. Almost 90 percent of people 65 and older take at least one medication, significantly more than any other age group.[[159]](#footnote-160) Patient safety is highly important to member health, especially patients who are at increased risk of adverse drug events due to coexisting conditions and polypharmacy. Adverse drug events have been linked to preventable problems in elderly patients, such as depression, constipation, falls, immobility, confusion and hip fractures. 30 percent of elderly-patient hospital admissions may be linked to drug-related problems or toxic effects. [[160]](#footnote-161)

Drug-disease interactions identified for reporting in this measure are based on the literature and on the key clinical expert consensus process by Beers that identified potentially inappropriate medication use in older adults with specific diagnoses or conditions. NCQA’s medication management expert panel provided advice on the conditions and drugs to be included in this measure, based on the updated Beers list and a Canadian panel and significance of harm and impact on the older adult population.[[161]](#footnote-162)

Organizations have control over processes of care through quality improvement and educational activities directed at providers and patients. In addition, they can control drug selection through alerts in their pharmacy benefit systems or formulary restrictions and support planning and implementing interventions to reduce drug-related morbidity and mortality in older adults.

Use of High-Risk Medications in the Elderly (DAE)

This measure assesses the percentage of Medicare members 66 years of age and older who received a high risk medication. Two rates are reported:

* Members who received at least one high-risk medication.
* Members who received at least two different high-risk medications.

This patient safety measure addresses medication management to prevent the harms associated with certain medications in the elderly. It identifies high-risk medications that should be avoided in the elderly population. Certain medications are associated with increased risk of harms from drug side-effects and drug toxicity, and pose a concern for patient safety.[[162]](#footnote-163),[[163]](#footnote-164),[[164]](#footnote-165) There is clinical consensus that these drugs pose increased risks in the elderly.[[165]](#footnote-166),[[166]](#footnote-167),164

NCQA used the 2012 American Geriatrics Society Updated Beers Criteria for Potentially Inappropriate Medication Use in Older Adults as a clinical foundation for this measure. The development of the 2012 Updated Beers Criteria was based on an extensive literature review and discussion by a panel of experts in geriatric care and pharmacotherapy. The Updated Beers Criteria is intended as a tool that both identifies and describes drugs and drug-disease interactions that should generally be avoided in people 65 years of age and older, because the drugs pose unnecessary risk for older adults.[[167]](#footnote-168)

Appropriate use of prescription drugs in the elderly, including proper drug selection, has been identified as an important quality of care issue, and explicit criteria defining inappropriate drug use as an important tool in the evaluation of prescribing to populations.168,169 Studies link prescription drug use by the elderly with adverse drug events that contribute to hospitalization, increased length of hospital stay, increased duration of illness, nursing home placement and falls and fractures that are further associated with physical, functional and social decline in the elderly.[[168]](#footnote-169),123

Reducing prescriptions of high-risk drugs in the elderly also represents an opportunity to reduce the costs associated with harm from medications (e.g., hospitalizations from drug toxicity) and to encourage clinicians to consider safer, alternative medications. Reducing unnecessary prescribing will also help to reduce cost, given that the elderly population represents one-third of all prescription drug expenditures in the U.S., but comprises only 13 percent of the population.[[169]](#footnote-170)

Organizations have control over clinical processes of care through quality improvement and educational activities directed at providers and patients. In addition, they can control drug selection through alerts in their pharmacy benefit systems for physicians and pharmacists or formulary restrictions for the elderly.[[170]](#footnote-171) Studies also show prescribing of these drugs is linked to poor health outcome. More cautious use of potentially harmful drugs has been shown to prevent adverse events in the elderly, and organizations can reduce potentially harmful prescribing through quality improvement activities or formulary restrictions.173,[[171]](#footnote-172)

The Medicare Health Outcomes Survey (HOS)

This measure looks at keeping Medicare members healthy, with a high health-care-related quality of life. It assesses an organization’s ability over time to maintain or improve the health status of its members. The measure is designed to quantify the physical and mental health of the Medicare population at the beginning and end of a defined period. The HEDIS Medicare HOS is the primary health outcome measure for seniors enrolled in a Medicare health plan.

The measure is based on a random sample of individuals whose functional status is assessed at the beginning and end of a two-year period. It evaluates physical and mental health functional status using the Veterans 12-Item Health Survey (VR-12). Researchers and clinicians use patient-based assessments like the VR-12:

* To look at the health of the general population.
* To evaluate treatment outcomes and procedures.
* To provide external performance measurement.

The functional status of the elderly normally declines over a two-year period. The measure considers expected decline and looks at whether the change in the physical and mental health status of each Medicare beneficiary surveyed was better, the same or worse than expected, accounting for risk-adjustment factors.

Fall Risk Management (FRM)

This Medicare HOS survey measure assesses two facets of falls risk management for Medicare members:

* *Discussing Fall Risk.* The percentage of members 75 years of age and older or 65–74 years of age with balance or walking problems or a fall in the past two months, who were seen by a practitioner and discussed falls or problems with balance or walking.
* *Managing Fall Risk.* The percentage of members 65 years of age and older who had a fall or problems with balance and walking who were seen by a practitioner and received fall risk intervention in the past 12 months.

Unintentional injuries are the fifth leading cause of death in older adults, and falls are responsible for two-thirds of these deaths.[[172]](#footnote-173) Falls can have serious psychological and social consequences. Many elderly people who fall develop a fear of subsequent falls, which can result in self-imposed functional limitations. Of those older adults who fall, 20 percent–30 percent suffer moderate to severe injuries that may reduce mobility and independence, as well as increase the risk of premature death. [[173]](#footnote-174),[[174]](#footnote-175) Recurrent falls are a common reason for the need for long-term care; a recent study found that falls were a significant factor in 40 percent of admissions to long-term care.[[175]](#footnote-176),[[176]](#footnote-177)

Because falls have the potential to cause serious harm and significantly limit functional status of the elderly, a clinical practice to routinely monitor and manage risk factors can have significant impact in preventing unintentional injuries from falls. The American Geriatrics Society, along with the British Geriatrics Society and the American Academy of Orthopedic Surgeons, published clinical practice guidelines for the prevention of falls in older people.[[177]](#footnote-178)

Management of Urinary Incontinence in Older Adults (MUI)

This survey measure provides information on how well physicians manage urinary incontinence (UI) in Medicare members 65 years of age and older. The measure assesses the following components, based on responses to survey items in the Medicare HOS:

* *Discussing UI.* The percentage of Medicare members 65 years of age and older who reported having a urine leakage in the last six months and who discussed their urinary leakage problem with a health care provider.
* *Discussing Treatment of UI.* The percentage of Medicare members 65 years of age and older who reported having urine leakage in the past six months and who discussed treatment options for their current urine leakage problem.
* *Impact of UI.* The percentage of Medicare members 65 years of age and older who reported having urine leakage in the past six months and who reported that urine leakage made them change their daily activities or interfered with their sleep a lot.

UI, or the unintentional loss of urine, is a condition that affects between 10 percent and 30 percent of adults. An estimated 13 million Americans suffer from bladder control problems; 85 percent of these are women. The prevalence of UI increases with age, and although it should not be considered a normal part of aging, up to 35 percent of people 60 years of age and older are incontinent. The underlying causes of UI can be diagnosed and managed effectively by a practitioner.[[178]](#footnote-179),[[179]](#footnote-180) UI can cause a wide range of morbidity in the elderly, including pressure ulcers, urinary tract infections (UTI), social withdrawal and depression.[[180]](#footnote-181) UI is one of the major causes of institutionalization of the elderly.[[181]](#footnote-182),[[182]](#footnote-183)

In 1996, AHRQ updated the *Clinical Practice Guidelines on Urinary Incontinence in Adults*. These and other guidelines provide consensus on effective treatments for UI, which can improve or even “cure” most patients.183

Since UI is associated with poor physical and mental health status, organizations can educate providers and invest in patient education initiatives to improve the functional and health status of elderly patients who suffer from multiple comorbid conditions.

Osteoporosis Testing in Older Women (OTO)

This Medicare HOS survey measure assesses the number of women 65–85 years of age who report ever having received a bone density test to check for osteoporosis.

Osteoporosis is the most common of the bone diseases that will affect Americans.[[183]](#footnote-184) In the U.S., 10 million people are estimated to have osteoporosis; another 34 million are estimated to have low bone mass, placing them at risk for osteoporosis and related fractures.186 The prevalence of osteoporosis is high among older women. Published economic assessments suggest that diagnosis and treatment of women at risk for osteoporosis would be more cost-effective by targeting treatment to those with the lowest bone measurement results.

