

Introduction to Physician Performance Measurement Sets

***Tools Developed by Physicians
for Physicians***

October 2001

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Introduction

The Physician Consortium for Performance Improvement (The Consortium) is a physician-led initiative that provides performance measurement tools to practicing physicians to facilitate quality improvement in patient care.

This document describes The Consortium's purpose, and the underlying principles that guide its work, as well as The Consortium's processes for developing performance measurement sets, and its products and collaborations.

Physician Consortium for Performance Improvement

The Consortium currently includes methodological experts, clinical experts representing more than 50 national medical specialty societies, the Agency for Healthcare Research and Quality (AHRQ), and the Centers for Medicare & Medicaid Services (CMS). The American Medical Association (AMA) convenes The Consortium and provides staff support. The Iowa Foundation for Medical Care serves as consultant. A current list of Consortium members and Consortium products can be found on The Consortium's Web site:

www.ama-assn.org/go/quality

All medical specialty societies represented in the AMA House of Delegates are invited to become members of The Consortium. For more information regarding representation, contact the AMA at 312 464-4908.

The vision and mission of The Consortium are as follows:

Vision Statement

The vision of the Physician Consortium for Performance Improvement is to fulfill the responsibility of physicians to patient care and public health and safety by:

- becoming the leading source organization for evidence-based clinical performance measures and outcomes reporting tools for physicians; and
- ensuring that all components of the medical profession have a leadership role in all national forums seeking to evaluate the quality of patient care.

Mission Statement

The mission of the Physician Consortium for Performance Improvement, a physician-led initiative, is to improve patient health and safety by:

- identifying and developing evidence-based¹ clinical performance measures that enhance quality of patient care and that foster accountability;
- promoting the implementation of effective and relevant clinical performance improvement activities; and
- advancing the science of clinical performance measurement and improvement.

Purpose of The Consortium's Physician Performance Measurement Sets

One of the fundamental activities of The Consortium is to identify and, when necessary, develop *Physician Performance Measurement Sets* for practicing physicians. The primary purpose of these sets is to encourage physicians to improve patient care and maintain clinical excellence by ensuring that they receive standardized, useful information describing their current practice patterns compared with a minimum set of clinical recommendations. Physician use of these measurement sets is voluntary.

For *patients*, the Physician Performance Measurement Sets represent the consensus of experts in clinical and research fields and include those measurable activities in which physicians can participate to continuously improve quality of care and outcomes.

It is important to note that performance measures must be designed to meet their intended purpose.^{2,3} Because The Consortium's performance measures are intended for continuous physician quality improvement, and not physician comparison,⁴ The Consortium does not specify a minimum sample size but encourages inclusion of all patients who meet the criteria for that particular measurement set. Furthermore, The Consortium recommends that feedback to physicians include both aggregated patient data and confidential, individual patient data, to enable physicians to tailor quality improvement efforts to individual patient needs.

Key Terms

A *clinical performance measure* indicates "whether or how often a process of care or outcome of care occurs"² (eg, percentage of patients receiving at least one lipid profile during the reporting year). As such, clinical performance measures are not clinical guidelines; rather, they are derived from clinical guidelines.

A collection of one or more measures that focus on a condition (eg, adult diabetes) or a type of care or service (eg, preventive care and screening) is known as a *performance measurement set*. When all of the measures within a set are intended to be used together, the set is called a *Core Physician Performance Measurement Set*. Core measurement sets allow the physician to evaluate his or her performance with regard to one or more "key" interventions that are recommended for a given population of patients—where the recommended interventions are both widely accepted (at least as a minimum standard of practice) and feasible to measure. For example, The Consortium recommends that physicians managing the care of patients with chronic stable coronary artery disease apply all of the measures in the *Chronic Stable Coronary Artery Disease Core Physician Performance Measurement Set*, as these address "key" interventions for that patient group. Additional interventions may be indicated for subsets of patients with that condition (such as high risk groups), but the core measures should apply to the majority of such patients.

For other types of care or service (eg, preventive care and screening), The Consortium recommends that physicians select those measures within a set that are appropriate for their patient population. For example, a physician whose patients are primarily under the age of 50 may choose to apply the Tobacco Use measure, which covers patients aged 18 years and older, but not the Influenza Immunization measure, which currently focuses on patients more than 50 years of age. A physician who manages the care for pregnant women may choose to implement the *Prenatal Testing Core Physician Performance Measurement Set* as well as the Tobacco Use measure. The Consortium strives to provide physicians with tools that are flexible and useful.

