NATIONAL QUALITY FORUM

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WASHINGTON, DC 20005
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Reference Materials

The Essentials of Quality Measurement

Hosted by NQF Member Relations

September 28, 2017

This packet includes:

- Agenda
- Complete slide deck
- Handout: Types of Measures
- Infographic: Understanding Performance Measures Anatomy and Types
- Infographic: Criteria for Evaluating a Measure
- Infographic: A Tale of Two Hearts
- Endorsement Criteria
- NQF Phrasebook: A Plain Language Guide to NQF Jargon
- NQF Glossary
- ABCs of Measurement
- Learner Notification for CME and CNE

There are many additional resources online:

- Member Resources for a full listing of all member resources
- Measurement Basics page, including the e-learning activity Measurement Unpacked
- Member Education Resource Center for webinar recordings, downloadable resources, and videos
- Member events page to register for upcoming online and in-person events
- NQF Projects page to view all current projects
- Email alert page to sign up for topic specific email alerts
- Quality Positioning System, a database for all NQF endorsed measures

NATIONAL QUALITY FORUM

Essentials of Quality Measurement

Hosted by NQF Member Relations

Thursday, September 28, 2017

Stay Connected

Wifi: guest Wifi password: NQFguest

Tweet about this event: @NatQualityForum *or* #NQF

Learning Objectives

By the end of the day, participants will:

(1) Know the basic terminology of quality measurement.
(2) Understand the lifecycle of quality measurement.
(3) Describe specific examples of how measures are used in the field (when, where, why and how).

Agenda

8:30am **Networking Breakfast**
Hot breakfast compliments of NQF Member Relations

9:00am **Introduction and Icebreaker (15 mins)**
Camille Espinoza, MSW, MSPH, Director, Member Education, NQF

- Welcome and opening activity
- Member recognition
- Overview of objectives and agenda

9:15am **Measurement Essentials (75 mins)**
Melissa Marinelarena, RN, MPA, Senior Director, National Quality Forum

Learning objectives: (1) Understand where measurement fits into a system of quality improvement; (2) Define 'performance measure' and at least three different types of measures; (3) Identify at least three different uses for performance measures.

- The bigger picture of quality improvement – why do we measure?
- How measures are used, such as internal quality improvement, payment, and public reporting
- Types of measures, such as structure, process, outcome and patient-reported outcome measures
- Incorporating the patient experience into measurement

10:30am **Break (15 mins)**

10:45pm **The Lifecycle of Measure Development (75 mins)**
Cindy Cullen, MS, MBA, Associate Director, Mathematica Policy Research
Sam Simon, PhD, Senior Researcher, Mathematica Policy Research

Learning objectives: (1) Identify the key components of measure development; (2) Describe current challenges in measure development.

- Overview of key stages of measure development, including: concept and ideation, measure development and testing, implementation and monitoring, and measure maintenance
- Review of potential measure data sources and the strengths and challenges associated with each
- Illustrative example(s): the story of a measure from concept through implementation

12:00pm **Networking Lunch (45 mins)**
Compliments of NQF Member Relations

12:45pm **NQF Endorsement: Recognizing Attributes of Great Measures (75 mins)**
Karen Johnson, MS, Senior Director, NQF

Learning objective: Identify characteristics of great performance measures and how those characteristics related to NQF's five measure evaluation criteria.

- Attributes of great measures
- NQF's measure evaluation criteria and subcriteria

2:00pm **Break (15 mins)**

2:15pm **Measures in the Field: Stories from Emergency Medicine (30 mins)**
Michael Phelan, MD, FACEP, Emergency Services Institute and Medical Director Quality Measurement and Reporting, Enterprise Quality, Cleveland Clinic

Learning objectives: (1) Explain how measures are used throughout the healthcare system; (2) Illustrate how measures are used on the frontline of care through an example from emergency medicine.

- Demonstrate where to find measures in publicly available databases
- Example from emergency medicine: measuring door to balloon time to improve outcomes for patients with cardiac arrest

2:45pm **Conclusion**
Camille Espinoza, MSW, MSPH, Director, Member Education, NQF

- Closing activity
- Raffle drawing for word scramble

3:00pm **End**

Your NQF Member dues help support this workshop and other educational events.

NATIONAL QUALITY FORUM

The Essentials of Quality Measurement

Introduction

Camille Espinoza, MSW, MSPH
Director, Member Education, NQF

Twitter: @NatQualityForum or #NQF

September 28, 2017

WELCOME

TO NATIONAL QUALITY FORUM

Over 430 Members Strong

Introduction

Camille Espinoza, MSPH, MSW
Director, Member Education
National Quality Forum

No conflicts to disclose.

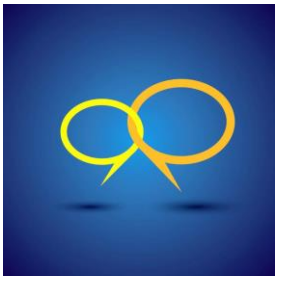
How Many Here Have…

Examples of Quality

Audience Activity: Reflections on Quality

Put on your “quality lens” and look for quality

Audience Activity: Reflections on Quality



1) Find another person at your table that you do not know
2) Introduce yourselves
3) Think back to the last time you or a loved one interacted with the health care system: where do you see quality, or not?

Quality and Measurement

How do we get to quality?

There is only one way: **Measurement!**

Today's Objectives

By 3:00pm today, you will:

- Know the basic terminology of quality measurement
- Understand the lifecycle of quality measurement
- Be able to identify NQF's measure endorsement criteria
- Describe specific examples of how measures are used in the field (when, where, why, and how)

Agenda and Housekeeping

Today's packed agenda includes:

- Learning from five quality experts
- Plenty of interactive activities
- Ample time for breaks and networking
- Opportunity to earn continuing medical education credits or continuing nurse credits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Essentials of Quality Measurement

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Thursday, September 28, 2017

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- Member recognition
- Overview of objectives and agenda

9:15am Measurement Essentials (75 mins)
Melissa Manwaring, RN, MPA, Senior Director, National Quality Forum

Learning objectives: (1) Understand where measurement fits into a system of quality improvement; (2) Define 'performance measure' and at least three different types of measure; (3) Identify at least three different uses for performance measures

- The bigger picture of quality improvement – why do we measure?
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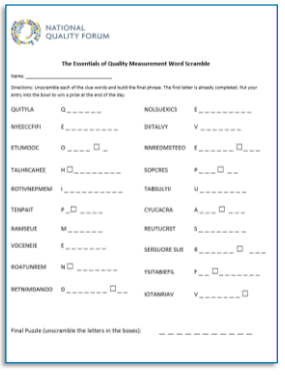
Obtaining CME and CNE credits

- Has been approved for 4.75 hours of credit for nurses and physicians
- These credits are recognized by many other organizations – check with your professional society or licensing board
- To claim credits, simply fill out the evaluation within 30 days
- A link will be sent to your email

Word Puzzle Raffle Drawing



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The Essentials of Quality Measurement Word Scramble

Name: _____

Directions: Unscramble each of the clue words and build the final phrase. The first letter is already completed. Put your entry into the bowl to win a prize at the end of the day.

QUITYLA	Q_____	NOLSUEXICS	E_____
NHEECCFIFI	E_____	DITALVY	V_____
ETUMODC	O____□_	NNREDMSTEEO	E_____□___
TALHRCAHEE	H□_____	SOPCRES	P___□__
ROTIVNEPMEMI	I_____	TABSULYII	U_____
TENPAIT	P_□____	CYUCACRA	A___□___
RAMSEUE	M_____	REUTUCRST	S_____
VOCENEIE	E_____	SERSUORE SUE	R_____□___
ROATUNREM	N□_____	YSITABIEFIL	F__□_____
RETNIMDANDO	D_____□__	IOTAMRIAV	V_____□

Final Puzzle (unscramble the letters in the boxes): _____

NATIONAL QUALITY FORUM

Measurement Essentials

Melissa Mariñelarena, RN, MPA
Senior Director, Quality Measurement

No conflicts to disclose.

September 28, 2017

Objectives & Agenda

By the end of this session, members can expect to:

- Understand where measurement fits into a system of quality improvement
- Define 'performance measure' and at least three different types of measures
- Identify at least three different uses for performance measures

Key Points

- ✓ To provide the best patient outcomes, we use healthcare performance measures as a tool to continuously improve the care we deliver.
- ✓ There are many forms and functions of measures. What they all have in common is that they seek to improve health outcomes by improving quality of care.
- ✓ Quality measurement is at work behind the scenes occurring throughout all aspects of healthcare, in various settings, and for various populations.

Meet Joe

- 50 years old
- Married for 25 years
- 2 adult children
- Fulltime, sedentary job
- Just became a grandfather
- He has a dog named “Buster”
- He spends time with his family and friends, plays cards, and going fishing

Joe's Annual Primary Care Visit

- 5'10" and 40 pounds overweight
- Previously diagnosed with hypertension
- Blood pressure was normal
- Diagnosed with type 2 diabetes
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- Annual influenza vaccine given

Joe's Check-Up Three Months Later

- Reduced weight by 10 pounds
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- Cholesterol lower
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Joe's Check-Up One Year Later

- Lost a total of 30 pounds
- Blood sugars lower
- Walks 2 miles every day
- Episodes of low blood pressure
- Colorectal cancer screening

Why Do We Measure?

To improve Joe's health outcomes.
Because whatever it is, it could be better.

Why Do We Measure?

The primary goal of healthcare performance measurement is to ***improve the quality of healthcare*** *received by patients (and ultimately, to* ***improve health****)*

Measurement is a quality improvement tool, not an end in and of itself

What Do We Mean by Measurement?

What Do We Mean by Measurement?

Meas•ure

n. A standard: a basis for comparison; a reference point against which other things can be evaluated; "they set the measure for all subsequent work."

v. To bring into comparison against a standard.*

*Source: *The ABC's of Measurement*

What is a Measure?

Healthcare performance measures are tools used to ***quantify*** the quality or cost of care provided to patients and their families.

They allow us to ***gauge*** the quality of care that is provided and help us understand whether and how much improvement activities ***improve*** care and outcomes.

Who Uses Measures and Why?

Many people are interested in the quality, outcomes, and cost of care including:

- Patients, Consumers, Families, & Caregivers
- Primary Care, Specialists, & Other Health Professionals
- Health Systems & Care Facilities
- Employers & Payers (private & public)
- Measure Developers and Programs
- Health and Measurement Researchers

What are the Major Uses of Healthcare Performance Measures?

- Internal quality improvement
- Benchmarking
- Accountability applications
  - Certification
  - Accreditation
  - Defining provider networks
  - Public reporting
  - Payment (public, i.e. Medicare, Medicaid)
  - Payment (private plans)

What Are The Types of Healthcare Performance Measures?

What are the Types of Healthcare Performance Measures?

Structure Measures

What do structure measures do?

- Assess healthcare infrastructure
- Reflect conditions in which providers care for patients
- Provide valuable information about institutional capacity, staffing and the volume of procedures performed by a provider

Examples of structure measures:

- Nursing care hours per day per patient
- Adoption of medication e-prescribing

Structure

What are the Types of Healthcare Performance Measures?

Measure Type	Definition
Structural	Assesses healthcare infrastructure. EXAMPLE: *Providers who can send prescription information to a pharmacy electronically* *EXAMPLE: Number of nursing hours per patient day* *EXAMPLE: Providers who have a reminder system for screening mammograms*

Process Measures

What do process measures do?

- Assess steps that should be followed to provide good care
- Show whether steps proven to benefit patients are followed correctly by a provider

Examples of process measures:

- Documentation of current medications and dosages in the medical record
- Screening (cervical cancer) rates

Process

What are the Types of Healthcare Performance Measures?

Measure Type	Definition
Process	Assesses steps that should be followed to provide good care. EXAMPLE: *Patients with HbA1c testing during the measurement period* *EXAMPLE: Adolescents who have received recommended immunizations* *Example: Stroke patients who receive clot-busting medications in a timely manner*

Outcome Measures

What do outcome measures do?

- Assess the results of healthcare, not the inputs or processes
- Assess endpoints like well-being, ability to perform daily activities, or death

Examples of outcome measures:

- Injury during a hospital stay
- Infections following surgery
- Mortality rate after heart attack

Outcome

What are the Types of Healthcare Performance Measures?

Measure Type	Definition
Intermediate Outcome	Assesses a change in physical condition that contributes to a long-term outcome. EXAMPLE: *Individuals with Blood Pressure < 140/90* *EXAMPLE: Diabetics with HbA1c levels < 8%*
Outcome	Assesses the results of healthcare that are experienced by patients. EXAMPLE: *Individuals who die after a heart attack* *EXAMPLE: Individuals who are readmitted to the hospital*

Incorporating the Patient Perspective

- *Surveys & Tools*
- *Importance*
- *Translation of Patient Reported Experience into Measurement*

What are the Types of Healthcare Performance Measures?