In 2002, the USPSTF updated its previous recommendations on osteoporosis screening and found at least fair evidence that screening improves health outcomes. It concluded that benefits significantly outweigh any harm, and recommends that clinicians routinely screen all women 65 and older for osteoporosis.[[184]](#footnote-185)

Physical Activity in Older Adults (PAO)

This measure assesses different facets of promoting physical activity in older adults.

Despite the proven benefits of regular physical activity on the health of older adults, over half of the older population is sedentary (47 percent of older adults 65–74 years of age and 61 percent of adults over 75 do not engage in physical activity).[[185]](#footnote-186),[[186]](#footnote-187) Less than a third of the elderly population is regularly active. In particular, older women, who share a higher burden of morbidity and mortality, are less likely to exercise than older men: 66 percent of women, compared to 54 percent of men 75 and older, do not engage in leisure-time physical activity, according to the CDC Behavioral Risk Factor Surveillance Survey.

By targeting the health care system, this measure complements national efforts to increase physical activity levels in the community through a wide range of community actions and environmental and policy approaches, as well as behavioral/social interventions recommended by the United States Task Force on Community Preventive Services.188

Engaging in 30 minutes or more of moderate physical activity most days of the week is recommended for the general population by the USPSTF.188 Increased physical activity is especially important for the older population, which can most benefit from increased activity levels to improve the gradual decline in functioning and health status associated with increasing age.187 Furthermore, studies have shown that even a small increase in physical activity leads to health benefits. Encouraging people to be more physically active is even more cost-effective and has greater health benefits than getting people to quit smoking.

Currently there is a low prevalence of physicians counseling patients to exercise; therefore, there is high potential for organizations to improve on this measure. Examples of effective interventions for changing patient behavior include patient goal setting, written exercise prescriptions, individually tailored exercise regimens and multidimensional approaches. Organizations can help reduce health care costs through cost-effective behavior-change interventions that demonstrate favorable return on investment, especially considering the higher health care charges associated with each risk factor.

Aspirin Use and Discussion (ASP)

This measure assesses the percentage of men 46–65 years of age who have at least one factor for cardiovascular risk (e.g., current smoker or tobacco user, family history of cardiovascular disease [CVD], high cholesterol, high blood pressure); women 56–79 who have at least two risk factors for CVD; all men 66–79 who currently report taking aspirin; and the percentage of women 56–79 and men 46–79 who were counseled about the risks and benefits of aspirin use. This is a process measure and specifications are consistent with current recommendations from USPSTF and ADA.

The USPSTF strongly recommends that clinicians discuss aspirin chemoprevention with adults who are at increased risk (five-year risk ≥3 percent) for CHD. Discussions with patients should address both the potential benefits and harms of aspirin therapy. The ADA encourages the use of aspirin therapy (75–162 mg/day) as a primary prevention strategy in patients with type 1 or type 2 diabetes who are at increased cardiovascular risk, including those who are 40 years of age and older or who have additional risk factors (e.g., family history of CVD, hypertension, smoking, dyslipidemia, albuminuria).

In 2004, CHD was an underlying or contributing cause of death for 451,300 people and accounted for 1 of every 5 deaths in the U.S. The prevalence of CHD for both sexes in 2005 was nearly 16 million people, or 7.3 percent of the American population.[[187]](#footnote-188) The cost of cardiovascular diseases and stroke in the U.S. for 2008 was estimated at $448.5 billion,190 including health expenditures and lost productivity resulting from morbidity and mortality (indirect costs). Evidence shows that age is a strong demographic factor for CHD. It is projected that by 2030, 1 in 5 Americans will be 65 or older. The need for CHD management is essential.190,[[188]](#footnote-189)

Aspirin treatment has been shown to prevent one cardiovascular event over an average follow-up of 6.4 years. This means that, on average in a 6.4 year period, the use of aspirin therapy results in a benefit  
of three cardiovascular events prevented per 1,000 women and four events prevented per 1,000 men.[[189]](#footnote-190)   
Aspirin has been shown to reduce CHD in patients with peripheral arterial disease, as well.192,[[190]](#footnote-191),

Aspirin therapy (75–162 mg/day) is also recommended as a secondary prevention strategy in patients who have diabetes and a history of CVD.

Flu Vaccinations for Adults Ages 18–64 (FVA)

This measure looks at the percentage of members 18–64 years of age who received an influenza vaccination.

The disease burden for influenza is large, and the potential for prevention is high. Influenza infections result in significant health care expenditures each year, and the vaccine is safe and effective. Specifications are consistent with current recommendations from ACIP. This group has an increased prevalence of people with high-risk medical conditions, and age-specific strategies have been more successful to increase vaccine coverage than those based on medical conditions.

Healthy adults in this age group without high-risk conditions will benefit by a reduced number of illnesses, physician visits, missed workdays and antibiotic use, and will have reduced disease transmission from contacts who are at high-risk for influenza-related complications. Organizations can implement a variety of interventions for increasing coverage. Successful vaccination programs combine publicity and education for health care workers and other potential vaccine recipients. Programs include identifying people at high risk; patient reminder/recall systems; assessment of practice-level vaccination rates with feedback to health care providers and staff; and efforts to remove administrative and financial barriers that prevent people from receiving the vaccine. Organizations can also contribute to cooperative and communitywide immunization clinics scheduled just before the start of the flu season.

Flu Vaccinations for Adults Ages 65 and Older (FVO)

This measure looks at how well organizations help protect America’s seniors from potentially life-threatening influenza outbreaks. It looks at the percentage of members over 65 years of age who received the influenza vaccine. Specifications for this measure are consistent with current ACIP recommendations.[[191]](#footnote-192)

Influenza accounts for 10,000–40,000 or more deaths each year in the U.S.[[192]](#footnote-193) Older adults are at high risk for developing serious infections (such as pneumonia) following the flu. For this reason, experts recommend that all adults over 65 receive a flu vaccination every year to reduce the risk of developing serious complications if they become infected. Vaccination programs against influenza have been shown to reduce the incidence of illness and death, and are cost-effective, as well.

ACIP, the ACP and the Infectious Disease Society of America recommend yearly influenza vaccination for adults 65 and older to protect against infection and reduce the risk of complications from infection.[[193]](#footnote-194),[[194]](#footnote-195) Organizations can implement a variety of interventions to increase influenza coverage. Successful vaccination programs combine publicity and education for health care workers and other potential vaccine recipients. Programs include developing a plan for identifying people at high risk; use of patient reminder/recall systems; assessment of practice-level vaccination rates with feedback to health care providers and staff; and efforts to remove administrative and financial barriers that prevent people from receiving the vaccine, including use of standing orders programs. Organizations can also contribute to cooperative and communitywide immunization clinics scheduled just prior to the start of the flu season.

Medical Assistance With Smoking and Tobacco Use Cessation (MSC)

This three-part survey measure looks at the health care provider’s role in curbing smoking and tobacco use and focuses on health care providers’ efforts to help members quit smoking or using tobacco by evaluating the following components.

* *Advising Smokers and Tobacco Users to Quit.* The percentage of members 18 years of age and older who are current smokers/tobacco users and who received advice to quit from their practitioner.
* *Discussing Cessation Medications.* The percentage of members 18 and older who are current smokers/ tobacco users and whose practitioner discussed smoking/tobacco use cessation medications.
* *Discussing Cessation Strategies.* The percentage of members 18 and older who are current smokers/ tobacco users and whose practitioner discussed smoking/tobacco use cessation strategies.

Smoking and tobacco use is the leading preventable cause of death in the U.S., causing more than 430,700 deaths each year. Over 47 million Americans smoke or use tobacco, despite the risks. 70 percent of smokers are interested in stopping smoking completely; smokers report that they would be more likely to stop smoking if a doctor advised them to quit.[[195]](#footnote-196) A number of clinical trials have demonstrated the effectiveness of clinical quit-smoking programs. Getting even brief advice to quit is associated with a 30 percent increase in the number of people who quit.[[196]](#footnote-197)

Specifications for this measure are consistent with current USPSTF recommendations.[[197]](#footnote-198) Quitting smoking reduces the risk of lung and other cancers, heart attack, stroke and chronic lung disease. Women who stop smoking before pregnancy or during the first three months of pregnancy reduce their risk of having a low-birth-weight baby to the same risk as women who never smoked. The excess risk of CAD is reduced by about half one year after quitting, and continues to decline gradually.200

Smokers who quit before age 45 are likely to avoid 54 percent–67 percent of expected lifetime economic losses due to smoking, and those over 70 are likely to avoid 32 percent–52 percent of such costs. Organizations should encourage physicians to talk openly with patients about smoking, and provide opportunities and programs that encourage and support quitting. Evidence suggests that tracking smoking status as a “vital sign” leads to more aggressive counseling and higher quit rates. Organizations can offer tobacco cessation classes and offer a “stop smoking tool kit” as part of their benefits, and pharmaceutical aids such as nicotine patches and other such smoking cessation supports could be offered without copayment.