Given the purpose of Consortium measurement sets—to facilitate quality improvement—Consortium measures include both *clinical performance measures* and *descriptive measures*. Descriptive measures provide physicians with distributions of the frequency of testing and test results (eg, distribution of values of HbA1c test results). Key terms are defined on the next page.

Table 1. – Key Terms

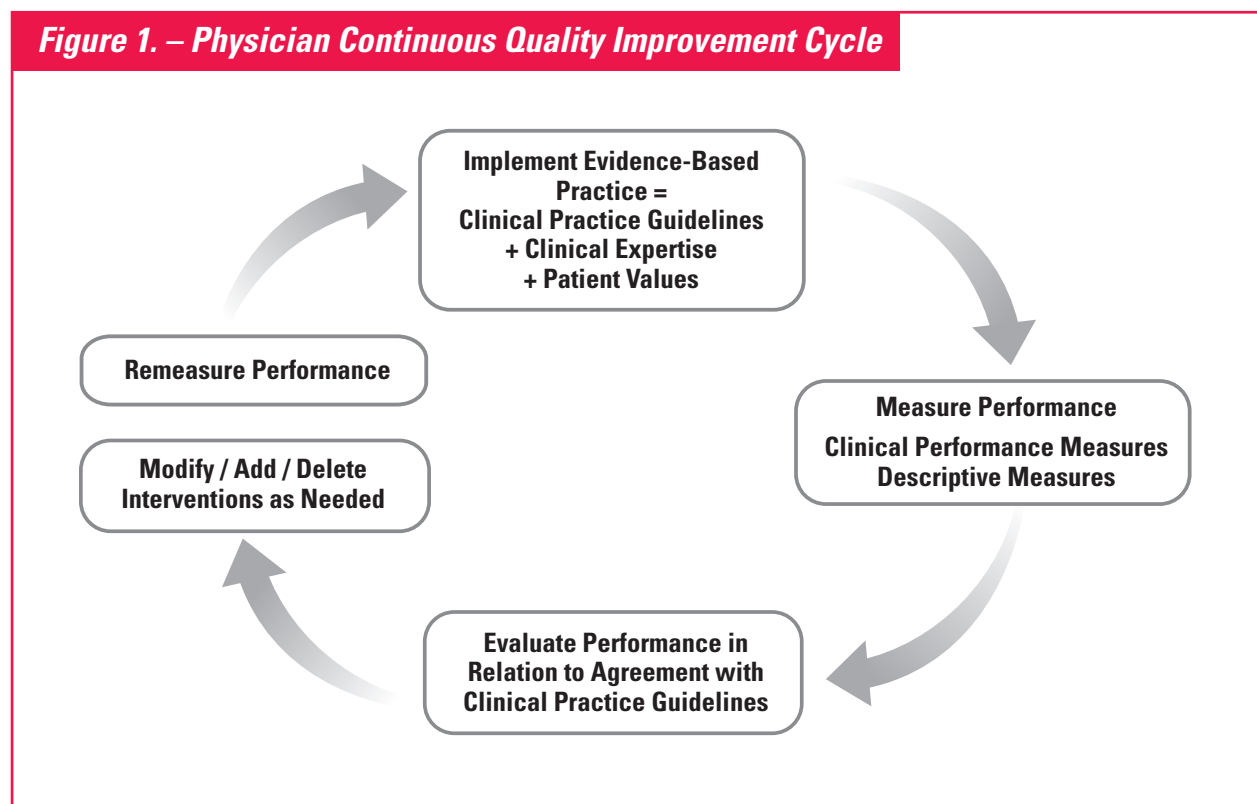
| Term / Definition | Example |
|--|--|
| <p>Aspect of Care A specific area of patient care that may be the focus of measure development</p> | Lipid Management |
| <p>Clinical Performance Measure Indicates “whether or how often a process of care or outcome of care occurs”²</p> | Percentage of patients with prior myocardial infarction who are receiving beta-blocker therapy (Beta-Blocker Therapy Core Measure) |
| <p>Descriptive Measure The distribution of frequency of testing or test values over a specified time period; does not specify a recommended level of frequency or test value; Consortium measures include both clinical performance measures and descriptive measures</p> | <p>Distribution of frequency of LDL test(s): 0, 1, 2, 3, >3</p> <p>Distribution of values of LDL test results (mg/dl): ≥130, 100-129, <100 (Lipid Management Core Measure)</p> |
| <p>Physician Performance Measurement Set One or more performance measures that focus on a condition or type of care or service</p> | <i>Preventive Care and Screening Physician Performance Measurement Set</i> |
| <p>Core Physician Performance Measurement Set A set where all of the measures within the set are intended to be used together</p> | <i>Adult Diabetes Core Physician Performance Measurement Set</i> |
| <p>Inclusion Criteria Data used to include patients who fall within the scope of the measure</p> | History of myocardial infarction (Beta-Blocker Therapy Core Measure) |
| <p>Exclusion Criteria Data used to exclude patients who fall outside the scope of the measure</p> | Patients with end stage renal disease (ESRD) (Urine Protein Testing Core Measure) |
| <p>Adjustment Criteria Data used to adjust the denominator to provide physicians with additional, useful information</p> | <p>Unadjusted Denominator: All patients with chronic stable coronary artery disease (CAD)</p> <p>Adjusted Denominator: All patients with chronic stable CAD except those with active bleeding in the previous six months, which required hospitalization and/or transfusion(s) (Antiplatelet Therapy Core Measure)</p> |
| <p>Data Element Information collected from a data source to construct the measure</p> | Yes/No – Patient receiving a statin (Drug Therapy for Lowering LDL-Cholesterol Core Measure) |