Measure Type	Definition
Patient-Reported Outcome Performance Measure (PRO-PM)	Assesses performance using an instrument, scale, or survey that gathers the information directly from the patient, consumer, or caregiver on their healthcare engagement and experiences. *EXAMPLE: Patients or caregivers who say they are involved in care decisions* *EXAMPLE: Caregivers who feel confident giving medications to a family member.*

What are the Types of Healthcare Performance Measures?

Measure Type	Definition
Cost/ Resource Use	Assesses the cost or the resources (people and supplies) needed to provide care. EXAMPLE: *Resource use of primary care provider's effectiveness at managing their patients.*
Composite	A combination of two or more component or individual measures, each of which individually reflects the quality of various aspects of care, into a single quality measure with a single score. EXAMPLE: *How successful is a patient's diabetes managed based on their A1c, blood pressure, statin use, tobacco use, and daily aspirin or anti-platelet medication.*

Where Do Data for Measures Come From?

Where Do Data for Measures Come From?

Where Do Data for Measures Come From?

- Paper medical records
- Electronic health records
- Other electronic clinical data (e.g., pharmacy, labs, imaging)
- Electronic assessment data (e.g., MDS; OASIS)
- Administrative claims (e.g., insurance claims)
- Clinical data registries
- Patient reports (e.g., from surveys)

Whose Performance is Measured?

Providers of healthcare: Provider-level measures

- Individual clinicians or groups of clinicians
- Hospitals
- Nursing facilities
- Home health agencies
- Hospices
- Health plans

Whose Performance is Measured?

Populations: Population-level measures

- A specified geopolitical area or some other subpopulation of individuals (e.g., age, race, ethnicity, occupation, schools, health conditions, common interests, or any number of other characteristics)

What are the "Key Ingredients" of a Measure?

What Are the "Key Ingredients" of a Measure?

To understand a measure, we need to know :

- ***What*** should happen?
- ***Who*** is the target group?
- ***Where*** should it take place?
- ***When*** should it take place?
- ***How*** should it occur?
- What, Who, Where, When, & How should ***NOT*** be measured?

"*Measure specifications*" is the term used to describe how to build and calculate a measure

Let's Review a Measure – NQF #0057

Title

Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) testing

Description

Percentage of patients 18-75 years of age with diabetes (type 1 and type 2) who received an HbA1c test during the measurement year

Numerator (What, How, When)

Patients with a HbA1c test completed during the measurement period

Denominator (Who, Where, When)

Patients with type 1 or type 2 diabetes who had at least one described encounter during the measurement period

Exclusions (NOT)

Patients with gestational or steroid-induced diabetes

How is Performance Calculated?

Numerator (What, How, When)

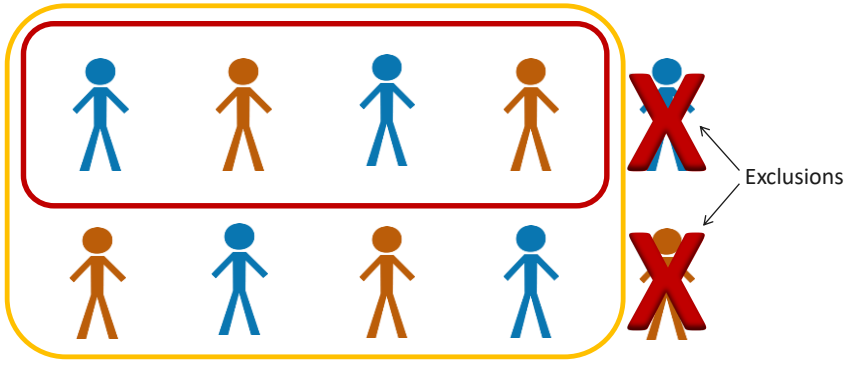
Patients with HbA1c testing during the measurement period

Denominator (Who, Where, When) – Exclusions (NOT)

Patients with type 1 or 2 diabetes who had at least one described encounter during the measurement period

Patients with gestational or steroid-induced diabetes

Patients Receiving Hemoglobin A1c Testing



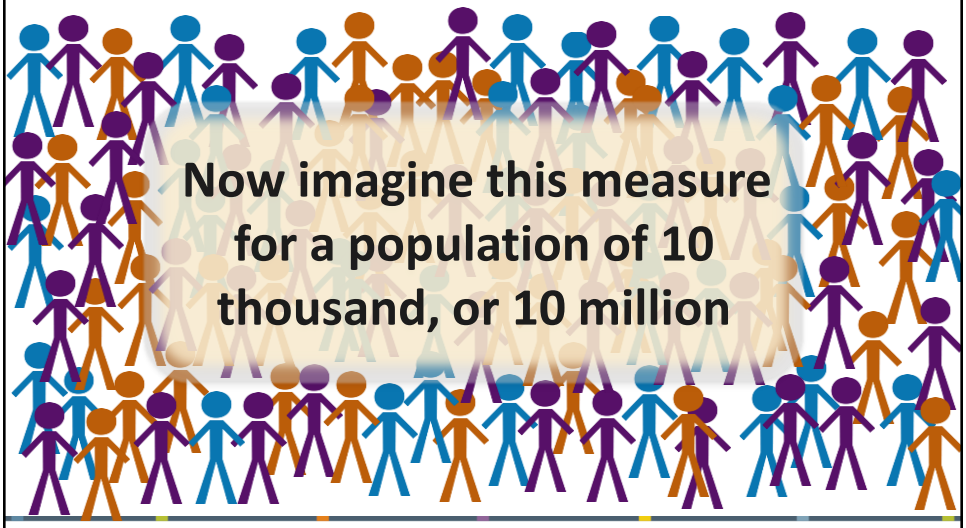
50% of eligible patients received HbA1c testing

Calculating Patients Receiving Hemoglobin A1c Testing

$$\frac{\text{Numerator}}{\text{Denominator} - \text{Exclusions}}$$

$$\frac{4}{10-2} = \frac{4}{8} = 50\%$$

Populations Receiving Hemoglobin A1c Testing



Measures at Work Behind the Scenes

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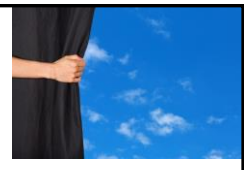
Joe's Annual Primary Care Visit: Measures at Work Behind the Scenes



Measure Name/# [type]	Key Question
Body Mass Index (BMI) Screening and Follow Up (NQF 0421) [process]	Did the provider calculate the patient's BMI, and if the BMI is out of range, did the provider take action?
Flu Vaccinations for Adults Ages 18 and Over (NQF 0039) [process]	Did the provider administer the flu vaccine to all eligible adults during their annual visit?
EHR* with EDI* prescribing used in encounters where a prescribing event occurred (NQF 0487) [structure]	What number of encounters last month used an EHR for prescribing medications?

*EHR refers to electronic health records; EDI refers to Electronic Data Interchange

Joe's Check-Up Three Months Later

- Reduced weight by 10 pounds
- Increased daily exercise
- Morning blood sugars lower
- Cholesterol lower
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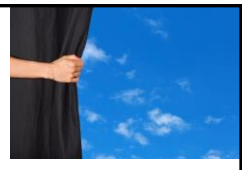
Joe's Check-Up Three Months Later: Measures at Work Behind the Scenes



Measure Name/# [type]	Key Question
Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) testing (NQF 0057) [process]	Did patients with diabetes have a HgA1c testing during the measurement period?
Controlling High Blood Pressure (NQF 0018) [intermediate outcome]	Is the patient's blood pressure under control?
CAHPS* Clinician & Group Surveys (CG-CAHPS) - Adult, Child (NQF 0005) [PRO-PM]	In the patient's opinion, did he or she receive good service?

*CAHPS refers to the Consumer Assessment of Healthcare Providers and Systems

Joe's Check-Up One Year Later

- Lost a total of 30 pounds
- Blood sugars lower
- Walks 2 miles every day
- Episodes of low blood pressure
- Colorectal cancer screening

Joe's Check-Up One Year Later: Measures at Work Behind the Scenes

Measure Name/# [type]	Key Question
Optimal Diabetes Care (NQF 0729) [composite]	Are diabetic patient's receiving optimal care, based on established best practices?
Colorectal Cancer Screening (COL) (NQF 0034) [process]	Were patients ages 50 through 75 years old screened for colorectal cancer?

Other Measures at Work Behind the Scenes

Measure Name/# [type]	Key Question
Diabetes Short-Term Complications Admission Rate (PQI 01) (NQF 0272) [outcome]	How many patients were admitted to the hospital with short-term complications?
Total Cost of Population-based PMP Index (NQF 1604) [resource use]	How many resources (doctor's visits, hospital stays, diagnostic tests) does is take to care for a patient?
Adult Current Smoking Prevalence (NQF 2020) [intermediate outcome]	How many U.S. adults are smokers?

Applying Joe's Story: How Can Performance Measurement Help to Improve Care?

What Are Some Fundamental Tensions in Healthcare Performance?

A few good outcome measures for accountability	**Versus**	Specific process measures to guide improvement
Core sets of measures	**Versus**	Measures that meet the needs of different providers and settings
Measuring at system level	**Versus**	Measuring at individual clinician level
Burdens for providers	**Versus**	Comprehensiveness for consumers & purchasers

How Can We Improve Healthcare Performance Measurement?

- Understanding how to engage patients in measurement
- Making measurement meaningful to both consumers & providers
- Adjusting measures for different patient populations, like sociodemographic (SDS) factors
- Attributing results to specific providers (hospitals, medical group, individual clinician)

Key Points

- ✓ To provide the best outcomes, we use healthcare performance measures as a tool to continuously improve the care we deliver.
- ✓ There are many forms and functions of measures. What they all have in common is that they seek to improve health outcomes by improving quality of care.
- ✓ Quality measurement is at work behind the scenes occurring throughout all aspects of healthcare, in various settings, and for various populations.

THANK YOU

MATHEMATICA Policy Research

The Life Cycle of Measure Development

Goals, Processes, and Use Cases

NQF Essentials of Quality Measurement Workshop
Washington, DC

September 28, 2017

Cindy Cullen, M.S., M.B.A.
Sam Simon, Ph.D.

No conflicts to disclose.

Agenda

- Why measure?
- Overview and deeper dive into the measure development life cycle
  - What are the methods available and considerations at each step?
- Walk through an example (or two)

Why do we measure?

- Quality improvement
  - Internal focus at the lowest level: clinician/practice, hospital
- Enforce standards of care
  - Specialty societies
- Support national quality programs
  - Merit-based Incentive Payment System (MIPS), Inpatient and Outpatient Quality Reporting
- Compare providers
  - Hospital Compare, LeapFrog
- Barometer of policy impact
  - Reduce costs, improve access and maintain/improve quality

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3

Measure development is a process to create and test measures to ensure they are . . .

- Important: Evidence based, can affect quality where there is variation or low performance
- Feasible: Data are readily collectible for measurement or could be captured without undue burden
- Usable: Performance results used (or can be used) to infer quality
- Valid: Underlying data are accurate and scores are accurate indicators of provider quality
- Reliable: Can distinguish performance among those being measured, results are consistent over time

GOAL: *Measures that matter* (important, usable) *and can be measured in a meaningful way* (feasible, valid, reliable).