Pneumococcal Vaccination Status for Older Adults (PNU)

This measure looks at the number of Medicare members 65 years of age and older who ever report having received a pneumococcal vaccination.

Pneumonia infection is a common cause of illness and death in the elderly. Each year, pneumonia causes an estimated 40,000 deaths among adults in the U.S. Pneumonia accounts for more deaths than any other vaccine-preventable bacterial disease.[[198]](#footnote-199) The burden of this disease is high for older adults, but the potential for prevention is also high. Pneumonia infections result in significant health care costs each year, and vaccination is safe and effective.

The specifications for this measure are consistent with current recommendations from ACIP,[[199]](#footnote-200) which recommends pneumococcal vaccine for all individuals who are 65 and older to protect against infection. Medicare Part B fully covers the cost of the vaccine and its administration every five years. Many people are unaware of the need for flu shots; many seniors are unaware of the need for vaccination against pneumonia or they harbor misconceptions about the vaccinations’ usefulness.

Outreach includes awareness through educational efforts or reminder programs. Successful vaccination programs combine publicity and education for health care workers and other potential vaccine recipients. Programs include developing a plan for identifying people at high risk; use of patient reminder/recall systems; assessment of practice-level vaccination rates with feedback to health care providers and staff; and efforts to remove administrative and financial barriers that prevent people from receiving the vaccine, including use of standing orders programs. Organizations can also contribute to cooperative and communitywide immunization clinics.

Access/Availability of Care Measures

Measures in this domain look at how members access basic and important services offered by their organization. **Access** refers to members’ ability to get the services they require from a health care system. There are many access measures in HEDIS. The *Effectiveness of Care* section contains an access measure for well-child care immunization rates and access measures for women’s health care.

Adults’ Access to Preventive/Ambulatory Health Services (AAP)

This measure looks at whether adult members receive preventive and ambulatory services from the organization. It looks at the percentage of members who have had a preventive or ambulatory visit to their physician. Consider the other side of this measure: How many patients *never* access the system? What services do they receive? How does preventive care and counseling occur for these members? Without a patient visit, they do not receive counseling on diet, exercise, smoking cessation, seat belt use and behaviors that put them at risk. If the organization’s services are not being used, are there barriers to access? Maintaining access to care requires more than making providers and services available—it involves analysis and systematic removal of barriers to care.

Children and Adolescents’ Access to Primary Care Practitioners (CAP)

Like the *Adults’ Access* measure, this measure looks at visits to pediatricians, family physicians and other organization providers of primary care as a way to assess general access to care for children and adolescents.

Annual Dental Visit (ADV)

This measure looks at Medicaid members’ use of the organization’s dental services. It measures the percentage of members between 2 and 20 years of age with dental coverage who had a dental check-up during the past year.

The average American adult has between 10 and 17 decayed, missing or filled permanent teeth. About half of all adults have gingivitis (gum inflammation) and 80 percent have experienced some degree of destruction of the bone supporting the teeth.

Tooth decay is the most common disease known to man. The number of cavities in school-age children has been declining since the 1940s, yet the average child still has at least:

* 1 cavity in permanent teeth by age 9.
* 2.6 cavities in permanent teeth by age 12.
* 8 cavities in permanent teeth by age 17.

Guidelines set by the American Academy of Pediatric Dentistry (AAPD), the American Dental Association (ADA) and the American Academy of Pediatrics (AAP) recommend the first dental visit occur for children by one year of age.[[200]](#footnote-201),[[201]](#footnote-202),[[202]](#footnote-203) Regular visits to the dentist provide access to cleaning, early diagnosis and treatment, as well as education on how to prevent problems.

Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET)

This measure assesses the degree to which the organization initiates and engages members identified with a need for alcohol and other drug (AOD) dependence services and the degree to which members initiate and continue treatment once the need has been identified. Two rates are reported.

There are more deaths, illnesses and disabilities from substance abuse than from any other preventable health condition. Treatment of medical problems caused by substance abuse places a huge burden on the health care system.[[203]](#footnote-204)

Identifying people with AOD disorders is an important first step in the process of care, but identification often does not lead to initiation of care.[[204]](#footnote-205) Someone may not initiate treatment because of the social stigma associated with AOD disorder, denial of the problem or lack of immediately available treatment services.207 This measure is designed to ensure that treatment is initiated once the need has been identified, and permits comparison of effectiveness in initiating care.

Treatment engagement is an intermediate step between initially accessing care (the first visit) and completing a full course of treatment. Numerous studies indicate that individuals who remain in treatment for a longer duration of time have improved outcome, but the 1990 Drug Service Research Survey suggested that many clients (52 percent) with AOD disorders leave treatment prematurely.[[205]](#footnote-206) This measure is an important intermediate indicator, closely related to outcome. In fact, studies have tied frequency and intensity of engagement as important in treatment outcome and in reducing drug-related illnesses.[[206]](#footnote-207),[[207]](#footnote-208)

* *Initiation of AOD Dependence Treatment.* The percentage of adults diagnosed with AOD dependence who initiate treatment through either of the following methods:
* An inpatient AOD admission, ***or***
* An outpatient service for AOD abuse or dependence and any additional AOD services within   
  14 days.
* *Engagement of AOD Dependence Treatment.* The percentage of adults diagnosed with AOD dependence who receive two additional AOD services within 30 days after the initiation of AOD treatment through either of the following methods:
* An inpatient stay, ***or***
* Outpatient, ED or detoxification services.

Prenatal and Postpartum Care (PPC)

This composite measure is a combination of two rates; it aims to provide relevant and comparable data and create efficiency in data collection:

* Timeliness of Prenatal Care.
* Postpartum Care.

The first rate looks at how well the organization provides timely prenatal care to pregnant women. It measures the percentage of pregnant women in the organization who began prenatal care during the first 13 weeks of pregnancy, or within 42 days of enrollment, for women who were more than 13 weeks pregnant when they enrolled. Care can be delivered by a variety of appropriate obstetrical, primary care or nurse-midwife practitioners. The second rate of this measure looks at care rendered to women after they have delivered a baby. It measures the percentage of women who had live births and who had a postpartum visit between 21 and 56 days after delivery.

Preventive medicine is fundamental to prenatal care. Healthy diet, counseling, vitamin supplements, identification of maternal risk factors and health promotion must occur early in pregnancy to have an optimal effect on outcome. Poor outcomes include spontaneous abortion, low-birth-weight babies, large-for-gestational-age babies and neonatal infection. Early prenatal care is also an essential part of helping a pregnant woman prepare to become a mother. Ideally, a pregnant woman will have her first prenatal visit during the first trimester of pregnancy. Some women enroll in an organization at a later stage of pregnancy; in this case, it is essential for the organization to begin providing prenatal care as quickly as possible.

ACOG[[208]](#footnote-209) recommends that women see their health care provider at least once between four and six weeks after giving birth. The first postpartum visit should include a physical examination and is an opportunity for the health care practitioner to answer parents’ questions, give family planning guidance and counsel on nutrition.

Call Answer Timeliness (CAT)

This measure reports the percentage of calls received during the measurement year by Member Services call centers (during operating hours) that were answered by a live voice within 30 seconds. Collected data provide opportunities for organization comparison and quality improvement initiatives. This measure complements member feedback on customer service obtained through the CAHPS 5.0H health plan survey.

Health care providers, health plan members and purchasers increasingly recognize the importance of customer service as a factor in patient satisfaction. Articles in medical journals, member experience surveys (e.g., CAHPS, Caredata) and employer and payer requests for information and proposals are responding to demands to improve consumer health care experiences.

Customer service is an important dimension of the organization’s ability to provide members with reasonable access to services. The ability to access customer service in a timely manner is the first step toward ensuring that the organization’s Customer Service Department adequately meets members’ needs. This sets the foundation for assessing quality of interaction between the organization and the member. Higher performance on this measure should improve member satisfaction and reduce employer cost of handling employee dissatisfaction with customer service.

Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics (APP)

This measure assesses the percentage of children and adolescents 0–17 years of age who had a new prescription for an antipsychotic medication and had documentation of psychosocial care as first-line treatment.

Although antipsychotic medications may serve as effective treatment for a narrowly defined set of psychiatric disorders in children, they are often being prescribed for nonpsychotic conditions such as attention-deficit hyperactivity disorder and disruptive behaviors,[[209]](#footnote-210),[[210]](#footnote-211),[[211]](#footnote-212) conditions for which psychosocial interventions are considered first-line treatment.[[212]](#footnote-213),[[213]](#footnote-214) Thus, clinicians may be underutilizing safer first-line psychosocial interventions and using antipsychotics for nonprimary indications in children and adolescents.