Table 1. – Key Terms Continued

| Term / Definition | Example |
|---|--|
| Patient Factor Information collected to determine if patient is eligible for inclusion in measurement set or to give meaning to feedback | Patient age, gender |
| Physician / Office Factor Information collected to give meaning to feedback | Practice size, specialty |
| Feedback The manner in which data will be presented to the physician | Per Patient - Number of lipid profiles obtained per patient per year Across All Patients - Percentage of patients receiving at least one lipid profile per year (Lipid Management Core Measure) |

Principles Underlying The Consortium's Work

- **Performance measures are not clinical guidelines; rather, they are *derived from evidence-based clinical guidelines and indicate “whether or how often a process of care or outcome of care occurs.”***²
The Consortium identifies and, when necessary, develops performance measures, *not* clinical guidelines. Clinical guidelines, which are often developed by medical specialty societies, are “standardized specifications for care developed by a formal process that incorporates the best scientific evidence of effectiveness with expert opinion.”⁵ Evidence-based practice refers to “the integration of best research evidence with clinical expertise and patient values.”¹
- **Performance measurement is an integral step in physician continuous quality improvement.**
Performance measurement enables the physician to identify aspects of care that may need to be modified to improve patient care (see Figure 1).



- **Performance measure design and use must be consistent with their intended purpose.**^{2,3}
The Consortium's performance measures are designed to facilitate individual physician quality improvement. Therefore, there are no minimum sample size requirements or explicit risk adjustment criteria.⁴ The suggested feedback is detailed enough to pinpoint areas of concern for the physician (eg, all HbA1c test values, per patient). The Consortium's measures are not intended, and should not be used, for physician comparison.⁴

- **Physicians will value performance measurement data that:**

- **are accurate and meaningful.**

Performance measures must be tested for reliability, validity, and feasibility to ensure that they correctly measure what was intended and that they provide essential information to the physician.

- **can be tracked over time.**

Performance measures have been identified as a means for tracking changes in patient care. Therefore, data element specifications should be consistent from year to year unless new knowledge requires changes.

- **provide for feedback on all of their patients, not just those covered by a particular health plan.**

Health plans often provide physicians with performance measurement reports that cover only those patients in their respective plans. Information on only a fraction of the physician's overall practice provides an incomplete picture of clinical practice.

- **include data on individual patients and data aggregated across patients.**

An aggregated statistic, such as the percentage of patients with diabetes who receive an annual eye examination, may be useful to initially pinpoint areas for improvement; however, physicians need individual patient data to enable them to tailor quality improvement efforts to individual patient needs.