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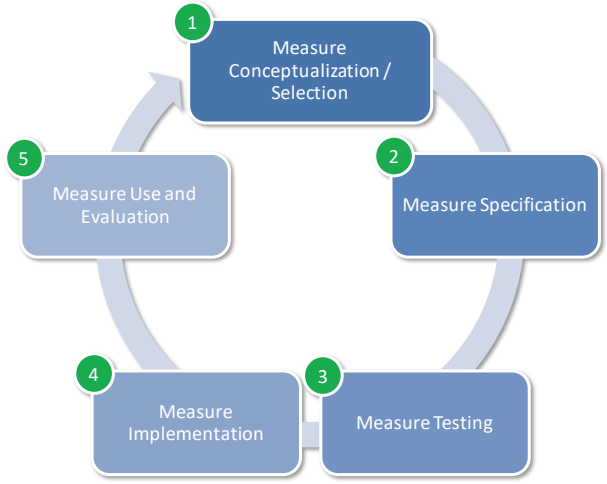
Measure development life cycle



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Phase 1: Measure conceptualization/selection

- Goal: Generate and vet a list of measure concepts to be developed
  - Work with key stakeholders (e.g., clinical experts, patients, beneficiaries, providers and electronic health record vendors)
- Take into consideration
  - Defined priorities
  - Areas or domains where there are measurement gaps
  - Scientific evidence, gaps in care, and opportunities for quality improvement to support measure concept
  - Data sources

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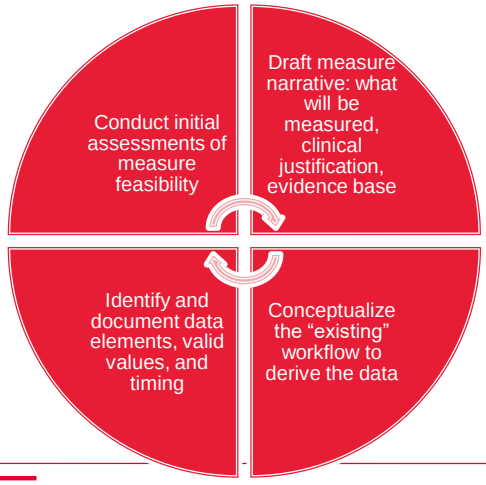
Phase 2: Measure specification

- **Goal: Develop well-defined specifications that can implemented consistently**



Vet draft measure specifications through a technical expert panel and other stakeholders in an iterative process

Phase 3: Measure testing

- **Goal: Evaluate the measure to assess and document scientific acceptability and other critical characteristics**
  - **Develop appropriate research questions and analysis approaches to determine feasibility, usability, validity, and reliability**
  - **Select the most appropriate testing techniques given the measure's structure and data availability**
  - **Take the following into consideration:**
    - CMS's Measures Management System "Blueprint"
    - NQF endorsement criteria
    - Test measure with intended reporting entity

Testing methods

- Feasibility
  - Assess availability of data elements within the data source
  - Assess provider workflow and the ability to capture needed data
- Usability
  - Review intent and specifications with stakeholders
  - Conduct semi-standardized interviews with stakeholders to assess usability and unintended consequences
- Validity
  - Statistical evaluation of correlation between measure score (or data elements) and gold standard
  - Review measure specification and measure results with experts
  - Evaluate risk adjustment adequacy and impact
- Reliability
  - Statistical evaluation of measure score precision
    - Assess level of error or "noise" in measurement

Development and implementation of a comprehensive measure testing plan can be a lengthy process.

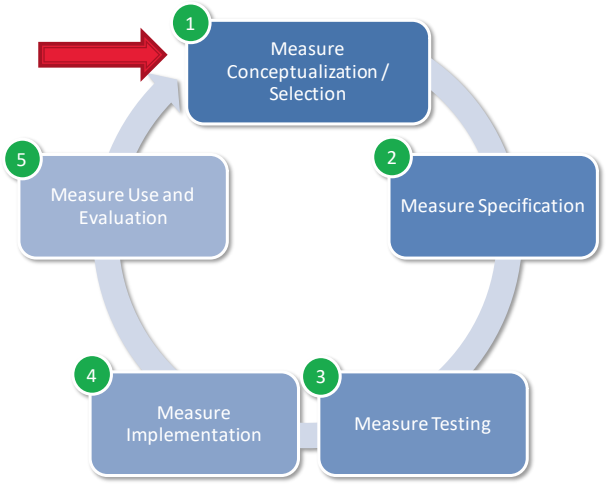
Phase 4: Measure implementation

- Support measure rollout, including development of rollout plan, business process to support measure reporting, data management plan, auditing process, and education/training and outreach efforts
- Prepare documentation for endorsement by NQF and support the measure as it goes through the endorsement process
- National reporting programs only: Prepare measure for Federal rulemaking process and support public comment period

Phase 5: Measure use and evaluation

- Assess how the measure is performing in the field over time
- Conduct measure maintenance at least annually
  - Review evidence for impact on measure intent
    - Guideline updates
    - New research
  - Review terminologies for new or retired codes
  - Take into account feedback from the field regarding measure feasibility and/or need for clarification
  - Analyze performance trends to understand impact
- Feed results of measure evaluation into new measure conceptualization

Putting it all together: Obesity screening



An idea . . .

- **U.S. Preventive Service Task Force recommendation**

Obesity in Children and Adolescents: Screening

Release Date: June 2017

Recommendation Summary

Population	Recommendation	Grade (What's This?)
Children and adolescents 6 years and older	The USPSTF recommends that clinicians screen for obesity in children and adolescents 6 years and older and offer or refer them to comprehensive, intensive behavioral interventions to promote improvements in weight status.	B

Phase 1: Considerations at concept phase

Consideration	Meet requirement?
Is it a priority?	Yes. The national initiative Healthy People 2020 has an objective to reduce the proportion of children and adolescents who are considered obese.
Are there measurement gaps?	Yes. There are fewer measures that address childhood health compared to adult health. There is only one endorsed measure on childhood obesity, and it does not extend down to 6-year-olds.
Is there an evidence base to support?	Yes. The USPSTF found adequate evidence that screening and intensive behavioral interventions for obesity in children and adolescents 6 years of age and older can lead to improvements in weight status. The magnitude of this benefit is moderate.

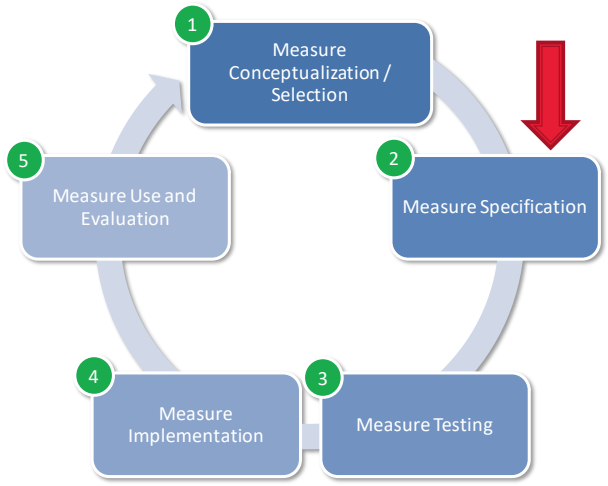
Data sources for measure development

Data Source	Pros	Cons
Administrative claims (billing data)	Low data collection burden; standardized data set; readily available	Data limited to billable events and diagnoses
Clinical data Paper or electronic medical records	Rich data that can support development of a wide range of measures	High extraction burden; lack of standards for data elements
Surveys Facilities/providers Patients	Qualitative data on satisfaction and perceptions	High extraction burden
Registries Consolidation of health data across facilities or providers	Standardized data; low data acquisition costs	Often limited to focused clinical conditions; may have geographical bias

Draft measure concept

- **Description: Patients aged 6–17 with a documented BMI above threshold and a follow-up plan**
- **Data source: Claims**
- **Measure type: Process**
- **Measure scoring: Proportion**
- **Interpretation: Higher scores indicate better quality**
- **Measure setting: Ambulatory**

Putting it all together: Obesity screening



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Phase 2: Considerations at specification phase

Consideration	Thinking
What is the eligible population? How do we define it?	Evidence base discusses children and adolescents 6 and older, so 6–17 age range. Don't expect BMI at every visit, so patient-based measure instead of episode-based.
What is the action we're looking to be done to/for the eligible population?	Need assessment of BMI (physical exam) and evidence of a follow-up plan. May want to consider types of follow-up, such as referrals, in-office counseling, medications.
Are there are reasons to exclude from measurement?	There could be some diagnoses or contraindications, but we don't have ready access to clinical data, so this will be difficult.
Is attribution of care clear?	Select appropriate primary care encounters.
Does this measure need to be harmonized with other measures?	Review child/adolescent weight assessment measure for possible encounters, review adult BMI measure for approach to numerator.

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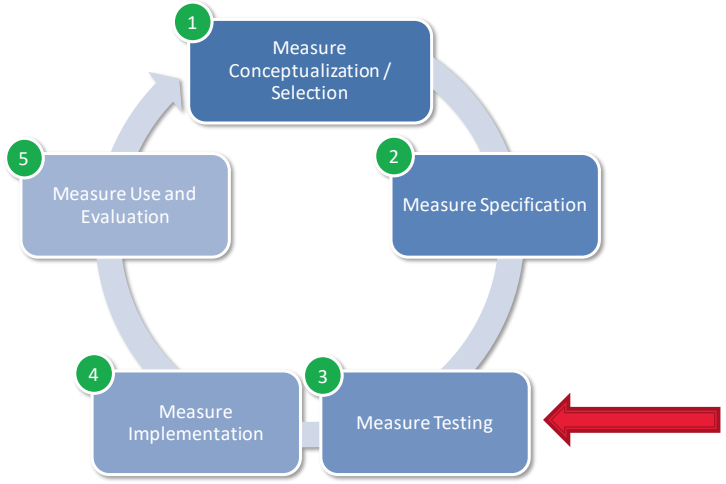
Methods to assist in specification

- Evidence base
  - Guidelines, research, systematic reviews
- Workflow analysis
  - Consider actions and data flows
  - Flowcharts can be useful
- Expert work groups / technical expert panels
  - Clinical, subject matter, and methods experts provide in-depth knowledge and field experience
  - Patient perspective is important and should be considered throughout the development process
- Formative testing
  - Qualitative: interviews, site visits, brief surveys
  - Quantitative: use data to investigate prevalence

Draft measure specification

- Denominator—Patients aged 6–17 with an encounter during the measurement period
  - Patients aged 6–17 years on date of encounter
  - AND
  - Patient encounter during the measurement period (CPT or HCPCS): 97161, 97162, 97163, 97165, 97166, 97167, 97802, 97803, 98960, 99201, 99202, 99203, 99204, 99205, 99212, 99213, 99214, 99215, 99383, 99384, 99393, 99394, G0108, G0270, G0271, G0402
- Numerator—Patients with a documented BMI above threshold and a follow-up plan is documented during the encounter
  - G8417: BMI is documented above normal parameters and a follow-up plan is documented
- Exclusions—None

Putting it all together: Obesity screening



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Phase 3: Considerations at testing phase

Consideration	Thinking
What is the appropriate unit of analysis for testing?	Given that this screening is likely to occur at the eligible clinician level, the measure will be most appropriate for those clinicians
What data are available to test this measure, and how will we get it?	Analysis of data driven by availability of data
Is there a "gold standard" we can use to compare performance on this measure?	Identify and vet benchmark to compare
Who are the relevant stakeholders for this measure?	All stakeholders who could be affected by this measure should be involved in testing, from patients or their proxy to specialty societies and providers who will be reporting the measure

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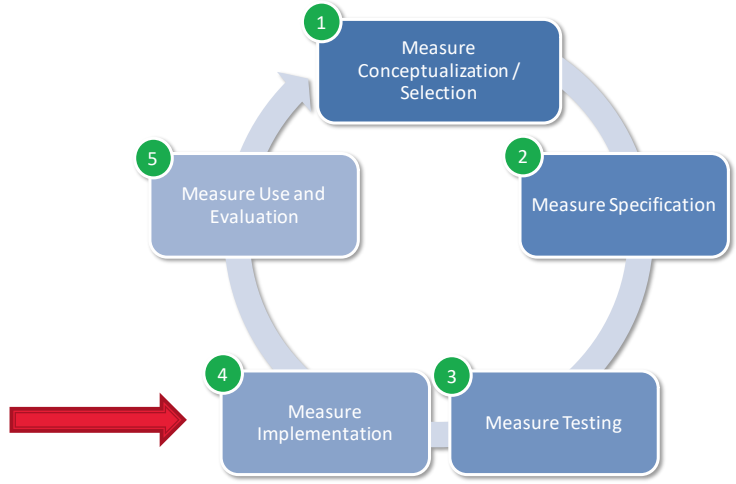
Foundational research questions

- Is the measure feasible to report?
- Do stakeholders find the measure important to measure, useful to measure, and indicative of clinician quality?
- Does the measure score reflect quality?
  - Is it a valid measure of quality?
- Can the measure score be reported with precision?
  - Freedom from measurement error

Testing approach by measure evaluation criteria

- Feasibility
  - Evaluation of numerator and denominator data element prevalence in claims
- Importance and usability
  - Feedback from stakeholders: Patients, clinicians, specialty societies (AAP), relevant Federal agencies (CMS, CDC), others (NCQA)
- Validity
  - Statistical correlation with other, conceptually related and validated measures of quality (CMS155)
- Reliability
  - Statistical evaluation of "signal-to-noise" of measurement at the relevant unit of analysis

Putting it all together: Obesity Screening



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Phase 4: Considerations at implementation phase

Consideration	Thinking
What guidance will clinicians need to implement this measure?	Implementers will need references to the guidelines used as the basis of this measure to facilitate broad implementation. Implementers may need education and outreach to help them understand the intent and appropriateness of the measure.
Can the measure be reported in a low/no-stakes environment?	Providers may be more willing to implement a measure if they are provided a low-risk opportunity (for example, a dry run) to report.
Should the measure be submitted for NQF endorsement?	If the measure is valid, reliable, and feasible; is important and can affect change on a broad basis; and is useful to improve quality, then strong consideration should be given for endorsement. This needs to be balanced with the ongoing maintenance requirements.

