

Characteristics of Measurement

Moving Measurement into Action: Designing Global Principles for Measuring Patient Safety | Pre-Seminar Briefing Document on Effective Measures and Types of Measurement.

Characteristics of Effective Measures

Meaningful	The measure evaluates something that is important to measure, and its reporting is meaningful to key stakeholders.	Is this topic important to measure? Is this measure meaningful to key stakeholders? Does this measure address a gap in performance? Is this measure relevant to intended activities, outputs, and outcomes? Does this measure address a key priority?
Valid	The measure is scientifically acceptable. It is evidence-based and has been adequately tested.	Is this measure evidence-based, and what level of evidence is available? Can this measure be evaluated against an existing standard? Has this measure been adequately tested? By whom? Is there strong evidence this measure leads to improvement? What is the process used to validate this measure?
Feasible	The data necessary for the measure is already collected or can be collected without adding undue burden.	Is the necessary data available? Is there a person or technology that is able to collect and analyze the necessary data? Is data for the measure derived from a regular data source that is also used for constructing other measures (for example, an electronic medical record) or is additional data collection needed? Is this measure dependent upon nonproprietary information that will allow for scale and affordability?
Fit for purpose	The measure is actionable for the specific purpose a stakeholder will use it for (monitoring, signaling, continuous improvement, etc.)	Is this measure fit for the purpose a specific stakeholder wants to use it for? Can this measure be used for improvement and accountability purposes? Can this measure track changes over time? Can it compare outcomes among organizations? Can this measure be available in a timely manner (e.g. when decisions will be made)?
Reliable	The measure is easy to understand and measure consistently across individuals and settings.	Is this measure specific and closely tied to the intended change/ outcome? Is this measure easy to understand and interpret? Will the measure be consistently evaluated across reviewers and settings?

Adapted from National Quality Forum and the Agency for Healthcare Research and Quality criteria for evaluating a measure, among other resources.

Types of Measures – Core Safety and Quality Measure Types

Structural Measures

These measures assess the context in which care is delivered and the characteristics of a care setting. Structural measures may assess things like capacity and personnel, facilities, systems, and policies.

Examples:

Example A: Ratio of patients to care providers.

Example B: Percentage of physicians who can send prescription information to a pharmacy electronically.

Process Measures

These measures assess transactions between patients and providers. Process measures evaluate generally accepted standards for clinical practice and what a provider does to maintain or improve health, in both healthy populations and in those diagnosed with specific conditions.

Examples:

Example A: Percent of patients receiving recommended preventative immunizations.

Example B: Percent of patients with intentional rounding completed on schedule.

Outcome Measures

These measures evaluate the effect of health care on the health status of patients and populations. Outcome measures include both ultimate outcomes and intermediate outcomes, and impact key stakeholders including patients, communities, and payors.

Examples:

Example A: Number of adverse drug events per 1,000 doses.

Example B: Percent of patients who die as a result of a surgery.

Culture Measures

These measures assess patterns of individual or organizational behavior, based upon shared beliefs and values, that continuously seek to minimize patient harm, which may result from the process of care delivery.

Examples

Example A: Measures/ questionnaires to assess safety culture as experienced by patients.

Example B: Measures/questionnaires to assess safety culture as experienced by health care workers.

Types of Measures – Additional Safety and Quality Measure Types

Balancing Measures

Balancing measures help to assess whether changes designed to improve one part of the system cause new or worsening problems in other parts of the system.

Examples:

Example A: Measures on reduced length of stay may be balanced with measures on readmission rates.

Example B: Measures on reduced ventilator time may be balanced with measures on reintubation rates.

Patient Reported Measures

These measures are often collected via survey and are usually focused on experiences or outcome measures (e.g., PREMS, PROMS). Patient reported measures provide direct feedback from patients and caregivers about their experience receiving care.

Examples:

Example A: Percentage of patients that report they are as involved as they wanted to be in decisions about their care.

Example B: Percentage of patients that get a hip replacement reporting they experience increased mobility and decreased pain after surgery.

Composite Measures

Composite measures combine multiple measures to produce a single score. These measures are intended to paint a complete picture of a system, organization, or process and to simplify comparison.

Examples:

Example A: A “big dot” for patient safety summarizing various types of adverse events occurrence per hospital.

Example B: Overall mortality for selected conditions.

Prospective Measures

Measures for which data are collected prospectively.

Examples:

Example A: Incidence of patients in a department developing bedsores over the course of a week.

Example B: Number of days without a particular adverse event.

Retrospective Measures

Measures for which data are collected retrospectively, usually from administrative databases.

Examples:

Example A: 5-year survival rate for breast cancer.

Example B: 30-day case fatality rate for Acute Myocardial Infarction (AMI).