- **are available where and when needed.**

The Consortium continues to explore ways to increase data accessibility at the physician-patient encounter, such as integrating pop-up reminder screens into computer-based patient records or flowsheets into the paper medical record.

- **Performance measures should be implementable across all relevant medical specialties.**

A particular Consortium Physician Performance Measurement Set is intended for any physician who manages the overall care of patients with that particular condition, regardless of the physician's specialty. For example, the *Adult Diabetes Core Physician Performance Measurement Set* is appropriate for internists, family practitioners, general practitioners, endocrinologists, diabetologists, gerontologists, obstetricians/gynecologists, and nephrologists. To ensure that Consortium measures are applicable across specialties, all relevant specialties are represented on Consortium measurement development work groups. Other measurement sets that are relevant strictly to a particular specialty or subspecialty are being developed by those specialty societies.

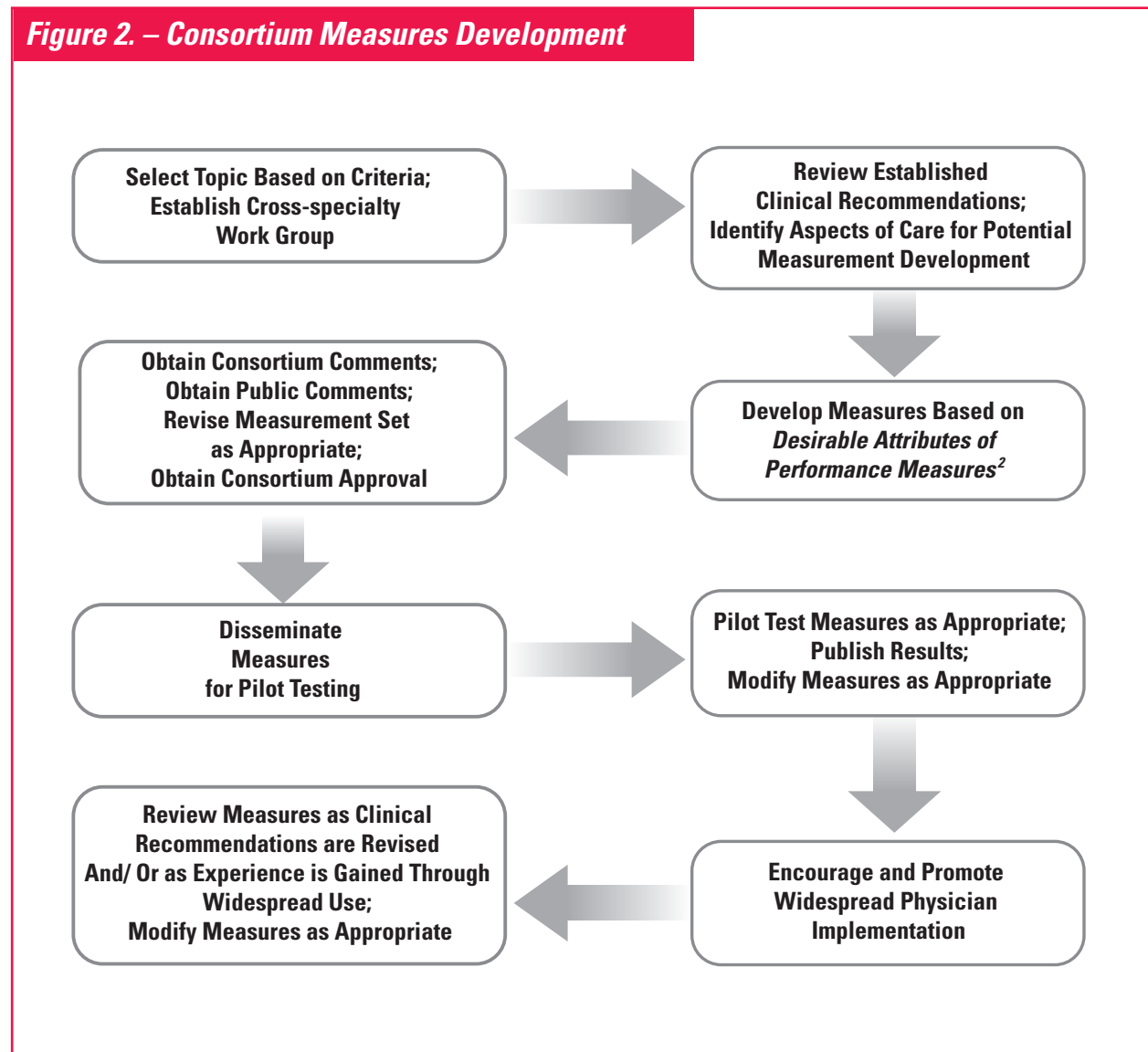
- **Innovative data collection strategies will reduce data collection burden.**