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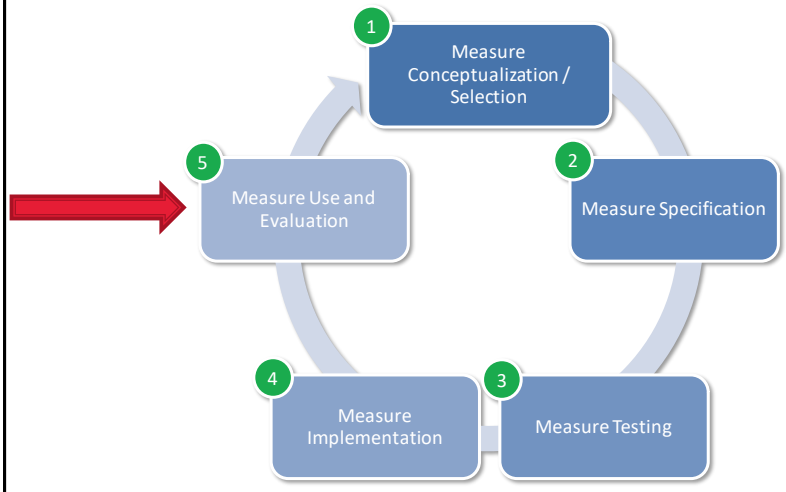
Putting it all together: Obesity screening



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Phase 5: Considerations at evaluation phase

Consideration	Thinking
Has the underlying evidence changed?	USPSTF constantly reevaluates the evidence; the organization's "B" recommendation should be monitored.
Have coding vocabularies changed?	Clinical coding vocabularies are not static, relevant codes must be reviewed and new codes incorporated where relevant.
Has performance changed?	Over time, performance gap may drop and the measure may be "topped out."

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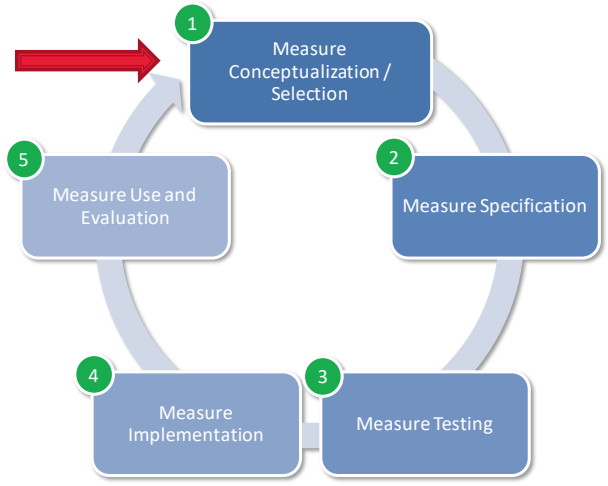
Another approach

- Process measure assesses whether appropriate treatment was provided, but not the outcomes
- How do we know if we've made an impact?
  - Are we reducing the number of obese children?
  - Are children who were screened as obese and treated getting their weight in control?
- To measure this concept, we need access to clinical data
  - What was the original BMI?
  - How does it change over time?

→ Let's build another measure!

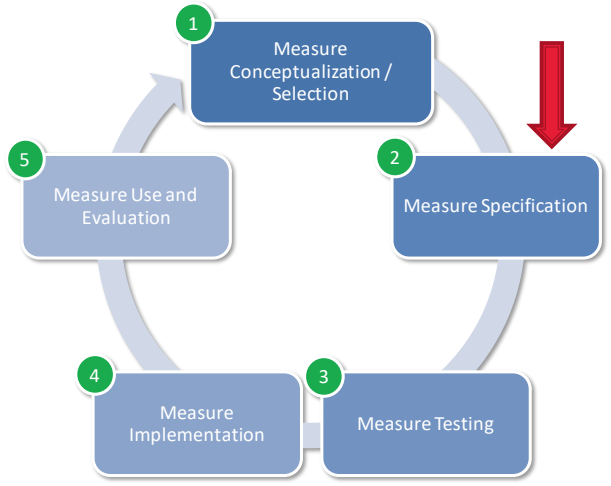
Putting it all together: Obesity screening and outcome



Phase 1: Conceptualization

- Description: Patients aged 6–17 with a documented BMI above threshold and a follow-up plan with a lower BMI documented within 15 months
- Importance
  - Remains essentially the same
- Data source
  - Will not have access to BMIs in claims data
  - Will need access to clinical data; therefore, paper chart or electronic health record data will be required
- Measure type: Outcome
- Measure scoring: Proportion
- Interpretation: Higher scores indicate better quality

Putting it all together: Obesity screening and outcome



Phase 2: Considerations at specification phase: clinical

Consideration	Thinking
How do we handle BMI?	BMI for children is usually reported as a percentile against national averages.
How do we measure improvement?	Approaches could be lower BMI/BMI percentile, percentage differences, absolute differences in percentiles. Need to give consideration to clinical significance of change.
What time frame should be considered for improvement?	Review evidence base, think about how care is delivered for children (annual exams).
Are there are reasons to exclude from measurement?	Diagnoses of pregnancy or palliative care might be appropriate. Talk with patients about excluding those who refuse treatment.
Should we consider risk adjustment?	Most outcome measures will need some level of risk adjustment to account for differences in risk for the outcome across provider panels.

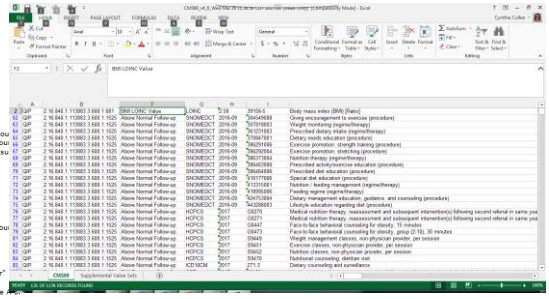
Phase 2: Considerations at specification phase: technical

- **Feasibility is a factor when defining data elements for electronic health record measures**
  - **Are data in discrete fields?**
  - **Can they be reliably extracted?**
  - **How good/current are the data?**
    - Are problem lists and medication lists updated regularly?
  - **Are the data captured in the delivery of care?**
    - Just because there's a field to record data doesn't mean it's being used
- **Clinical concepts need to be expressed in clinical vocabularies (SNOMED, LOINC)**
  - **Not well integrated into electronic health record products**
  - **Provide a mix of clinical and equivalent billing codes**

Draft eCQM outcome measure specification

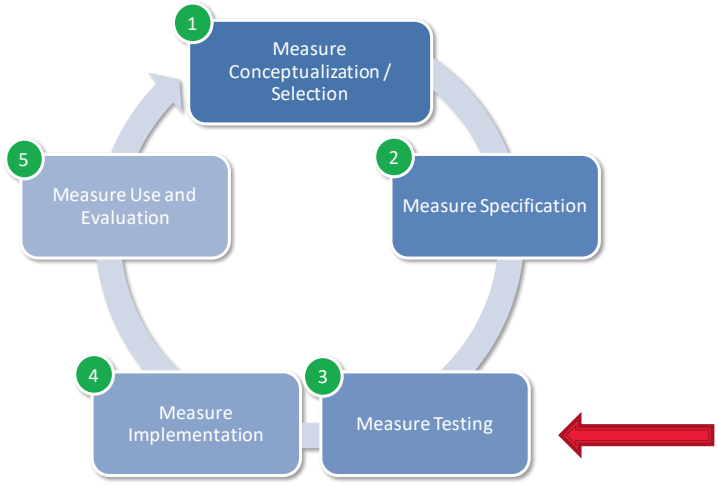
Logic expressed using Quality Data Model

- **Initial Population** =
  - AND: Age>= 6 year(s) at: "Occurrence A of Encounter, Performed: BMI Encou
  - AND: Age< 18 year(s) at: "Occurrence A of Encounter, Performed: BMI Encou
  - AND: "Occurrence A of Encounter, Performed: BMI Encounters" during "Measu Period"
- **Denominator** =
  - AND: Initial Population
- **Denominator Exclusions** =
  - OR: "Diagnosis: Pregnancy Dx" overlaps "Measurement Period"
- **Numerator** =
  - AND: "Physical Exam, Performed: BMI Percentile" satisfies all:
    - (result) <= 15 month(s) starts before end of "Occurrence A of Encou Performed: BMI Encounters"
    - (result >= 95%)
  - AND: Union of:
    - "Intervention, Order: Above Normal Follow-up"
    - "Intervention, Order: Referrals where weight assessment may occur"
    - "Medication, Order: Above Normal Medications"
    - <= 15 month(s) starts before or concurrent with end of "Occurrence A Encounter, Performed: BMI Encounters"
  - AND: "Physical Exam, Performed: BMI Percentile: satisfies all:
    - (result) starts during "Occurrence A of Encounter, Performed: BMI Encounters"
    - (result < 95%)
- **Numerator Exclusions** =
  - None
- **Denominator Exceptions** =
  - OR: Union of:
    - "Intervention, Order not done: Medical or Other reason not done" for "Above Normal Follow-up"
    - "Intervention, Order not done: Medical or Other reason not done" for "Referrals where weight assessment may occur"
    - "Medication, Order not done: Medical or Other reason not done" for "Above Normal Medications"
    - "Intervention, Order not done: Medical or Other reason not done" for "Below Normal Follow up"
    - "Medication, Order not done: Medical or Other reason not done" for "Below Normal Medications"
    - <= 15 month(s) starts before or concurrent with end of "Occurrence A of Encounter, Performed: BMI Encounters"
- **Stratification** =
  - None



Value set extract from VSAC

Putting it all together: Obesity screening and outcome



Phase 3: Considerations at testing phase

- Does the existing workflow support collection of the measure data elements?
- Do testing sites have capacity and time to extract the EHR data?
- Are the EHR data valid?
  - Data element validity compares extract of EHR data with manually abstracted chart data
- To address potential for low performance rates, testing should
  - Replicate intended reporting
  - Occur in sites where the outcome is generally frequent

Key points

- The measure development life cycle is an iterative effort
- The goal of measure development is to facilitate creating and maintaining measures that matter and can be measured in a meaningful way
- Measure intent should drive all aspects of the development life cycle
- Stakeholder involvement is critical throughout the process
- Data sources have different strengths and weaknesses
- Testing can be a lengthy and iterative process
  - Is a means to an end

For more information

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  - SSimon@mathematica-mpr.com
  - (617) 301 - 8982

NATIONAL QUALITY FORUM

Mastering the Basics of Quality Measurement

What Makes a Great Measure?

Karen Johnson
Senior Director, Quality Measurement, NQF

September 28, 2017

Featured Speaker

Karen Johnson
Senior Director, Quality Measurement
National Quality Forum

No conflicts to disclose

Session Objectives

By the end of this session, participants will:

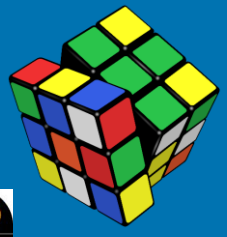
- Be able to identify **12** qualities that make a measure "great"
- See the connection between attributes of great measures and NQF's endorsement criteria

Why Do We Measure?

The primary goal of healthcare performance measurement is to ***improve the quality of healthcare*** *received by patients (and ultimately, to* ***improve health****)*

Measurement is a quality improvement tool, not an end in and of itself

Activity: Group cards, then arrange



7

9 out of 10 dentists recommend Crest!