Antipsychotic medications are associated with a number of potential adverse impacts, including weight gain[[214]](#footnote-215) and diabetes,[[215]](#footnote-216),[[216]](#footnote-217) which can have serious implications for future health outcomes. Children without primary indication for an antipsychotic and who are not given the benefit of a trial of psychosocial treatment first, may unnecessarily incur the risks associated with antipsychotic medications. Mental health conditions in youth are associated with a number of potential adverse effects, including increased risk for substance use.[[217]](#footnote-218) To the extent that psychosocial interventions are associated with better outcomes,[[218]](#footnote-219),[[219]](#footnote-220),[[220]](#footnote-221) underuse of these therapies may lead to poorer mental and physical health outcomes.

In the absence of a Food and Drug Administration indication for an antipsychotic medication, guidelines recommend that psychosocial treatments be provided prior to initiating an antipsychotic.[[221]](#footnote-222),[[222]](#footnote-223),[[223]](#footnote-224) Guidelines for individual conditions that recommend use of antipsychotics in the absence of a primary indication address the use of psychosocial interventions prior to use of an antipsychotic. Treatment guidelines for management of aggression[[224]](#footnote-225) and disruptive behavior disorders all endorse psychosocial interventions as first-line treatment.

Experience of Care Measures

Measures in this domain assess members’ experience of care across a number of products and populations and give a general indication of how well the organization meets member expectations. The NCQA CPM has long felt that consumer experience with health care is a critical component of quality of care and is itself an outcome of care.

CAHPS Health Plan Survey 5.0H, Adult Version (CPA)

This measure provides information on commercial and Medicaid members’ experience with the health plan. Results summarize member experiences through ratings, composites and individual question summary rates.

Four global rating questions reflect overall satisfaction.

|  |  |
| --- | --- |
| * Rating of All Health Care. * Rating of Health Plan. | * Rating of Personal Doctor. * Rating of Specialist Seen Most Often. |

Seven composite scores summarize responses in key areas.

|  |  |
| --- | --- |
| * Claims Processing *(commercial only).* * Customer Service. * Getting Care Quickly. * Getting Needed Care. | * How Well Doctors Communicate. * Shared Decision Making. * Plan Information on Costs *(commercial only).* |

Item-specific question summary rates are reported for the rating questions and each composite question. Question Summary Rates are also reported individually for two items summarizing the following concepts.

|  |  |
| --- | --- |
| * Health Promotion and Education. | * Coordination of Care. |

**Note:** Medicare member experience with the organization is assessed through the Medicare CAHPS survey. This measure is administered by CMS on behalf of Medicare organizations.

CAHPS Health Plan Survey 5.0H, Child Version (CPC)

This measure provides information on parents’ experience with their child’s health plan. Results summarize member experiences through ratings, composites and individual question summary rates. Four global rating questions reflect overall satisfaction.

|  |  |
| --- | --- |
| * Rating of All Health Care. * Rating of Health Plan. | * Rating of Personal Doctor. * Rating of Specialist Seen Most Often. |

Five composite scores summarize responses in key areas.

|  |  |
| --- | --- |
| * Customer Service. * Getting Care Quickly. * Getting Needed Care. | * How Well Doctors Communicate. * Shared Decision Making. |

Item-specific question summary rates are reported for the rating questions and each composite question. Question Summary Rates are also reported individually for two items summarizing the following concepts:

|  |  |
| --- | --- |
| * Health Promotion and Education. | * Coordination of Care. |

Children With Chronic Conditions (CCC)

This measure provides information on parents’ experience with their child’s health plan for the population of children with chronic conditions. Three composites summarize experience with basic components of care essential for successful treatment, management and support of children with chronic conditions:

* Access to Specialized Services.
* Family Centered Care: Personal Doctor Who Knows Child.
* Coordination of Care for Children With Chronic Conditions.

Item-specific question summary rates are reported for each composite question. Question Summary Rates are also reported individually for two items summarizing the following concepts:

* Access to Prescription Medicines.
* Family Centered Care: Getting Needed Information.

Utilization and Risk Adjusted Utilization Measures

Measures in this domain gather information about how organizations manage the provision of member care and how they use and manage resources. Use of services is affected by many member characteristics, which can vary greatly among organizations and include age and sex, current medical condition, socioeconomic status and regional practice patterns.[[225]](#footnote-226) Consumers and purchasers should consider the information provided by these measures as a starting point for discussion. Analyzing Effectiveness of Care and Utilization results together may provide information about how resources are used, the extent of care and possible inappropriate care.

There are three kinds of measures in this domain:

* *Measures that express rates of service,* often expressed as “per 1,000 member years (or months).”
* *Measures that express the percentage of members who received certain services.* These are similar to the measures in the Effectiveness of Care domain and report information on members who were continuously enrolled in the organization for a certain period.
* *Utilization measures that are risk-*adjusted.

HEDIS 2016 reports many of these measures in table form. Each table includes a large number of data elements, broken down by age and sex.

Frequency of Ongoing Prenatal Care (FPC)

This measure looks at the use of prenatal care services. It tracks Medicaid-enrolled women who had live births during the past year to determine the percentage of recommended prenatal visits they had.

Complications can arise at any time during pregnancy. For that reason, continued monitoring throughout pregnancy is necessary. Frequency and adequacy of ongoing prenatal visits are important factors in minimizing pregnancy problems. ACOG recommends that prenatal care begin as early as possible in the first trimester of pregnancy.229  Visits should follow a schedule:

* Every 4 weeks for the first 28 weeks of pregnancy.
* Every 2–3 weeks for the next 7 weeks.
* Weekly thereafter until delivery.

Well-Child Visits in the First 15 Months of Life (W15)

This measure looks at the adequacy of well-child care for infants. It measures the percentage of children who had between one and six or more well-child visits by the time they turned 15 months of age.

The AAP recommends six well-child visits in the first year of life: the first within the first month of life, and then at around 2, 4, 6, 9 and 12 months of age.[[226]](#footnote-227) These visits are of particular importance during the first year of life, when an infant undergoes substantial changes in abilities, physical growth, motor skills, hand-eye coordination and social and emotional growth. Regular check-ups are one of the best ways to detect physical, developmental, behavioral and emotional problems. They also provide an opportunity for the clinician to offer guidance and counseling to the parents.

Well-Child Visits in the Third, Fourth, Fifth and Sixth Years of Life (W34)

This measure looks at the use of routine check-ups by preschool and early school-age children. It assesses the percentage of children 3, 4, 5 and 6 years of age who received at least one well-child visit with a primary care practitioner during the measurement year.

Well-child visits during the preschool and early school years are particularly important. A child can be helped through early detection of vision, speech and language problems. Intervention can improve communication skills and avoid or reduce language and learning problems.

The AAP recommends annual well-child visits for 2–6 year-olds.229

Adolescent Well-Care Visits (AWC)

This measure looks at the use of regular check-ups by adolescents. It reports the percentage of adolescents 12–21 years of age who had one or more well-care visits with a primary care provider or OB/GYN during the measurement year. Adolescents benefit from an annual preventive health care visit that addresses the physical, emotional and social aspects of their health.

Adolescence is a time of transition between childhood and adult life and is accompanied by dramatic changes. Accidents, homicide and suicide are the leading causes of adolescent deaths. Sexually transmitted diseases, substance abuse, pregnancy and antisocial behavior are important causes of—or result from—physical, emotional and social adolescent problems.