Asking a busy physician practice to collect data for performance measurement often adds administrative burden. To limit data collection burden, The Consortium is working with other organizations to coordinate data collection with hospitals and health plans and to explore the use of computer-based patient records as a resource for performance measurement data.

The Consortium's Process for Developing Measures

The Consortium's Physician Performance Measurement Sets are developed using the process diagrammed in Figure 2. The process is followed consistently to ensure that each measurement set provides physicians with products that are valid, reliable, and useful. The following pages further describe specific steps in the process and provide the criteria used in the selection of topics and development of measures.

Figure 2. – Consortium Measures Development



Criteria for Topic Selection

The following criteria are used by The Consortium to select topics for the development of performance measures. Topics meeting the first tier criteria are then considered by application of the second tier criteria.

First Tier

1. Actionable by physician or physician group.
2. Known feasibility (eg, available data sources, physician attribution).
3. National, widely accepted guidelines or evidence base available.
 - 3a. Potential of guideline or assessment to improve health outcomes: expected effect on health outcomes[†] and/or public health issues.

Second Tier

4. Prevalence of the clinical problem or condition: number of affected persons per 1,000 persons in the general U.S. population.[†]
5. Burden of illness imposed by the problem: individual mortality, morbidity, functional impairment, cost per person, and macro-economic burden.
6. Variability in practice: significant differences in utilization rates for prevention, diagnoses, or treatment options.[†]
7. Work completed to date in identifying performance measures for particular condition.
8. Potential of the guideline or assessment to reduce costs.[†]
9. Number of specialties treating condition.
10. Opportunity for the medical profession to take a leadership role.

[†]Derived from the Institute of Medicine Committee on Methods for Setting Priorities for Guidelines Development.⁶

Consortium Measures Development

On reaching consensus on the selection of a clinical topic, The Consortium chairs invite two Consortium members to serve as co-chairs of the new work group. All members of The Consortium are invited to participate on Consortium work groups to ensure cross-specialty representation. Together, work group members determine if additional members, with particular expertise, are needed.

Work group members first review existing clinical guidelines, including the levels of evidence provided, and existing performance measures to determine aspects of care for potential measure development. Work groups use a consensus statement, *Desirable Attributes of Performance Measures*,² jointly developed by the AMA, the National Committee for Quality Assurance (NCQA), and the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), to guide the measures development process (see pages 14-15).

Performance measures created by the work group undergo review by the full Consortium and are then made available to targeted audiences for public comment. The work group responds to comments, revises the measures if appropriate, and presents its recommendations to The Consortium. Subsequent to consensus and approval by the full Consortium, the performance measurement set is made available for pilot testing and demonstration projects.

A list of the current work groups is available on The Consortium's Web site:

www.ama-assn.org/go/quality

Desirable Attributes of Performance Measures

The AMA, JCAHO, and NCQA have adopted the following attributes of performance measures. These attributes are applied to all the measures developed by these three organizations to ensure consistency.

Table 2. – Desirable Attributes of Performance Measures²

| Attribute | Definition |
|---|--|
| 1. Importance of Topic Area Addressed by the Measure | |
| 1A. High Priority for Maximizing the Health of Persons or Populations | The measure addresses a process or outcome that is strategically important in maximizing the health of persons or populations. It addresses an important medical condition as defined by high prevalence, incidence, mortality, morbidity, or disability. |
| 1B. Financially Important | The measure addresses a clinical condition or area of health care that requires high expenditures on inpatient or outpatient care. A condition may be financially important if it either has high per-person costs, or if it affects a large number of people. |
| 1C. Demonstrated Variation in Care and/or Potential for Improvement | The measure addresses an aspect of health care for which there is a reasonable expectation of wide variation in care and/or potential for improvement. If the purpose of the measure is internal quality improvement and professional accountability, then wide variation in care across physicians or hospitals is not necessary. |
| 2. Usefulness in Improving Patient Outcomes | |
| 2A. Based on Established Clinical Recommendations | For process measures, good evidence exists that the process improves health outcomes. For outcomes measures, good evidence exists that there are processes or actions that providers can take to improve the outcome. |
| 2B. Potentially Actionable by User | The measure addresses an area of health care that potentially is under the control of the physician, health care organization, or health care system that it assesses. |
| 2C. Meaningful and Interpretable to User | The results of the measure are reportable in a manner interpretable and meaningful to the intended user. For example, physicians must be able to use the information generated by the measure to improve patient care. Health care organizations must find the information useful for decision-making purposes. When measures are used to compare health care systems, users should be able to understand the clinical and economic significance of differences in how well systems perform on the measure. |