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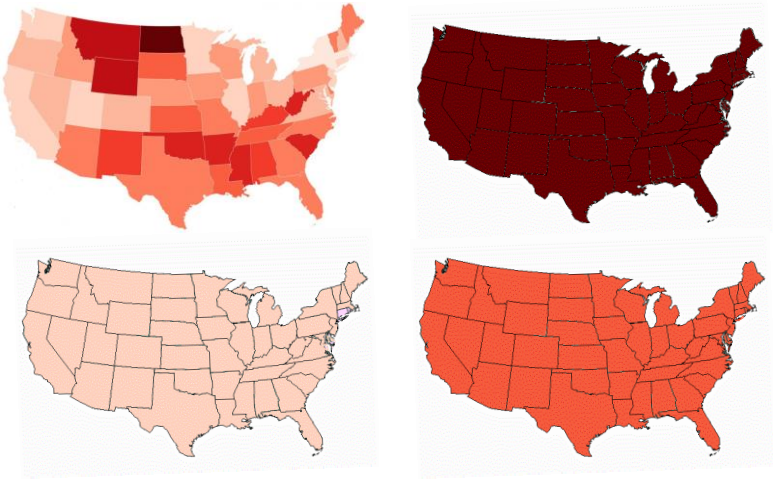
Car crash deaths per 100,000 population



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Hospital Compare
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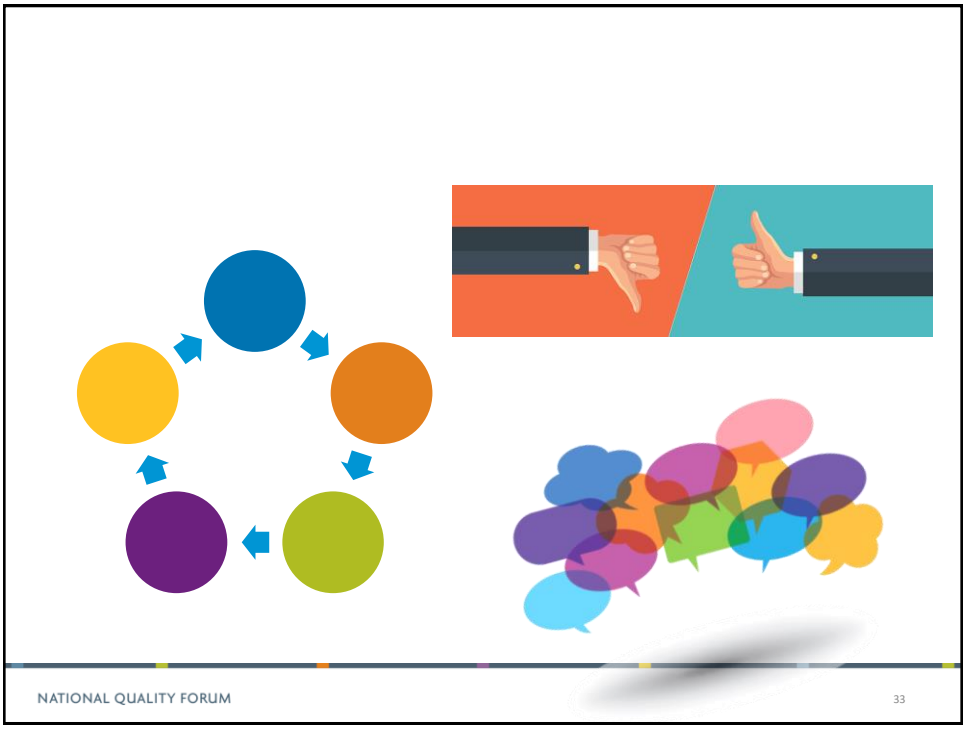

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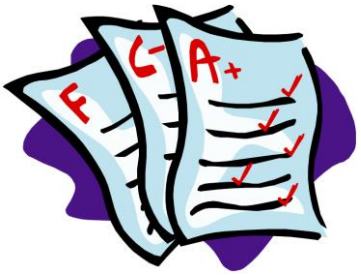
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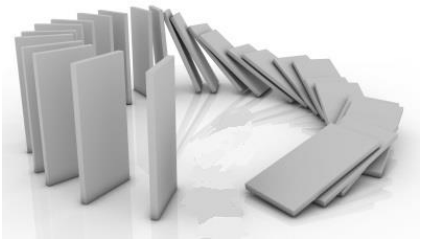

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Fun!!

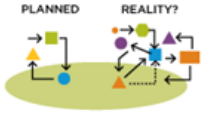
But what does all this have to do with great performance measures???

(Or with NQF???)

Attributes of Great Measures: NQF's Measure Evaluation Criteria

1 IMPORTANCE TO MEASURE AND REPORT

2 SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES



3 FEASIBILITY

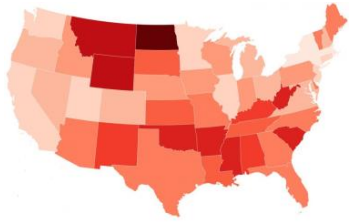
4 USABILITY AND USE

5 ASSESS RELATED AND COMPETING MEASURES

Attributes of Great Measures: NQF's Measure Evaluation Criteria

1 IMPORTANCE TO MEASURE AND REPORT

✓**Opportunity for Improvement**

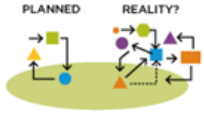


✓**Evidence**

Attributes of Great Measures: NQF's Measure Evaluation Criteria

1 IMPORTANCE TO MEASURE AND REPORT

2 SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES



3 FEASIBILITY

4 USABILITY AND USE

5 ASSESS RELATED AND COMPETING MEASURES

Attributes of Great Measures: NQF's Measure Evaluation Criteria

✓**Repeatable**

2 SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES

✓**Distinguish differences**

Attributes of Great Measures: NQF's Measure Evaluation Criteria

✓**Accurate**

2 SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES

✓**Correct**

Attributes of Great Measures: NQF's Measure Evaluation Criteria

✓**Exclusions**

2 SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES

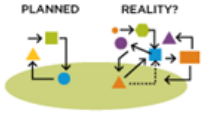
✓**Risk-adjustment**
✓**Meaningful differences**
✓**Comparability**

✓**Missing data**

Attributes of Great Measures: NQF's Measure Evaluation Criteria

1 IMPORTANCE TO MEASURE AND REPORT

2 SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES



3 FEASIBILITY

4 USABILITY AND USE

5 ASSESS RELATED AND COMPETING MEASURES

Attributes of Great Measures: NQF's Measure Evaluation Criteria

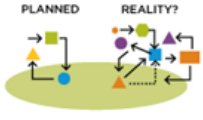
✓**Burden**

3 FEASIBILITY

Attributes of Great Measures: NQF's Measure Evaluation Criteria

1 IMPORTANCE TO MEASURE AND REPORT

2 SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES



3 FEASIBILITY

4 USABILITY AND USE

5 ASSESS RELATED AND COMPETING MEASURES

Attributes of Great Measures: NQF's Measure Evaluation Criteria

✓**Accountability & Transparency**

✓**Improvement**

✓**Unintended consequences**

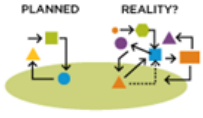
✓**Feedback**

4 USABILITY AND USE

Attributes of Great Measures: NQF's Measure Evaluation Criteria

1 IMPORTANCE TO MEASURE AND REPORT

2 SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES



3 FEASIBILITY

4 USABILITY AND USE

5 ASSESS RELATED AND COMPETING MEASURES

Attributes of Great Measures: NQF's Measure Evaluation Criteria

✓**Similar**

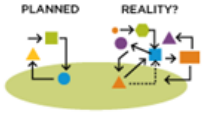
✓**Identical**

5 ASSESS RELATED AND COMPETING MEASURES

Attributes of Great Measures: NQF's Measure Evaluation Criteria

1 IMPORTANCE TO MEASURE AND REPORT

2 SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES



3 FEASIBILITY

4 USABILITY AND USE

5 ASSESS RELATED AND COMPETING MEASURES

NQF's Measure Evaluation Criteria

Measure Evaluation Criteria (abbreviated)

1. **Importance to Measure and Report** (must-pass)
   - 1a. Evidence to Support the Measure Focus (must-pass)
   - 1b. Performance Gap, including Disparities (must-pass)
   - 1c. For composite measures: Quality Construct and Rationale (must-pass)
2. **Scientific Acceptability of Measure Properties** (must-pass)
   - 2a. Reliability [includes additional subcriteria] (must-pass)
   - 2b. Validity [includes additional subcriteria] (must-pass)
   - 2c. For composite measures: Empirical Analysis Supporting Composite Construction (must-pass)
3. **Feasibility**
   - 3a. Required data elements routinely generated and used during care delivery
   - 3b. Availability in electronic health records or other electronic sources OR a credible, near-term path to electronic collection is specified
   - 3c. Data collection strategy can be implemented
4. **Usability and Use**
   - 4a. Use (must-pass for maintenance measures)
     - 4a1. Accountability and transparency
     - 4a2. Feedback on the measure by those being measured and others
   - 4b. Usability (not must-pass for maintenance measures)
     - 4b1. Improvement
     - 4b2. The benefits to patients outweigh evidence of unintended negative consequences to patients
5. **Comparison to Related or Competing Measures**
   - 5a. Measure specifications are harmonized **OR** differences are justified
   - 5b. Superior measure is identified **OR** multiple measures are justified

Sources for Clipart and Pictures

- https://www.youtube.com/watch?v=CQUWtdnx2gQ
- http://www.kanyetothe.com/forum/index.php?topic=5197977.0
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- http://www.valeacademy.org.uk/SEF_Improvement_Plan
- https://wikispaces.psu.edu/pages/viewpage.action?pageId=41095610
- https://play.google.com/store/apps/details?id=com.playnlearnapps.farmanimalsfortoddlersfree.farmanimalsfortoddlersfree
- http://theverybesttop10.com/identical-twin-animals/
- http://worldartsme.com/missing-puzzle-piece-clipart.html#gal_post_65806_missing-puzzle-piece-clipart-1.jpg
- HERE: https://articles-images.sftcdn.net/wp-content/uploads/sites/3/2008/02/944233_94159959.jpg
- http://blog.macsales.com/wp-content/uploads/2013/05/puzzles.jpg
- https://upload.wikimedia.org/wikipedia/commons/thumb/a/a6/Rubik's_cube.svg/2000px-Rubik's_cube.svg.png
- http://www.michaelmccurry.net/wp-content/uploads/2010/10/boring-lecture.jpg
- http://www.uah.edu/images/administrative/lean-healthcare/Concepts_3.jpg
- http://www.abss.k12.nc.us/cms/lib02/NC01001905/Centricity/Domain/5274/classic-thermometer-10466137.jpg
- https://cdn.sparkfun.com/assets/learn_tutorials/1/01_Multimeter_Tutorial-04.jpg
- http://tomsworkbench.com/2012/08/05/quick-poll-230/
- http://onechroniqueshow.com/wp-content/uploads/2014/11/cross.png
- http://community.mystar12.com/wp-content/uploads/2013/11/Bored-Audience.jpg
- https://artandhealing.org/new-site-feedback/
- http://commonhealth.legacy.wbur.org/2012/05/consumer-reports-ma-doctors
- http://www.vhi.org/hospital_cmscompare.asp
- https://www.slideshare.net/consumernursing/10-31leapfrog
- https://www.chargify.com/blog/beyond-nps-and-exit-surveys/
- https://www.dreamstime.com/royalty-free-stock-image-d-choosing-right-person-illustration-check-mark-selected-unique-man-group-people-image31279926
- https://artandhealing.org/new-site-feedback/

NATIONAL QUALITY FORUM

The Essentials of Quality Measurement

Measures in the Field: Stories from Emergency Medicine

Michael Phelan, MD, FACEP
Emergency Services Institute and Medical Director
Quality Measurement and Reporting, Enterprise Quality
Cleveland Clinic

September 28, 2017

Introduction

Michael Phelan, MD, FACEP
Emergency Services Institute and Medical Director Quality Measurement and Reporting, Enterprise Quality
Cleveland Clinic

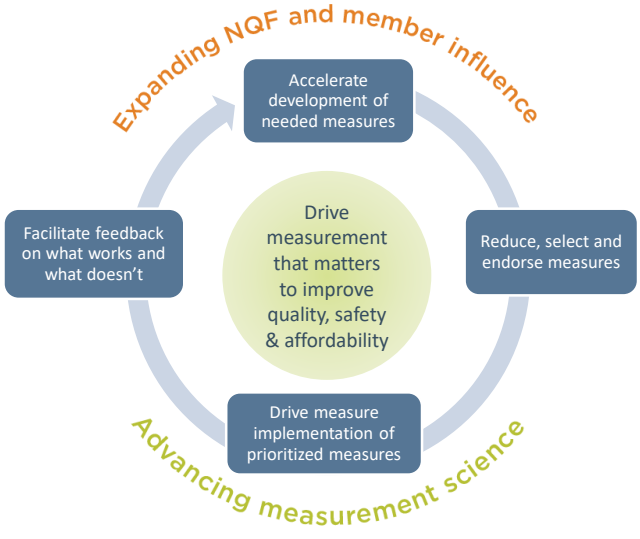
No conflicts to disclose.

Session Objectives

Session Objectives

- Explain how measures are used throughout the healthcare system
- Demonstrate where to find measures in publicly available databases
- Discuss how measures are used on the frontline of care through an illustrative example from emergency medicine

NQF: Lead. Prioritize. Collaborate.