The AMA’s Guidelines for Adolescent Preventive Services, the federal government’s Bright Futures Program and the AAP guidelines recommend comprehensive annual check-ups for adolescents.[[227]](#footnote-228),[[228]](#footnote-229)

Frequency of Selected Procedures (FSP)

This measure lists several frequently performed procedures (mostly surgical, listed below) that contribute substantially to overall cost. Wide variations among geographic regions in medical procedure rates appear to have little correlation with health outcomes. The reasons for this are unclear. Some variation is because of unnecessary procedures; conversely, some procedures may not be performed often enough. These rates are likely to be strongly influenced by how the organization manages care.

|  |  |
| --- | --- |
| *Bariatric weight loss surgery* | Procedures such as gastric bypass and gastric banding, which change the digestive system’s anatomy, limit the amount of food that can be eaten and digested and thus promote weight loss. |
| *Tonsillectomy* | The surgical removal of the tonsils or adenoids. |
| *PCI* | Percutaneous coronary intervention. Encompasses a variety of procedures used to treat patients with stenotic coronary arteries found in coronary heart disease. |
| *Hysterectomy* | Removal of the uterus, most commonly because of the presence of benign or malignant tumors. |

|  |  |
| --- | --- |
| *Cholecystectomy* | Removal of the gall bladder. It is sometimes required as a treatment for gallstones or infection. HEDIS measures both laparoscopic procedures (those performed using a small surgical scope) and regular surgery. |
| *Back surgery* | All spinal fusions and disk surgeries, including laminectomy with and without disk removal. |
| *Cardiac catheterization* | Insertion of a slender sensing device into the heart to measure functions such as blood pressure and cardiac output or to evaluate the extent of CAD radiographically. This procedure is used in diagnosing heart disease. |
| *CABG* | Coronary artery bypass grafting. A surgical procedure to allow blood circulation to bypass an obstructed artery in the heart. |
| *Prostatectomy* | Removal of the prostate gland. It is a common treatment for benign or malignant enlargement of the prostate. |
| *Total hip or total knee replacement* | Procedures to replace joints damaged by arthritis. |
| *Carotid endarterectomy* | Used to prevent strokes when there is a narrowing in the arteries that supply the brain with blood. |
| *Mastectomy* | Excision of the breast. |
| *Lumpectomy* | Excision of a breast tumor with a limited amount of associated tissue. |

Variation in procedure rates present a starting point in examining the kind of care that is being rendered   
to members. Coding practices, epidemiology, demographics and practice patterns may be responsible   
for variation. Examining these measures may help eliminate unwarranted variation in the delivery of   
medical care.

Ambulatory Care (AMB)

This measure assesses member use of two kinds of ambulatory services:

* Outpatient visits.
* Emergency department visits.

Outpatient visits include office visits or routine visits to hospital outpatient departments. Emergency rooms often deliver nonemergency care.

Inpatient Utilization—General Hospital/Acute Care (IPU)

This measure assesses the extent to which the organization’s members receive inpatient hospital treatment because of pregnancy and childbirth, for surgery or for nonsurgical medical treatment.

The organization reports how many hospital stays occurred during the measurement year and the length of hospitalization.

Identification of Alcohol and Other Drug Services (IAD)

This measure provides an overview of members with an AOD dependence diagnosis and the extent to which the different levels of chemical dependency services are used. It reports the number and percentage of members with an AOD claim (i.e., containing a diagnosis of AOD abuse or dependence and a specific AOD-related service during the measurement year) in the following categories:

* Any Service.
* Inpatient Services.
* Intensive Outpatient or Partial Hospitalization Services.
* Outpatient or ED Services.

In each category, the organization reports by age and sex the number of members with an AOD diagnosis who received the service and the percentage that received the service out of all members with a chemical dependency benefit.

There are more deaths, illnesses and disabilities from substance abuse than from any other preventable health condition. Treatment of medical problems caused by substance use and abuse places a huge burden on the health care system.206

Mental Health Utilization (MPT)

It is estimated that 22.1 percent of American adults suffer from a diagnosable mental disorder. Federal legislation defines serious mental illness as “a mental disorder that substantially interferes with one’s life activities and ability to function.” Given this definition, it is estimated that 5.4 percent of the adult population in the U.S. is affected by serious mental illness each year.[[229]](#footnote-230) Approximately half of those receive some form of treatment. Overall, 15 percent of adults and 21 percent of children ages 9–17 receive mental health services in any one year,[[230]](#footnote-231) though very few of those treated receive adequate treatment.

Different “intensity levels” of mental health care exist:

* Inpatient treatment.
* Intensive outpatient and partial hospitalization.
* Outpatient or ED treatment.

Purchasers may be interested in the percentage of members who received mental health services at each of these intensity levels. This measure also provides information about access to mental health services.

Antibiotic Utilization (ABX)

This measure assesses the number of all antibiotic prescriptions prescribed to enrolled members, as well as antibiotics of concern, to encourage plans to reduce potential overuse, which may contribute to drug resistance. It reports outpatient utilization of antibiotic prescriptions, stratified by age and gender, for the following:

* Total number of antibiotic prescriptions.
* Average number of antibiotic prescriptions per member per year (PMPY).
* Total days supplied for all antibiotic prescriptions.
* Average days supplied per antibiotic prescription.
* Total number of prescriptions for antibiotics of concern.
* Average number of prescriptions PMPY for antibiotics of concern.
* Percentage of antibiotics of concern for all antibiotic prescriptions.
* Average number of antibiotics PMPY reported by drug class:
* For selected “antibiotics of concern.”
* For all other antibiotics.

Plan All-Cause Readmissions (PCR)

Discharge from a hospital is a critical transition point in a patient’s care. Poor care coordination at discharge can lead to adverse events for patients and avoidable rehospitalization. Hospital readmissions may indicate poor care or missed opportunities to coordinate care better. Research shows that specific hospital-based initiatives to improve communication with beneficiaries and their caregivers, coordinate care after discharge and improve the quality of care during the initial admission can avert many readmissions.

There is extensive evidence about adverse events in patients, and this measure aims to distinguish readmissions from complications of care and pre-existing comorbidities.[[231]](#footnote-232) This measure assesses the number of acute inpatient stays during the measurement year that were followed by an unplanned acute readmission for any diagnosis within 30 days for members 18 years of age and older in the following categories:

* Count of Index Hospital Stays (denominator).
* Count of 30-Day Readmissions (numerator).
* Average Adjusted Probability of Readmission.

“Potentially preventable readmissions” are defined as readmissions that are directly tied to conditions that could have been avoided in the inpatient setting. While not all preventable readmissions can be avoided, most potentially preventable readmissions can be prevented if the best quality of care is rendered and clinicians are using current standards of care.

Inpatient Hospital Utilization (IHU)

For members 18 years of age and older, this measure assesses the risk-adjusted ratio of observed to expected acute inpatient discharges during the measurement year reported by Surgery, Medicine and Total.

NCQA investigated the appropriateness of developing this risk adjusted HEDIS measure by building on the existing, unadjusted measure: *Inpatient Utilization—General Hospital/Acute Care (IPU)*. Since 1993, the IPU measure has reported the unadjusted total discharges per member month/year from acute inpatient care.

The aim of applying a risk adjustment strategy to this utilization measures is to allow better comparison of inpatient use across health plans and to create an “even playing field” by removing the effect of select patient characteristics and health status differences on the reported results.

Test results reveal that risk adjustment is a desirable refinement and demonstrate that the proposed risk adjustment strategy is both accurate and reliable. NCQA’s advisory panels agree that the results support the reliability of the risk adjustment model and that the measures can help identify opportunities for quality improvement.

Emergency Department Utilization (EDU)

For members 18 years of age and older, this measure assesses the risk-adjusted ratio of observed to expected emergency department (ED) visits during the measurement year.

NCQA investigated the appropriateness of developing this risk adjusted HEDIS measure by building on the existing, unadjusted measure: *Ambulatory Care (AMB).* Since 1993, the AMB measure has reported the unadjusted ED and outpatient services across health plan members of all ages.

The aim of applying a risk adjustment strategy to this utilization measures is to allow better comparison of inpatient use across health plans and to create an “even playing field” by removing the effect of select patient characteristics and health status differences on the reported results.

Test results reveal that risk adjustment is a desirable refinement and demonstrate that the proposed risk adjustment strategy is both accurate and reliable. NCQA’s advisory panels agree that the results support the reliability of the risk adjustment model and that the measures can help identify opportunities for quality improvement.

**Hospitalization for Potentially Preventable Complications (HPC)**

For members 67 years of age and older, this measure assesses the rate of discharges for ambulatory care sensitive conditions (ACSC) per 1,000 members and the risk-adjusted ratio of observed to expected discharges for ACSC by chronic and acute conditions.

Ambulatory care sensitive conditions are acute and chronic health conditions that can be managed or treated in the outpatient setting. Appropriate access to care, high-quality care coordination, a focus on chronic disease self-management and connection to community resources can reduce the probability that individuals with these chronic and acute conditions will develop complications or exacerbations that result in hospitalization.

Hospital and inpatient care is the largest component of total health care costs for older adults (24 percent of Medicare spending, approximately $129 billion dollars in 2013).[[232]](#footnote-233) Hospitalization also poses several risks for older adults, who frequently develop serious conditions as a result of hospitalization such as delirium, infection and decline in functional ability.[[233]](#footnote-234),[[234]](#footnote-235)

Reducing the rate of hospitalization for potentially preventable complications of acute and chronic conditions for older adults will improve patient health, reduce costs and improve quality of life. It is important to note that some complications or exacerbations are unavoidable and therefore the appropriate rate of hospitalization is not “zero”; however, this measure will provide important information to health plans, providers and consumers and other stakeholders about how well a system of care helps older adults with chronic and acute conditions prevent hospitalization.