Table 2. – Desirable Attributes of Performance Measures² Continued

| Attribute | Definition |
|---------------------------------|---|
| 3. Measure Design | |
| 3A. Well Defined Specifications | The following aspects of the measure are to be well defined: numerator, denominator, sampling methodology, data sources, allowable values, methods of measurement, and method of reporting. |
| 3B. Documented Reliability | The measure will produce the same results when repeated in the same population and setting (low random error). Tests of reliability include (a) test-retest (reproducibility): test-retest reliability is evaluated by repeating administration of the measure in a short time frame and calculating agreement among the repetitions; (b) inter-rater: agreement between raters is measured and reported using the kappa statistic; (c) data accuracy: data are audited for accuracy; and (d) internal consistency for multi-item measures: analyses are performed to ensure that items are internally consistent. |
| 3C. Documented Validity | The measure has face validity—it should appear to a knowledgeable observer to measure what is intended. The measure also should correlate well with other measures for the same aspects of care (construct validity) and capture meaningful aspects of this care (content validity). |
| 3D. Allowance for Risk | <p>The degree to which data collected on the measure are risk adjusted or risk stratified depends on the purpose of the measure.</p> <p>If the purpose of the measure is for internal continuous quality improvement and professional accountability, then requirements for risk adjustment or risk stratification are not stringent.</p> <p>If the purpose of the measure is comparison and accountability, then either the measure should not be appreciably affected by any variables that are beyond the user’s control (covariates), or to the extent possible, any extraneous factors should be known and measurable. If case mix and/or risk adjustment is required, there should be well-described methods for either controlling through risk stratification or for using validated models for calculating an adjusted result that corrects for the effects of covariates. (In some cases, risk stratification may be preferable to risk adjustment because it will identify quality issues of importance to different subgroups.)</p> |
| 3E. Proven Feasibility | <p>The data required for the measure can be obtained by physicians, health care organizations, or health care systems with reasonable effort and within the period allowed for data collection.</p> <p>The cost of data collection and reporting is justified by the potential improvements in care and outcomes that result from the act of measurement.</p> <p>The measure should not be susceptible to cultural or other barriers that might make data collection infeasible.</p> |
| 3F. Confidentiality | The collection of data for the measures should not violate any accepted standards of confidentiality. |
| 3G. Public Availability | The measure specifications are publicly available. |

Pilot Testing/Demonstration Projects

When a Physician Performance Measurement Set is completed and approved, The Consortium actively solicits partners among its constituents and other stakeholders to test the measurement set. Projects may focus on a) testing the reliability and validity of measures; b) demonstrating the feasibility of data collection from physician offices and other practice sites; c) evaluating the use of computer-based and Web-based applications; d) increasing physician participation in practice-based research; or e) testing the feasibility of single data collection for physician-, hospital-, and health plan-level analyses (see page 20). Results obtained from the demonstration projects will be reviewed by The Consortium and subsequently submitted for publication.