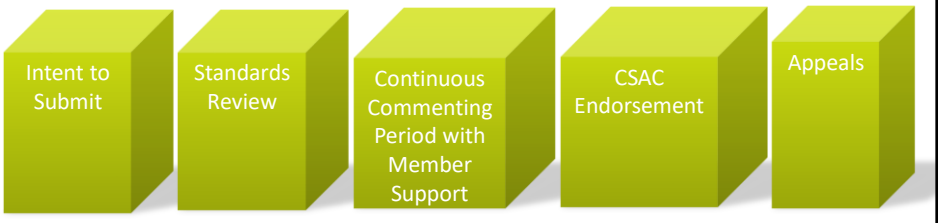
Dual Role of NQF

Partnerships Driving Innovation
Measure Applications Partnership (MAP)
National Quality Partners Action Teams
Measure Incubator

Measure Endorsement
Technical Expert Panel (TEP)
Endorsement Committees

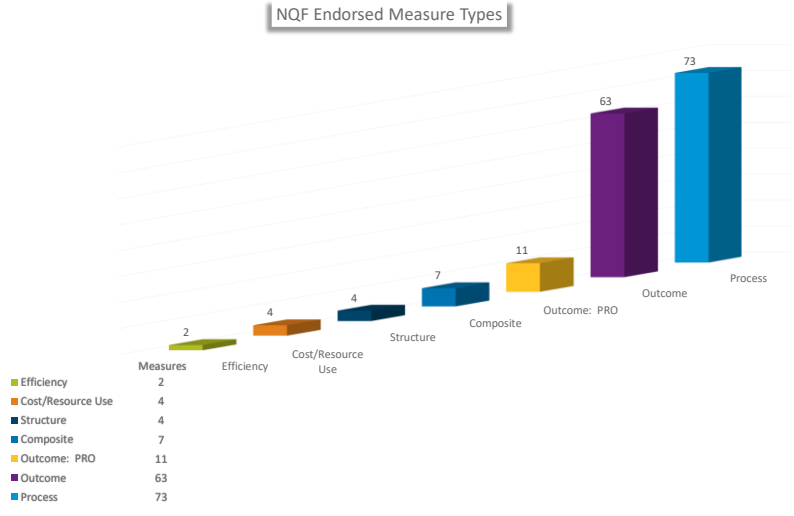
NQF Endorsement Criteria

NQF Consensus Development Process



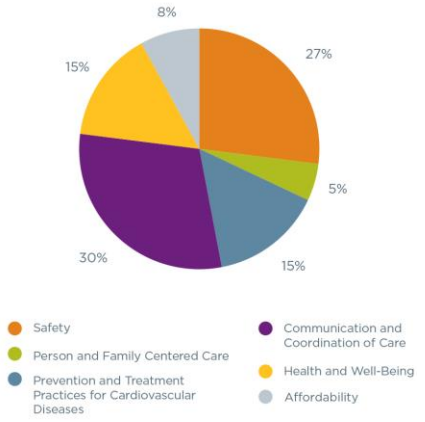
More info about NQF's CDP Process

What Kind of Measures are Endorsed?



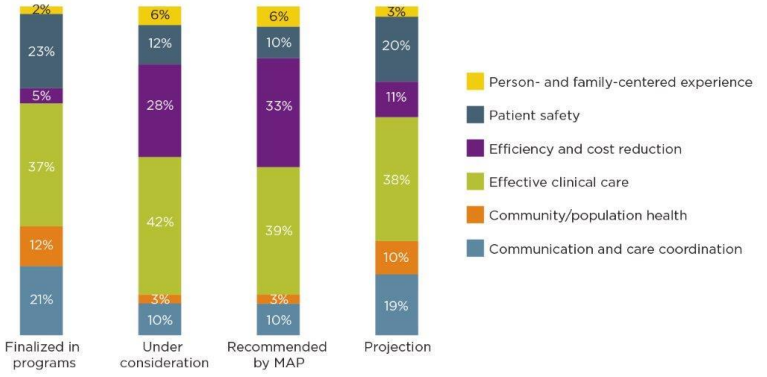
How and Where are Measures Used?

Measures in HHS Programs by NQS Priority Area 2014



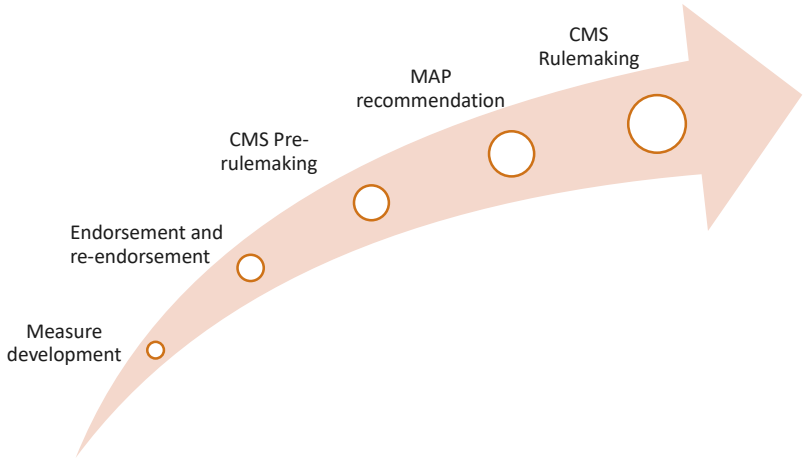
How and Where are Measures Used?

Measures in HHS Programs by NQS Priority Area 2014



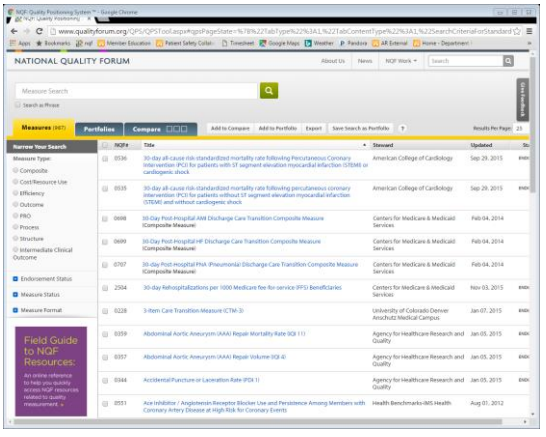
Note: percentages may not sum to 100 because of rounding.

A Measure's Path to Medicare



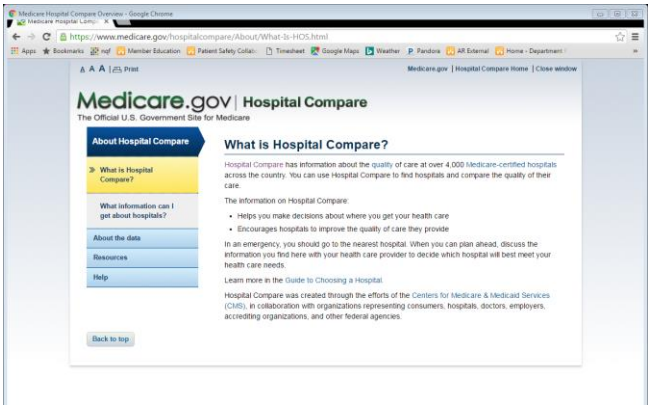
Where to Find NQF Endorsed Measures – Quality Positioning System (QPS)

www.qualityforum.org/qps



Hospital Compare

www.medicare.gov/hospitalcompare



Example from Emergency Medicine

Measures saving lives for patients experiencing heart attack

Measures at Work in the Field

Type of Measure	Example from cardiology
Structural	Participation in a systematic database for cardiac surgery
Process	Primary PCI* received within 90 minutes of hospital arrival ("door to balloon" time)
Outcome	30-day mortality AMI*

AMI = Acute Myocardial Infarction, or heart attack
PCI = Percutaneous Coronary Intervention
EKG or ECG = Electrocardiogram

Measuring Heart Attack Care

Focus Area	Measure Steward	Example of NQF Endorsed Measure	Example of Hospital Compare Measure	Type of Measure
Time from door to EKG	CMS	#0289 Median time to ECG – *Endorsement Removed in 2014*	OP-5 Median time to ECG	Process
Time from door to balloon	CMS	#0163 Primary PCI received within 90 minutes of hospital arrival	AMI-8a Primary PCI received within 90 minute of hospital to arrival	Process
AMI readmissions	CMS	#0230 Hospital 30-day, all-cause, risk-standardized mortality rate following AMI hospitalization	READM-30-AMI AMI 30-day readmission rate	**Outcome** (notice the move toward outcomes)
AMI mortality	AHRQ	#0730 Acute myocardial infarction mortality rate	MORT-30-AMI AMI 30-day mortality rate	**Outcome**

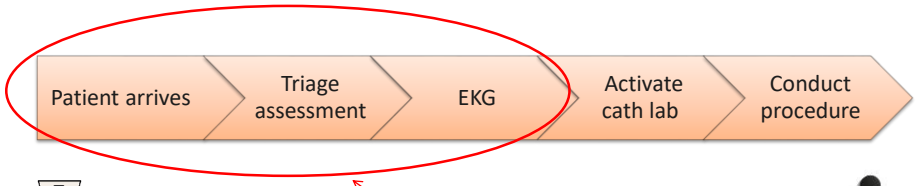
Reducing Door to EKG Time

Success story from the field:
Driving change with measure #0163

Measure NQF #0163:
Primary Percutaneous Coronary Intervention (PCI) Received within 90 Minutes of Hospital Arrival

Reducing Door to EKG Time

90 minutes



Critical first 10 minutes

Door

Balloon

Reducing Door to EKG Time

10 minutes

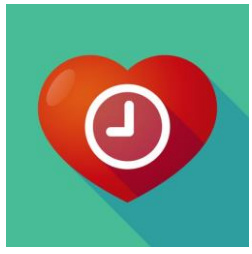
Patient arrives → Triage assessment → EKG

Critical first 10 minutes

Reducing Door to EKG Time

The challenges:

- Quick triage
- Data collection
- Working as a team
- Getting data in real time



Reducing Door to EKG Time

The solutions:

- Prioritize speed over data collection for patients with chest pain
- Work together as a team
- Provide real time data to nurses

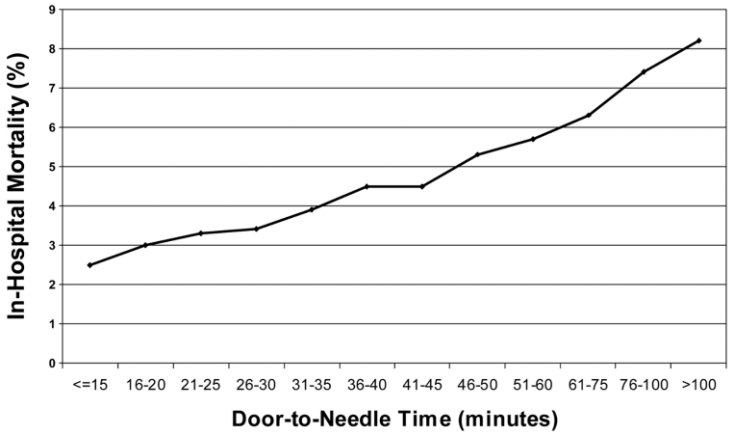
Reducing Door to EKG Time

The results:

- Rapid triage and assessment
- Saving lives
- Becoming a leading hospital

Measures making an impact

Process Measure Translates into Outcome



McNamara et. al., *Am J Cardiol.* 2007 October 15; 100(8): 1227–1232. doi:10.1016/j.amjcard.2007.05.043.

Q and A

Comments? Questions?


THANK YOU

NATIONAL QUALITY FORUM

The Essentials of Quality Measurement

Conclusion

Camille Espinoza
Director, Member Education
National Quality Forum

Audience Activity: Reflections on Quality

Think back to the activity from this morning. Recall what you thought about quality, and apply your new *measurement* lens.

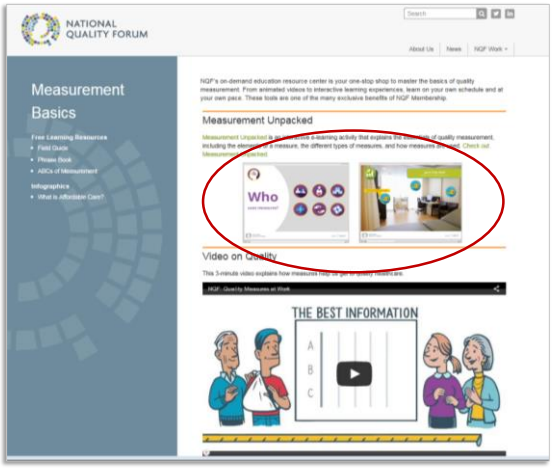
In the same pairs as this morning, talk about how you might measure those aspects of quality.