Relative Resource Use Measures

The measures in this domain summarize resource use during the measurement year by members with specific acute or chronic conditions. Organizations report pharmacy member months, frequency of selected services and standard price for those services. When evaluated with HEDIS Effectiveness of Care measures for the same condition, the RRU ratio provides a better understanding of the efficiency or value of services rendered by an organization.

How much care costs is an important consideration when choosing a health plan. There is a great demand for information to help purchasers and consumers determine which organizations offer the highest quality services, along with effective management of those services and low premium or out-of-pocket costs.

HEDIS 2016 includes five measures of relative resource use (RRU) for members with specific chronic and acute conditions:

1. *Relative Resource Use for People With Diabetes (RDI).*

2. *Relative Resource Use for People With Cardiovascular Conditions (RCA).*

3. *Relative Resource Use for People With Hypertension (RHY).*

4. *Relative Resource Use for People With COPD (RCO).*

5. *Relative Resource Use for People With Asthma (RAS).*

The measures are a standardized approach to measuring resource use. When evaluated with the corresponding Quality of Care measures, they provide more information about the efficiency or value of services rendered by an organization.

RRU measures share the following features:

* They focus on high-cost conditions that have corresponding HEDIS Effectiveness of Care measures.
* They differentiate between unit price and utilization variation.
* They capture almost 80 percent of the services spent for all of the organization’s members.
* They rely on a transparent risk-adjustment methodology that is similar to any proprietary risk-adjustment system.
* They assess acute inpatient facility, nonacute inpatient facility utilization, pharmacy prescription utilization and lab and imaging utilization.

Health Plan Descriptive Information Measures

The measures in this domain provide information about an organization’s structure, staffing and enrollment—factors that contribute to its ability to provide members with effective health care. Measures include information on practitioners, such as the number of board-certified physicians and how physicians are compensated, and examine how an organization coordinates member care with other community organizations.

Board Certification (BCR)

This measure reports the percentage of the following types of physicians whose board certification is active as of December 31 of the measurement year:

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| * Family medicine physicians. * Internal medicine physicians. | * Pediatricians. * OB/GYN physicians. | * Geriatricians. * Other physician specialists. |

It ensures that physicians meet rigorous criteria and have evidence of:

* Professional standing.
* Commitment to lifelong learning and self-assessment.
* Cognitive expertise.
* Evaluation of practice performance in order to maintain an “active” board certification. The American Board of Medical Specialties (ABMS) and the American Osteopathic Association (AOA) member boards require participation in a program of ongoing maintenance of certification.[[235]](#footnote-236)

The quality of the doctors participating in an organization’s network has a significant effect on the overall quality of care delivered to members. As a result, purchasers and consumers want information that helps them assess the quality of an organization’s physicians (though HEDIS does not directly measure the quality of every doctor in an organization).

The changing scope of medical information, increased public concern for the need to recredential physicians and evidence that knowledge and skills of practicing physicians decay over time motivated specialty boards to limit the duration of certificates.[[236]](#footnote-237) To date, all ABMS member boards have agreed to issue time-limited certificates that necessitate subsequent recertification, usually at intervals of 10 years or less.

Board certification shows what percentage of the organization’s physicians have sought and obtained board certification. While there are valid reasons why physicians may not have done this—and board certification alone is not a guarantee of quality—certification provides a baseline established by standardized, specialty-specific competency testing.

Enrollment by Product Line (ENP)

This measure reports the total number of members enrolled for each product line, by age and sex. The information reported in this measure is used by some employer groups to determine membership size, and can be used to help interpret data from other measures.

Enrollment by State (EBS)

This measure reports the number of members enrolled any time during the measurement year, by state.

Language Diversity of Membership (LDM)

This measure reports the number and percentage of Medicaid, Medicare and commercial members enrolled at any time during the measurement year, by spoken English language proficiency, spoken language preferred for health care, and preferred language for written materials. Since there are varying classifications for language, this measure is intended to standardize the format of collection and reporting of spoken language information.

Race/Ethnicity Diversity of Membership (RDM)

This measure reports the number and percentage of members enrolled any time during the measurement year, by race and ethnicity. Since there are varying classification schemes for race and Hispanic origin, this measure is intended to standardize the format of collection and reporting of race/ethnicity.

Weeks of Pregnancy at Time of Enrollment (WOP)

This measure reports stage of pregnancy at date of enrollment in the organization for all Medicaid women who gave birth to a child during the measurement year.

Because pregnancy qualifies some women for Medicaid benefits, many female Medicaid members join an organization when they become pregnant. The number of women enrolling during early and late pregnancy is important descriptive information that helps to assess how much time the organization had to provide pregnancy-related care and to maintain or achieve good health for the mother and child. Additionally, Medicaid purchasers are interested in the stage of pregnancy of Medicaid eligible women at the time of their enrollment in order to interpret the pregnancy-related measures found in the Access/Availability of Care domain.

Total Membership (TLM)

This measure looks at the number of members enrolled as of December 31 of the measurement year.

Whenever you make a sizeable investment—as with health care coverage—it is important to know that the company you put your trust in is stable and will remain so for the near future. It is particularly important to be able to recognize changes in a health plan’s structure or financing that could potentially affect its ability to deliver high-quality care and service.

Stability is also important to consider when reviewing other aspects of organization performance, because past performance is a good predictor of future performance only if the organization’s structure and health care delivery systems are reasonably stable.

Measures Collected Using Electronic Clinical Data Systems

Electronic clinical data system. A structured, electronic version of a patient’s comprehensive medical experiences, maintained over time, that may include some or all key administrative clinical data relevant to care (e.g., demographics, progress notes, problems, medications, vital signs, past medical history, social history, immunizations, laboratory data, radiology reports).

The ECDS provides automated access to comprehensive information and can create data files for quality reporting (e.g., QRDA 1, C-CDA, CCD). The ECDS may also support other care-related activities directly or indirectly through various interfaces, including evidence-based decision support, quality management and outcome reporting.

**To qualify for this measure, ECDS data must be automated data that is accessible by the healthcare team at the point of care** (electronic health records, registries and case management or disease management systems to which any provider interacting with the member has access to the clinical interface). For specific requirements on allowable ECDS data, refer to <http://ncqa.org/ECDS>.

Utilization of PHQ-9 to Monitor Depression Symptoms for Adolescents and Adults (DMS)

The percentage of members 12 years of age and older with a diagnosis of major depression or dysthymia, who have a PHQ-9 or PHQ-A tool administered at least once during a four-month period. Two rates are reported.

1. **Inclusion in ECDS Rate.** The percentage of members 12 and older with a diagnosis of major depression or dysthymia, who are included in an electronic clinical data system (ECDS).
2. **Utilization of PHQ-9 Rate.** The percentage of PHQ utilization. Members with a diagnosis of major depression or dysthymia who are covered by an ECDS and, if they had an outpatient encounter, have *either* a PHQ-9 or a PHQ-A score present in their record.

Major depressive disorder (MDD) is a leading cause of disability worldwide, affecting an estimated 120 million people.[[237]](#footnote-238) The lifelong prevalence is estimated to range from 10 percent–15 percent.[[238]](#footnote-239) In the United States, 15.7 percent of people report that at some point in their lifetime they were told by a health care professional that they had depression.[[239]](#footnote-240)

Depression is also associated with other chronic medical conditions and increased morbidity and mortality. The mortality risk for suicide in depressed patients is more than 20-fold greater than in the general population.[[240]](#footnote-241) In terms of other chronic conditions, depression is associated with a 60 percent increased risk of type 2 diabetes,[[241]](#footnote-242) and has been identified as a risk factor for development of cardiovascular disease.[[242]](#footnote-243) In adolescents, depression can also result in serious long-term morbidities such as generalized anxiety disorder and panic disorder or lead to engagement in risky behaviors such as substance use.[[243]](#footnote-244),[[244]](#footnote-245),[[245]](#footnote-246) Adolescent-onset depression increases the risk of attempted suicide by five-fold, compared with nondepressed adolescents.[[246]](#footnote-247) Most adolescents who commit suicide—the third leading cause of death among 15–24 year olds—have a previous history of depression.[[247]](#footnote-248)

Depression has large effects on both health care costs and lost productivity. Adolescents with depression have higher medical expenditures, including those related to general and mental health care, than adolescents without a diagnosis of depression.[[248]](#footnote-249) A recent study showed a relationship between the severity of depression symptoms and work function in working-age adults, and found that for every 1-point increase in PHQ-9 score (a measure of depression severity), patients experienced an additional mean productivity loss of 1.65 percent. In a survey study, Birnbaum et al. found that major depressive disorder severity is significantly associated with increased treatment usage and costs, unemployment, disability and reduced work performance.[[249]](#footnote-250) When the results of the study were projected to the U.S. workforce, it was estimated that monthly depression-related worker productivity losses had human capital costs of nearly $2 billion.