Content of the Physician Performance Measurement Sets

Each Physician Performance Measurement Set may include:

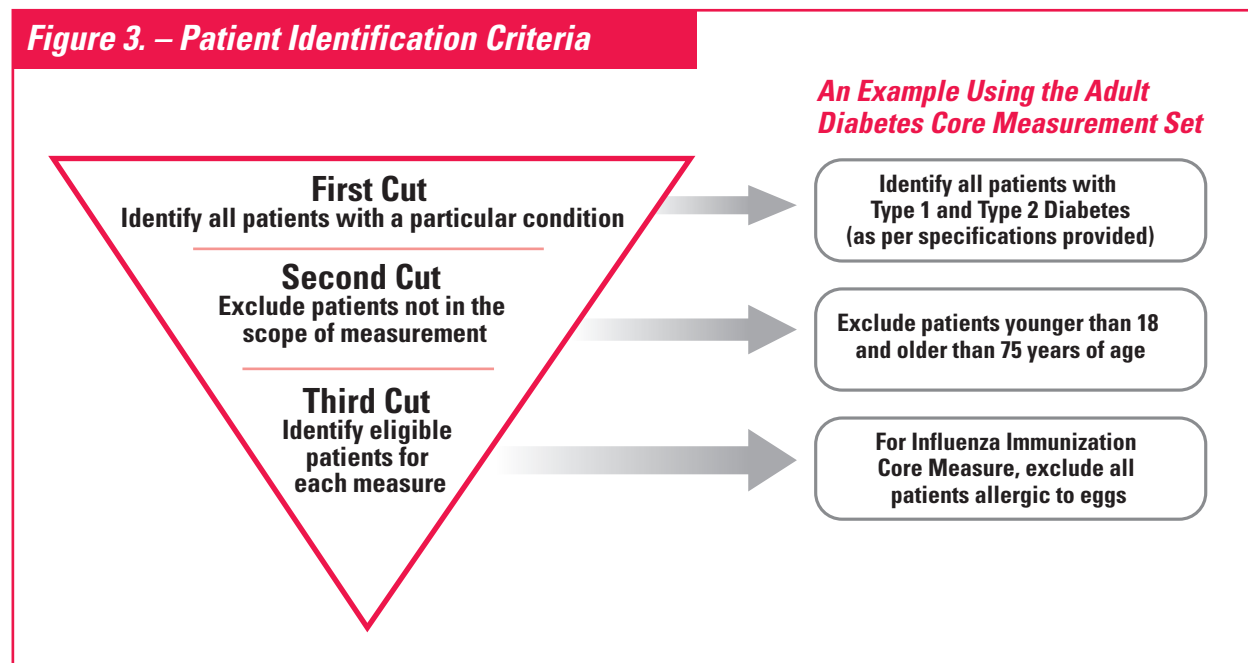
- the Work Group's composition and objectives;
- the rationale for the selection of the topic;
- the patient identification criteria and data collection time frame;
- the performance measures including:
 - the clinical recommendations used in the development of the measure;
 - the inclusion, exclusion, and/or adjustment criteria, if appropriate;
 - the data elements that must be collected;
 - the clinical performance measures;
 - the descriptive measures; and
 - the feedback per patient and across patients;
- a comparison of performance measures among select organizations;
- a sample prospective data collection tool, or flowsheet;
- a sample retrospective data collection tool;
- the specifications for retrospective data collection by medical record chart abstraction;
- sample feedback reports; and
- references for clinical recommendations.

Complete Physician Performance Measurement Sets are available at The Consortium's Web site:

www.ama-assn.org/go/quality

Patient Identification Criteria

Patients may be identified for participation in the measurement set in two ways. First, a physician may look back (ie, retrospectively) at medical records for patients who meet the patient identification criteria. Or, as patients are receiving care or begin receiving care, they may be included prospectively in the eligible population. The choice of a patient identification method is often dependent on the accessibility of the data used to identify patients. Because these measurement sets are intended for continuous physician quality improvement rather than for comparison, The Consortium does not specify a minimum sample size but encourages inclusion of all patients who meet the criteria for that particular measurement set.



Data Collection

Regardless of the patient identification method used, data may be collected prospectively or retrospectively. The measurement set will often include a flowsheet for prospective data collection. As the physician sees patients who meet the specified criteria, the flowsheet may be completed. Retrospective data collection involves the use of a data abstraction tool. This tool enables the physician or a data abstractor to review the patient's medical record or other data source and retrieve the information. Each measurement set also includes detailed instructions for data abstraction, including relevant medication lists. Specific data collection time frames are described in each measurement set.