Next Steps

NQF Membership:
Giving you tools and support to take the next step

Member exclusive resources
Special events
20+ projects at NQF
Special Member communications
Member webpage
Downloadable tools to share

Tools You Can Use: Measurement Basics



Visit the Measurement Basics page for:

- Measurement Unpacked interactive e-learning –**NEW!**
- Quality Measures at Work video
- Infographics and other shareable resources

Audience Activity: Wrap Up

One word or phrase that stands out in your mind from today

Word Puzzle Raffle Drawing

NATIONAL QUALITY FORUM

The Essentials of Quality Measurement Word Scramble

Name: _____

Directions: Unscramble each of the clue words and build the final phrase. The first letter is already completed. Put your entry into the bowl to win a prize at the end of the day.

QUITYLA	Q_____	NOLSUEXICS	E_____
NYEECCFIFI	E_____	DITALVY	V_____
ETUMODC	O____□_	NNREDMSTEEO	E_____□___
TALHRCAHEE	H□_____	SOPCRES	P___□__
ROTIVNEPMEMI	I_____	TABSULYII	U_____
TENPAIT	P_□____	CYUCACRA	A___□___
RAMSEUE	M_____	REUTUCRST	S_____
VOCENEIE	E_____	SERSUORE SUE	R_____□___
ROATUNREM	N□_____	YSITABIEFIL	F__□_____
RETNIMDANDO	D_____□__	IOTANRIAV	V_____□

Final Puzzle (unscramble the letters in the boxes): _____

Conclusion

- ✓ Evaluation link is going to your inbox today
- ✓ Fill out the evaluation within 30 days to claim your CME or CNE credit
- ✓ Contact membereducation@qualityforum.org with questions
- ✓ See you next time!

Comparison of Three Types of Measures

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		Influenza	Breast Cancer	30-Day Hospital Readmissions
Structure To assess if there are adequate resources (such as imaging machines) and staffing support (such as nursing care hours per patient) to provide the best quality care.	THIS TYPE OF MEASURE ASKS: **Are there enough resources?**	• How many doses of the flu vaccine are available? • How many qualified flu shot providers are there within a geographic area?	• How many hospitals within a geographic area have digital mammography machines? • How many qualified radiologists are within a geographic area?	• How many nursing hours per patient in the intensive care unit?
Process To assess if patients are receiving the right care. Usually evaluates if a patient receives a specified treatment, screenings, assessment, or preventative care.	THIS TYPE OF MEASURE ASKS: **Are best practices being applied?**	• How many adults got the flu shot immunization during a certain time period? (NAF #0039)	• How many eligible women received mammograms? (NQF #2372) • Of women with diagnosed breast cancer, how many received the recommended treatment? (NQF #0559)	• How many patients received a discharge plan?
Outcome To assess the short or long-term result of care. Usually assesses if the patient's condition improved, worsened, or stayed the same.	THIS TYPE OF MEASURE ASKS: **What are the results of care?**	• How many adults got the flu? • Of those hospitalized for flu, how many died?	• Of women with diagnosed breast cancer, how many have no evidence of cancer five years later (remission)?	• How many patients were readmitted within 30 days of discharge from a hospital? (NQF #1789)

NATIONAL QUALITY FORUM

Understanding Performance Measures: Anatomy and Types

WHAT IS A PERFORMANCE MEASURE?

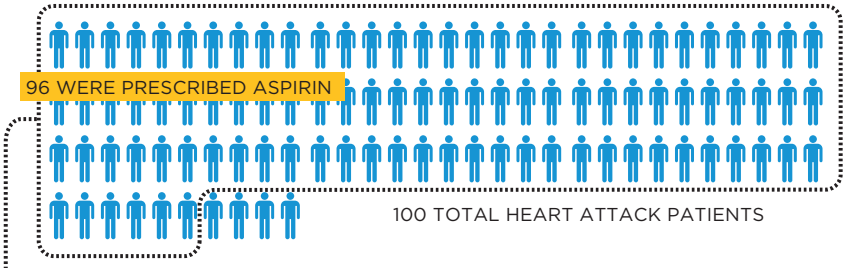
A healthcare performance measure is a way to calculate whether and how often the health and healthcare system does what it should.

Measures are based on scientific evidence about **processes, outcomes, perceptions, or systems** that relate to high-quality care.

Health and Healthcare System

CONSTRUCTING A MEASURE

The result of a measure is usually shown as a ratio or a percentage, and allows for comparison to other providers and benchmarking against national and local performance.



MEASURE FORMULA

NUMERATOR: # WHO HAD A SPECIFIC TREATMENT / # ELIGIBLE FOR TREATMENT = % (RESULT)

DENOMINATOR

MEASURE EXAMPLE

96 HEART ATTACK PATIENTS WERE APPROPRIATELY PRESCRIBED ASPIRIN AT DISCHARGE / 100 TOTAL HEART ATTACK PATIENTS = 96%

EXAMPLE: Once a person has had a heart attack, taking aspirin daily has been shown to reduce the chance of having a second one. Guidelines tell physicians to prescribe aspirin to all patients leaving the hospital after treatment.

TYPES OF PERFORMANCE MEASURES

STRUCTURAL MEASURES

ASSESS HEALTHCARE INFRASTRUCTURE

EXAMPLE: The percentage of physicians in a practice who have systems to track and follow patients with diabetes.

PROCESS MEASURES

ASSESS STEPS THAT SHOULD BE FOLLOWED TO PROVIDE GOOD CARE

EXAMPLE: The percentage of patients with diabetes who have had an annual eye exam in the last year.

OUTCOME MEASURES

ASSESS THE RESULTS OF HEALTHCARE THAT ARE EXPERIENCED BY PATIENTS

EXAMPLE: The percentage of diabetes patients who are blind or have compromised vision.

08-2013
Illustration: Funnel, Inc.

NATIONAL QUALITY FORUM

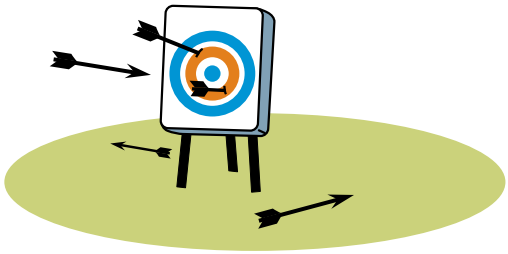
Multi-stakeholder Review: Criteria for Evaluating a Measure

MULTI-STAKEHOLDER COMMITTEES OVERSEE ENDORSEMENT

These committees evaluate measures by clinical condition against agreed upon criteria. Measures reviewed are endorsed and receive the NQF seal of approval. In order to receive NQF endorsement, measures must meet all five endorsement criteria.

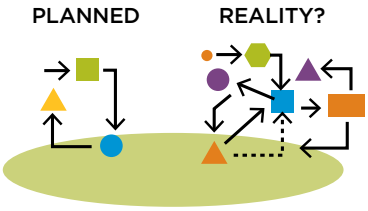
1 IMPORTANCE TO MEASURE AND REPORT

Evaluate whether the measure has potential to drive improvements in care, is aligned with the National Quality Strategy, and is based on strong clinical evidence.



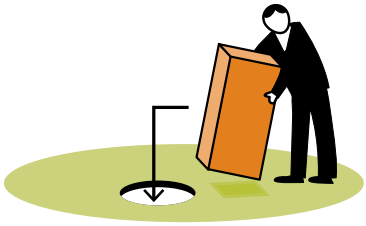
2 SCIENTIFIC ACCEPTABILITY OF MEASURE PROPERTIES

Determine if the measure will allow for valid conclusions about quality based on performance scores. If measures are not reliable (consistent) and valid (correct), results may mis-classify providers.



3 FEASIBILITY

Assess the burden involved with collecting measure information.



4 USABILITY AND USE

Evaluate if the measure can be appropriately used in accountability and improvement efforts.

5 ASSESS RELATED AND COMPETING MEASURES

Determine whether the measure is duplicative of other measures. If other criteria are met, harmonize or select the best measure among duplicative measures.

ACTION

08-2013
Illustration: Funnel, Inc.

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A Tale Of Two Hearts

TWO DIFFERENT JOURNEYS FROM THE DOOR TO BALLOON

"> 90 minutes after arrival = 42% higher risk of dying in the hospital,"
Dr. Robert L. McNamara, M.D.[1]

1 Woman at home grabbing at chest calls ambulance

2 Ambulance arrives and picks up for transport to the hospital

DOES MEET
THE "DOOR TO BALLOON" QUALITY GUIDELINES

3 While in the ambulance, ECG performed and transmitted to hospital.

4 ED Doctor diagnoses heart attack and alerts cardiac response team.

5 Ambulance arrives at the hospital.

6 Patient met by cardiac response team and rushed off for treatment

7 Start procedure

TOTAL ELAPSED TIME:
LESS THAN 90 MINUTES*

Endorsed Measure –
< 90 minutes
Door to Balloon time
NQF Measure No. 0163

DOES NOT MEET
THE "DOOR TO BALLOON" QUALITY GUIDELINES

3

4 Ambulance arrives at the hospital.

5 ED Doctor orders ECG

6 ED Doctor diagnoses heart attack

7 Interventional Cardiologist then pages the cardiac response team.

8 Patient brought in for treatment by cardiac response team.

9 Start procedure

TOTAL ELAPSED TIME:
90 MINUTES TO 2 HOURS

* Procedural timeline as published by the American College of Cardiologists. J Am Coll Cardiol. 2006;46(7):1236-1241

1 McNamara RL et al. "Effect of Door-to-Balloon Time on Mortality in Patients With ST-Segment Elevation Myocardial Infarction." J Am Coll Cardiol. 2006;47:2180-6

2003 – 2013: Death rate from coronary heart disease fell 38%
Door to Balloon time is one of the advances contributing to the reduction in mortality rate

NATIONAL QUALITY FORUM

Measure Evaluation Criteria for NQF Endorsement

1. Importance to Measure and Report (must-pass)

1a. Evidence to Support the Measure Focus (must-pass)
1b. Performance Gap, including Disparities (must-pass)
1c. For composite measures: Quality Construct and Rationale (must-pass)

2. Scientific Acceptability of Measure Properties (must-pass)

2a. Reliability [includes additional subcriteria] (must-pass)
2b. Validity [includes additional subcriteria] (must-pass)
2c. For composite measures: Empirical Analysis Supporting Composite Construction (must-pass)

3. Feasibility

3a. Required data elements routinely generated and used during care delivery
3b. Availability in electronic health records or other electronic sources OR a credible, near-term path to electronic collection is specified
3c. Data collection strategy can be implemented

4. Usability and Use

4a. Use (must-pass for maintenance measures)
  4a1. Accountability and transparency
  4a2. Feedback on the measure by those being measured and others
4b. Usability (not must-pass for maintenance measures)
  4b1. Improvement
  4b2. The benefits to patients outweigh evidence of unintended negative consequences to patients

5. Comparison to Related or Competing Measures

5a. Measure specifications are harmonized **OR** differences are justified
5b. Superior measure is identified **OR** multiple measures are justified

Updated September2017.

NATIONAL
QUALITY FORUM

phrase book

a plain language guide
to NQF jargon

Your Guide to this Guide

Every field develops its own terminology and jargon. Healthcare quality measurement is no exception.

Specialized words do have a purpose, but they can also disguise meaning and confuse people. All too often, those of us at the National Quality Forum (NQF) often use technical terms without providing enough context or explanation. At times it feels like a completely foreign language.

NQF brings together people and organizations working to improve healthcare quality. Our work is inclusive—strengthened by diverse perspectives. Everyone should be able to contribute, whether they are a longstanding leader in the field or new to quality measurement.

This Phrasebook is a guide to NQF's most commonly used terms. It is an attempt to translate our jargon into plain English. Just as you might use a pocket translator to order dinner abroad in Portuguese or Korean, use this booklet to understand "NQF-speak" and join us in collaborating.

Quality

Quality is how good something is. For healthcare, it is often expressed in a range. When a person receives high-quality healthcare, he or she has received the right services, at the right time, and in the right way to achieve the best possible health.

Quality Improvement

Quality improvement (QI) encompasses all of the work people are doing to improve healthcare and the health of individuals and populations. QI is both systematic and ongoing. Healthcare professionals and providers, consumers, researchers, employers, health plans, suppliers and other stakeholders all contribute to effective quality improvement.

Clinical quality improvement is a type of QI specifically designed to raise the standards for preventing, diagnosing, and treating poor health.

National Quality Strategy (NQS)

The NQS is a nationwide effort to provide direction for improving the quality of health and healthcare in the United States. It is guided by three aims: better care, healthy people and communities, and affordable care.