Numerous studies have found that patient outcomes improve when there is collaboration between a primary care doctor, case manager and a mental health specialist to screen for depression, monitor symptoms, provide treatment and refer to specialty care as needed.[[250]](#footnote-251),[[251]](#footnote-252),[[252]](#footnote-253),[[253]](#footnote-254),[[254]](#footnote-255) Standardized instruments are useful in identifying meaningful change in clinical outcomes over time. Guidelines recommend that providers establish and maintain regular follow‐up with patients diagnosed with depression and use a standardized tool to track symptoms.[[255]](#footnote-256),[[256]](#footnote-257)

# Appendix 1

# Glossary

APPENDIX 1

GLOSSARY

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| access | A patient’s ability to obtain medical care. Ease of access is determined by components such as availability of medical services and their acceptability to the patient, location of health care facilities, transportation, hours of operation and affordability of care. |
| accreditation | An official authorization or designation to an organization determined by compliance with a set of industry-derived standards. |
| accuracy | The extent to which recorded data (on medical records, forms and computer databases) are error-free and reflect defining events. |
| acute care | Treatment of a short-term or episodic illness; treatment of an exacerbated chronic condition. |
| administrative database | Automated data, including claims and encounter systems used by an organization to manage delivery of health services to members. |
| administrative methodology | An organization must identify a measure’s denominator and numerator, using transaction data or other administrative databases. The denominator comprises all eligible members (see **eligible population**). The organization reports a rate based on all members who meet the denominator criteria and who are found through administrative data to have received a particular service. |
| algorithm | A method used to create a calculated result. For example, algorithms are used to combine medical record results with administrative results to produce a measure’s rate. |
| ALOS | Average length of stay. Average number of hospital days from admission to discharge. |
| ambulatory care | Outpatient health care services that do not require hospitalization, such as those delivered at a physician’s office, clinic, medical or surgical center or outpatient facility. |
| anchor date | The date when a member must be enrolled with the organization. No gaps in enrollment may include this date. |
| attestation | A statement ensuring the validity of a report or document (e.g., practitioner attestation). |
| audit | A systemic investigation of procedures and operations that determine conformity with prescribed criteria. |
| audit designation | Designations that are assigned by the HEDIS Compliance Auditor indicating the suitability of measures for public reporting. |
| audit rationale | Explanation for an audit activity or result. |
| baseline | The point of reference for comparing subsequent performance measurements and for assessing change, relative to a starting point. |
| benchmark | National, state and regional averages among organizations submitting data to NCQA. Benchmark data come from accredited and nonaccredited organizations and consist of reporting measures publicly and privately. |

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| beta-blocker | A medication that lowers blood pressure and reduces how hard the heart works; this medical therapy has been shown to lower the risk of a second heart attack. |
| bias (degree of bias) | Degree of error. HEDIS rate measures are reported using a 95 percent confidence interval. A greater than 5 percent error in the reported rate is considered materially biased and receives a *Biased Rate (BR)* designation. For non-rate based measures, the error is greater than 10 percent for material bias and *Biased Rate (BR)* designation. |
| bundling | The organization accepts a single code as representative of several services or encounters. For example, prenatal care visits are bundled with delivery, or all hospital services may be under the revenue code for room and board. |
| CAHPS | Consumer Assessment of Healthcare Providers and Systems. The CAHPS Program is overseen by the Agency for Healthcare Research and Quality (AHRQ) and includes a number of survey products designed to capture consumer experience across different levels of the health care system. NCQA uses adult and child versions of the CAHPS Health Plan Survey for HEDIS and refers to them as the *CAHPS Health Plan Survey 5.0H, Adult Version* and *CAHPS Health Plan Survey 5.0H, Child Version.* |
| capitation | A set amount of money received or paid and based on membership rather than services delivered. Generally refers to a negotiated, per capita rate to be paid periodically (usually monthly) by an organization to a provider. |
| carve out | An organization sponsor (e.g., employer or purchaser) contracts for a service or function (e.g., mental health or laboratory) to be performed by an entity other than the organization. |
| chemical dependency | Dependence on or addiction to a substance (e.g., alcohol). |
| chronic care | A general description of a medical condition from which a person may suffer periodically or continuously, as opposed to a condition that can be healed with treatment. |
| claims audit/ error rate | A rate that indicates the reliability of a claims processing system. Most organizations review a sample of processed claims to compute an error rate, usually expressed as financial and nonfinancial. |
| claims dependent denominator | To determine the eligible population through claims data (e.g., diabetic members are identified by claims showing diagnoses for diabetes or dispensing insulin). |
| comprehensive data | Complete records of patient care. Information about a member’s every encounter with the health care system. |
| concurrent audit | Evaluation of methods and data during the data collection period. HEDIS Compliance Audits take place during data collection, allowing organizations to correct errors before data are reported. |
| confidence level | The degree of confidence, expressed as a percentage, that a reported number’s true value is between the lower and upper range specified. |
| continuous enrollment | The minimum amount of time, including allowed gaps, that a member must be enrolled in an organization to be eligible for a measure. |

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| copayment | A fixed payment paid by a patient at each visit to an organization clinician or when receiving covered services in a health plan. |
| corrective action | An activity an organization completes between the onsite visit and data submission to correct problems that may result in a *Biased Rate (BR)* designation. |
| CPM | Committee on Performance Measurement. This committee decides the measures included in HEDIS and content or changes to these measures. |
| CPT294 | Current Procedural Terminology codes. A list of descriptive terms and identifying codes for reporting physicians’ medical services and procedures. |
| database | Data collected and organized in a computer file for ease of expansion, updating and retrieval. |
| data completeness | Determination or evaluation of missing data. Data-completeness issues must be quantified and *Biased Rate (BR)* designations must be supported by determination of material bias. |
| data completeness assessment | An assessment of the effect of claim lag and encounter data submission rates on organization data completeness. |
| data consolidation | A combination of data from multiple sources, such as multiple electronic sources or electronic and medical record sources. |
| data extraction | Collecting data from medical records or from electronic and automated systems. |
| data integration | Combining data from multiple sources, with additional steps to ensure that duplicate data are removed and the remaining data are refined. |
| data integrity | Data that have not been altered or destroyed. |
| data reliability | A measure of data consistency based on reproducibility and an estimation of measurement error. |
| deductible | A fixed amount a patient must pay each year before an insurer will begin covering any part of the cost of care. |
| delegate | A formal process by which the organization gives another entity the authority to perform certain functions on its behalf, such as providing mental health care, laboratory services and vision services.  Delegation can also include the service functions, such as claims processing and call center functions. Delegates used in NCQA accreditation may also perform credentialing (CR), utilization management (UM) and quality improvement (QI) activities. |
| deviation | A process that does not strictly comply with HEDIS standards as published by NCQA. |

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| direct pay | Premium payments made by members directly to the organization rather than through an intermediary such as an employer or state or federal program. |
| discharges | The number of people released from a hospital. |
| disenrollment | Termination of participation in an organization. |
| DRG | Diagnosis Related Group. A system of classification for inpatient hospital services based on principal and secondary diagnoses, surgical procedures, age, sex and complications, and which is used to secure reimbursement from payers by hospitals and other providers. |
| DTaP | Vaccine for prevention of diphtheria, acellular pertussis and tetanus. |
| ECDS | Electronic clinical data system. A structured, electronic version of a patient’s comprehensive medical experiences, maintained over time, that may include some or all key administrative clinical data relevant to care (e.g., demographics, progress notes, problems, medications, vital signs, past medical history, social history, immunizations, laboratory data, radiology reports). |
| EDI | Electronic data interface. Standard electronic formats used for collecting data that are imported into or exported from various systems. |
| eligible population | Members of an organization who meet certain criteria for inclusion in a sample for calculation of a HEDIS measure. |
| enrollment | Number of people or lives covered by an organization at any given time. |
| external data | Any automated data supplied by contracted practitioners, vendors or public agencies (e.g., pharmacies, labs, hospitals, schools, state public health agencies) constitute external supplemental data.  External data can also come from electronic medical records (EMR). An EMR system is typically developed and maintained at the hospital or physician office and may be integrated (or linked) to the organization’s system. External data files can be standard or nonstandard. |
| FAQ | Frequently asked questions posted to the NCQA Web site on the 15th of each month. |
| fee-for-service | A method of charging for medical services. A physician charges a fee for each service provided and the insurer or patient pays all or part of the fee. |
| HEDIS repository | A database or file system that stores HEDIS information, including practitioners, claims and membership, and which may be updated during the data collection period. |
| HIPAA | Health Insurance Portability and Accountability Act. Federal government standards regarding privacy regulation that sets out specific and explicit rights that individuals have to access, make changes to and restrict the use of their protected health information. |
| homegrown code | A diagnosis or procedure code not recognized nationally but used by the organization. Commonly found in mental health and preventive care. |
| HMO | Health maintenance organization. An organized health care system that is accountable for the financing and delivery of a broad range of comprehensive health services to an enrolled population. |