It is important to note that the data elements described in these measurement sets require the use of confidential patient information. The Consortium encourages physicians to review and analyze their patients' data themselves. In the event that a physician wishes to use a vendor to assist him or her in data analysis, the obligations of the privacy requirements of the Health Insurance Portability and Accountability Act of 1996⁷ ("HIPAA Privacy Requirements") will apply. This means that patient information must be "de-identified" consistent with the HIPAA Privacy Requirements before it is sent to the vendor. If de-identification cannot be accomplished, the physician's practice will need to enter into a Business Associate agreement and observe additional requirements under the HIPAA Privacy Requirements if he or she sends protected health information to the vendor.

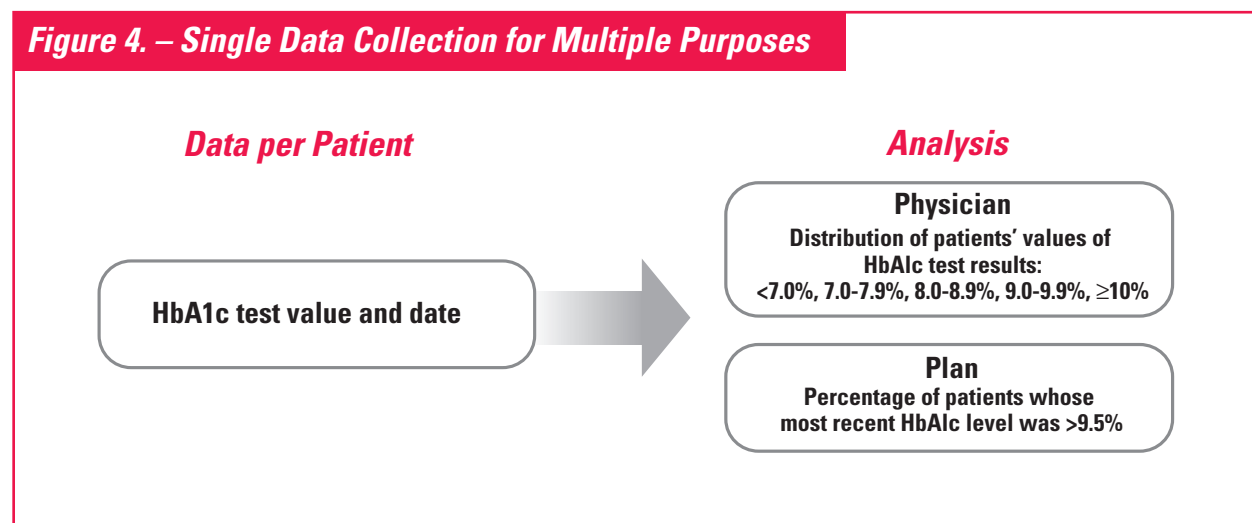
Sample Patient-level and Physician-level Feedback Reports

Physician Performance Measurement Sets call for feedback analysis reports that include de-identified patient level data and aggregated data across all eligible patients (aggregated to the physician practice level). Examples of both reports are provided in each measurement set. Users of the measurement sets are encouraged to improve on these report formats as long as the integrity of the data types is maintained and patient and physician confidentiality and privacy are maintained. The Consortium is also working with physicians to integrate performance measurement into practice, so that data are available at the time of the patient-physician interaction. For example, some current computer-based patient record systems provide graphs of patients' HbA1c test results, which can be viewed by both the patient and physician during the visit.

Collaboration with JCAHO and NCQA

Other organizations also have identified performance measurement sets. It is important to note, however, that measurement sets developed by various organizations often have different purposes. For example, NCQA's HEDIS® measures are intended to enable comparisons of managed health care plans by consumers and purchasers.

Although the purpose of measures may differ, commonalities among required data elements may exist (Figure 4). For example, a HEDIS® measure for health plans is the percentage of patients whose most recent HbA1c level was >9.5%.⁸ The Consortium descriptive measure is the distribution of values of HbA1c test results: <7.0%, 7.0-7.9%, 8.0-8.9%, 9.0-9.9%, ≥10%. The measures differ because their intended purposes differ. However, both measures require collecting the *same* data elements: HbA1c test value and date. Therefore, opportunities exist to collect data one time for multiple purposes. These opportunities for single data collection are being explored through a collaboration among the AMA, NCQA, and JCAHO. These organizations have issued a consensus statement on diabetes performance measurement, *Coordinated Performance Measurement for the Management of Adult Diabetes*,⁹ and are currently testing the concept of single data collection for multiple purposes.



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