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| hybrid measure | | | A measure that requires the organization to identify the numerator using both administrative and medical record data. The denominator consists of a systematic sample of members drawn from the measure’s eligible population. |
| ICD-9-CM codes | International classification of diseases, clinical modification. A system designed for classifying morbidity and mortality information for statistical purposes and for indexing hospital records by disease and operations for data storage and retrieval. | |
| indicator | A measure rate. For measures with multiple rates, the term “indicator” is used to describe an individual rate. For example, the *Comprehensive Diabetes Care* measure has ten indicators or rates. | |
| in-network | A predesignated set of providers in an organization is referred to as a **network** of providers. Members usually receive a higher rate of coverage when they see one of these providers. | |
| inclusiveness | The extent to which an entire population or defined group is intentionally included in a database. | |
| industry standard code | A code used by the majority of health care facilities and providers. HEDIS uses these codes in the specifications (CPT, LOINC, ICD-9-CM, DRG, CMS1500 place of service codes, UB type of bill, revenue codes). | |
| inpatient | Procedures performed or services rendered to patients during their hospital stay. | |
| interrater reliability | A methodology for quality control and evaluation of the medical record review process. Organizations use this method to compare a record reviewer’s results to those of another reviewer. | |
| internal data | Any automated data file created by the organization, which supplements the claim/ encounter data in the HEDIS repository. The data can come from internal systems such as DM programs. Internal files are nonstandard. | |
| logical group | A category that contains measures with similar characteristics, such as dependence on carved-out benefits, practitioner specialty, contraindications and diagnosis code specificity. Logical groups should be used for measure selection (core set, convenience sample, medical record review validation) and expansion. | |
| LOINC | Logical Observation Identifiers Names and Codes. A system designed for the exchange and pooling of laboratory results for clinical care, outcomes management and research. | |
| LOS | Length of stay. Number of hospital days from admission to discharge. | |
| map | A document showing how the organization cross-references homegrown codes to codes specified by HEDIS. | |
| measurement year | The year that an organization evaluates HEDIS measures, often referred to as the “data year.” Also the year prior to the HEDIS reporting year; for example, HEDIS reporting year 2016 is based on measurement year 2015 (January 1–December 31, 2015). | |

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| member | An individual (and the eligible dependents) who pays premiums to the organization as a member of the organization’s enrollment population. Members usually receive specified health care services from a defined network for a specified time. |
| member months | The cumulative number of months of organization enrollment by the current eligible population. |
| network | Doctors, clinics, health centers, medical group practices, hospitals and other providers that an organization selects and contracts with to care for its members. |
| nonstandard code | A code not used or recognized by the majority of practitioners and facilities (see **industry standard code** and **homegrown code**). These organization-specific codes must be mapped to industry codes for inclusion in HEDIS. |
| outpatient visits | Visits to providers that do not require hospital admission. |
| PHI | Protected health information. Information that can identify a specific person. Person-identified information is associated with names, social security numbers, alphanumeric codes or other unique individual information. |
| POS | Point of service. An HMO with an opt-out option that is accountable for financing and delivering a broad range of comprehensive health services to an enrolled population. |
| positive numerator event | Evidence of a measure-required service/event/diagnosis in either the administrative data or the medical record. |
| positive numerator hit | A member who satisfies the numerator requirements of a measure and who may be counted in the numerator. Some measures have multiple numerator requirements; for example, in the *Childhood Immunization Statu*s measure, the DTaP numerator requires four separate immunizations for a member to be a positive numerator hit. |
| PPO plan | Preferred provider organization plan. An accreditable entity whose performance is assessed by NCQA using the NCQA Health Plan Accreditation standards. PPO plans take responsibility for providing health benefits-related services to covered individuals and for managing a practitioner network. They may administer health benefits programs for employers, either by assuming insurance risk or by providing only administrative services. |
| practitioner | A professional who provides health care services. Practitioners must usually be licensed as defined by law. |
| product | An organized health care system that is accountable for financing and delivering a broad range of comprehensive health services to an enrolled population (HMO, POS, PPO). |
| product line | Commercial, Medicaid, Medicare, Marketplace. |
| provider | An institution or organization that provides services for the organization’s members. Examples of providers include hospitals and home health agencies.  NCQA uses the term **practitioner** to refer to professionals who provide health care services; however, it recognizes that a **provider directory** generally includes both providers and practitioners, and that the inclusive definition is the more common usage. |

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| quality assurance | Activities that safeguard or improve quality of medical care. |
| rater-to-standard | A methodology for evaluating the medical record review process. Organizations using this method compare their medical record reviewers’ results to a supervisor or lead reviewer’s results and strive for consistency of reviewer results. |
| reporting year | The year when HEDIS is reported and for which the volume is named; the year immediately following the measurement year. |
| required benefit | HEDIS measures evaluate performance and hold organizations accountable for services provided in their members’ benefits package. Measure specifications include benefits (i.e., medical, pharmacy, mental health, chemical dependency) required during the continuous enrollment period. |
| retrospective audit | Evaluation of methods and data after the data collection period has ended. With this type of audit, organizations are not given a chance to correct errors before data are reported. HEDIS Compliance Audits are conducted using a **concurrent audit**. |
| risk-adjustment | A statistical adjustment that controls for factors beyond the control of an organization so that results can be validly compared with those of other organizations. |
| sample frame | The file that contains the eligible population for survey measures. The sample frame must be approved by the auditor before it is sent to the NCQA-Certified Survey Vendor. |
| service event | A claim or call into a call center. |
| service measure | The *Call Answer Timeliness* measure is a service measure in the Access and Availability of Care domain. |
| SNP | Special Needs Plan. SNPs were created by Congress as part of the Medicare Modernization Act (MMA) of 2003 as a new type of Medicare managed care plan focused on certain vulnerable groups of Medicare beneficiaries: the institutionalized,  dual eligibles and beneficiaries with severe or disabling chronic conditions.  An SNP benefit package, referred to by CMS as the “plan,” may be a stand-alone Medicare Advantage (MA) contract or a benefit package within a larger MA contract. SNPs submit structure and process measures and HEDIS measures at the benefit package level. |
| systematic sample | The methodology that NCQA requires the organization to use to create a subset of members from the eligible population. This subset or sample is used for reporting hybrid measures. |
| validity | The extent to which data correspond to an actual event or documentation that supports a measure. |

# Appendix 2

# Contributors

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Adult Obesity Measurement Advisory Panel

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| **David Arterburn, MD, MPH (Chair)** Group Health Cooperative  **Lawrence Blonde, MD, FACP, FACE** Ochsner Clinic Foundation  **David Brumley, MD** Blue Cross Blue Shield of Massachusetts  **Marc Cornier, MD**  Denver Health Medical Center  **Morgan Downy, JD** The Downey Obesity Report  **Leonard (Len) Fromer, MD, FAAFP** TransforMED  **LuAnn Heinen, MPP** National Business Group on Health | **Trina Histon, PhD** Kaiser Permanente  **Michael Jensen, MD** Mayo Clinic  **Richard A. Kahn, PhD**  American Diabetes Association  **Jaan Sidorov, MD, MHSA** Sidorov Health Solutions  **Thomas Stellato, MD** Case Western Reserve University  **Thomas Wadden, PhD** University of Pennsylvania School of Medicine  **Peter Wald, MD, MPH** USAA |

Behavioral Health Measurement Advisory Panel

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Bone Joint Measurement Advisory Panel

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Cardiovascular Measurement Advisory Panel

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Child Health Measurement Advisory Panel

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Childhood/Adolescent Obesity Measurement Advisory Panel

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Culturally and Linguistically Appropriate Services Workgroup

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Diabetes Measurement Advisory Panel

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Efficiency Measurement Advisory Panel

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Geriatric Measurement Advisory Panel

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HEDIS Expert Audit Methodology Panel

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HEDIS Expert Coding Panel

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HEDIS Expert Laboratory Panel

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HEDIS Expert Pharmacy Panel

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Overuse Measurement Advisory Panel

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Perinatal Care Measurement Advisory Panel

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Respiratory Measurement Advisory Panel

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Risk Adjustment Expert Work Group

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Technical Measurement Advisory Panel

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