National Quality Forum

The *National Quality Forum* (NQF) is a nonprofit, nonpartisan, organization working toward healthcare that is safe, equitable, and of the highest value. NQF reviews, endorses, and recommends use of standardized healthcare performance measures while encouraging collaboration to accomplish quality goals. NQF is always busy with projects, large and small, and their names often get abbreviated. Some that you might encounter are:

Consensus Development Process (CDP)

NQF uses its formal CDP to evaluate and endorse different types of consensus standards. Standards are most often performance measures. They can also include best practices, frameworks, and reporting guidelines. The CDP follows carefully delineated steps to balance the opinions of all stakeholders to reach consensus. The collection of measures and other resources resulting from CDP projects are sometimes called the *NQF portfolio*.

Measure Applications Partnership (MAP)

The federal government and others who run healthcare programs are often considering new measures for their public reporting and performance-based payment programs. MAP is a large group of stakeholders that reviews those measures and makes recommendations about how they should be used. MAP also works to improve the consistency of measures being used in public- and private-sector programs.

National Priorities Partnership (NPP)

NPP is a partnership of 52 major national organizations with a shared vision to achieve better health, and a safe, equitable, and value-driven healthcare system. NPP was an early advocate for the creation of the National Quality Strategy (NQS) as a blueprint for achieving a high-value healthcare system. NPP continues to provide direction on healthcare policy and helps organizations pursuing the NQS to achieve quality improvement by making connections and helping to share information about innovative approaches.

High-Impact Condition

When a condition affects a large group of people, is expensive to treat, or has a large and long-lasting impact on a person's well-being, it is a high-impact condition. NQF has developed two lists of high-impact conditions and health risks, one for children and another for people with Medicare.

Some of the high-impact conditions in the Medicare population are depression, congestive heart failure, stroke, osteoporosis, and breast cancer.

Cross-Cutting Area

Cross-cutting areas refer to broad topics that people are interested in measuring and improving across the healthcare system. Sometimes we think about high-quality healthcare in the context of a disease, such as cancer, and making the right choices for treatment. At other times we think about factors that affect everyone receiving healthcare regardless of disease, like how well doctors and nurses communicate with patients.

Examples of cross-cutting topic areas include care coordination, healthcare disparities, patient safety, and palliative care.

Measure

A healthcare performance measure is a way to calculate whether and how often the healthcare system does what it should. Measures are based on scientific evidence about processes, outcomes, perceptions, or systems that relate to high-quality care. NQF-endorsed measures are tools that show whether the standards for prevention, screening, and managing health conditions are being met.

The result of a measure is usually shown as a ratio or a percentage. If you have a question about the health of a community or group of people or how well the health system is performing, a measure can give you the information you need.

A measure can be very narrow, such as the percentage of diabetic patients whose blood sugar reaches a certain level, or broad, such as the number of community members whose diabetes is well-managed according to specified criteria.

Please see **NQF's ABCs of Measurement**

Once a person has had a heart attack, taking aspirin daily has been shown to reduce the chance of having a second heart attack. Guidelines tell physicians to prescribe aspirin to all patients leaving the hospital after a heart attack. This practice can be measured, with higher percentages indicating better performance.

$$\frac{\text{96 HEART ATTACK PATIENTS WERE APPROPRIATELY PRESCRIBED ASPIRIN AT DISCHARGE}}{\text{100 TOTAL HEART ATTACK PATIENTS}} = 96\%$$

Types of Performance Measures

Structural measures

Structural measures assess healthcare infrastructure.

> **EXAMPLE:** *The percentage of physicians in a state who can send prescription information to a pharmacy electronically.*

Process measures

Process measures assess steps that should be followed to provide good care.

> **EXAMPLE:** *The percentage of patients leaving the hospital who had a full, updated list of medications sent to their primary care provider within 24 hours.*

Outcome measures

Outcome measures assess the results of healthcare that are experienced by patients. They include endpoints like well-being, ability to perform daily activities, or even death. An intermediate outcome measure assesses a factor or short-term result that contributes to an ultimate outcome, such as having an appropriate cholesterol level. Over time, low cholesterol helps protect against heart disease.

> **OUTCOME EXAMPLE:** *The percentage of a health plan's members who died of cardiovascular disease in the last year.*

> **INTERMEDIATE OUTCOME EXAMPLE:** *The percentage of a health plan's members who are maintaining their blood pressure within a healthy range.*

Patient engagement and patient experience measures

Patient engagement and patient experience measures use direct feedback from patients and their caregivers about the experience of receiving care. The information is usually collected through surveys.

EXAMPLES: *The percentage of patients who said they were as involved as they wanted to be in making decisions about their treatment.*
The percentage of caregivers who felt confident about their ability to give medication to a family member properly.

Composite measures

Composite measures combine multiple measures to produce a single score. The information can be greater than the sum of its parts because it paints a more complete picture.

EXAMPLE: *How successful were care transitions after patients left the hospital after a heart attack, based on three factors: follow-up by a primary care provider, visits to the emergency department, and hospital readmissions?*

MORE AHEAD

Measure specifications

Measure specifications are the technical instructions for how to build and calculate a measure. They describe a measure's building blocks: numerator, denominator, exclusions, target population, how results might be split to show differences across groups (stratification scheme), risk adjustment methodology, how results are calculated (calculation algorithm), sampling methodology, data source, level of analysis, how data are attributed to providers and/or hospitals (attribution model), and care setting.

Taken together, measure specifications are a blueprint that tells the user how to properly implement the measure within their organization.

Disparities-sensitive measure

Performance measures identified as *disparities-sensitive* highlight inequalities in care. Measure results can be split, or *stratified,* to show whether there are differences between two or more groups. Once disparities are visible, targeted strategies can be developed to address them.

Please see **NQF's project on Healthcare Disparities and Cultural Competency**

Patient-reported outcomes and measurement

Patients are a great source of information on health outcomes. Who better to answer questions such as, “Did you understand your doctor’s instructions?” or ”Can you walk several steps without pain?” NQF is working to increase the use of patient-generated information as part of performance measurement.

PATIENT-REPORTED OUTCOME (PRO): information about the patient, as communicated by that person

PRO MEASURE (PROM): an instrument, scale, or single-item measure that gathers the information directly from the patient

PRO-BASED PERFORMANCE MEASURE (PRO-PM): a way to aggregate the information that has been shared by the patient and collected into a reliable, valid measure of health system performance.

Please see **NQF’s Fast Forward: Creating Valid and Reliable Patient-Reported Outcome Measures**

Measurement of Affordability

Affordability is emerging as a high priority in performance measurement. Many terms related to this topic have subtle differences.

Cost

An amount, usually specified in dollars, related to receiving, providing, or paying for medical care. Things that contribute to cost include visits to healthcare providers, healthcare services, equipment and supplies, and insurance premiums.

Costs can be direct, such as when a person gives a copay at a pharmacy window. They can also be indirect, such as when poor health leads to lost productivity in the workplace.

Resource Use

Resources are the goods or services that are combined to produce medical care. They are inputs that have a price assigned to them. When a procedure is done many times, resource use can be measured and predicted. For example, the people and things needed to perform cataract surgery are a set of resources.

Efficiency

This concept combines cost and quality. At a given level of quality, services can be highly efficient or inefficient. Improved efficiency comes from providing high-quality healthcare at lower cost.

Value

The value of healthcare is subjective. It weighs costs against the health outcomes achieved, including patient satisfaction and quality of life.

Quality Measurement Tools Developed by NQF

Quality Positioning System (QPS)

The Quality Positioning System (QPS) is a web-based tool developed by NQF to help people more easily select and use NQF-endorsed® measures. You can search QPS for many helpful details about endorsed measures. Give it a try!

QPS Portfolio

A portfolio is a customized collection of NQF-endorsed measures selected by a QPS user. Some users have created portfolios of measures about specific topics or programs and published them in the system for others to view and use.

Please see **NQF's Quality Positioning System**

Quality Data Model (QDM)

The QDM is part of NQF's work in health information technology. It is an "information model" that defines concepts used in quality measures and clinical care so that users can clearly and concisely locate and communicate pieces of electronic information.

The QDM can be used to help the designers of electronic health records to improve consistency between different systems. This improves automation and the ability of different systems to exchange electronic information.

Endorsement/ NQF-endorsed®

When a measure is submitted for NQF endorsement, it goes through a standard process that includes a thorough review by a multi-stakeholder group of experts, a public comment period, voting by NQF's membership, and approval by NQF's Board of Directors. Measures endorsed by NQF meet tough requirements, so national, state, and local programs often prefer to use them.

Time-limited endorsement

Under rare circumstances, a measure can receive time-limited endorsement for up to a year. In addition to meeting the NQF the Measure Evaluation Criteria, a measure with time-limited endorsement must:

- relate to a topic not addressed by an endorsed measure,
- meet a critical timeline for implementing an endorsed measure (e.g., legislative mandate),
- not be complex (e.g., requiring risk adjustment or a composite), and,
- have testing completed within the 12 month time-limited endorsement period.

Due to the urgent need for a measure that addressed dementia, a recently submitted measure on that topic was given time-limited endorsement so that data would not be lost while the required testing was completed.

Please see **NQF's Measure Evaluation Criteria**

Endorsement Maintenance

Because healthcare is always changing, measures need ongoing maintenance and updates. Endorsement maintenance is a review process completed every three years to ensure that measures continue to meet the measure evaluation criteria and that their specifications are up to date.

The endorsement maintenance process creates an opportunity to consider all available measures in a topical area, harmonize them (see page 17), and endorse the "best in class."

Measure Evaluation Criteria

NQF uses standard criteria to evaluate a measure and decide if it should be recommended for endorsement.

Importance to measure and report

This principle asks if there is evidence that measuring this topic will improve healthcare quality. The goal of this principle is to keep the focus on the most important areas for quality improvement. As the saying goes, "Not everything that can be counted counts." There must also be scientific evidence to support the topic being measured and a significant opportunity to improve achievement.

Scientific acceptability of the measurement properties

This principle asks if a measure will provide consistent and credible information about the quality of care by evaluating its reliability and validity. In case you need a reminder:

- **RELIABILITY** reflects the amount of error in a measure and how well it distinguishes differences in performance. An unreliable measure doesn't function well across users or over time.

- **VALIDITY** asks if a measure truly provides the information that it claims to. A measure that isn't valid is mistakenly evaluating something besides the topic of the measure. Such a measure will not lead to sound conclusions about the quality of care provided.

Feasibility

This principle makes sure that the information needed to calculate a measure is readily available so that the effort of measurement is worth it. The most feasible measures use electronic data that is routinely collected during the delivery of care.

Usability

This principle checks that users of a measure—employers, patients, providers, hospitals, and health plans—will be able to understand the measure's results and find them useful for quality improvement and decision-making. It asks if the measure is strong enough to be used for various types of measurement programs, including public reporting, whether it leads to actual improvement for patients, and whether the benefits of the measure outweigh any potential harms.

Please see **NQF's Measure Evaluation Criteria.**

Measure Harmonization

When measures are similar, the endorsement process will select the best one, recommend how they can be better aligned, or justify why more than one measure is needed.

Competing measures

Competing measures address the same topic **and** the same population.

> **EXAMPLE:** *Two measures that address the rate of patient falls among older adults in nursing homes.*

Related measures

Related measures address **either** the same topic or the same population.

> **EXAMPLES:** *Two measures about flu shots, one for patients in hospitals and one for patients in nursing homes (same topic). Two measures for patients with diabetes, one addressing eye exams and another addressing foot exams (same population).*

Harmonization

Having multiple similar measures can make it difficult to choose one to use**.** *Harmonization* is the process of editing the design of similar measures to ensure they are compatible. Measure developers can make changes to the way a topic or population is defined. Harmonization helps reduce the confusion of having measures that are similar but different.

> **EXAMPLE:** *Two measures may give different age ranges for the population of "children."*

Please see **NQF's "Measure Evaluation Criteria"**

Measure Developer

Measure developers are individuals or organizations that design and build measures. Many people think that NQF develops measures but we do not.

Measure Steward

An individual or organization that owns a measure is responsible for maintaining the measure. Measure stewards are often the same as measure developers, but not always. Measure stewards are also an ongoing point of contact for people interested in a given measure.

Many medical specialty societies such as the American College of Surgeons and government agencies such as the Agency for Healthcare Research and Quality (AHRQ) develop and steward measures.

Health Information Technology (HIT)

HIT is of increasing importance for healthcare. Using HIT means that computer hardware and software are doing the work of storing, retrieving, sharing, and analyzing healthcare data. HIT helps healthcare providers to communicate securely, coordinate care, and better manage services for their patients. HIT can include the use of electronic health records (EHRs) as well as personal health records (PHRs).

Electronic health record (EHR) system

An electronic health record (EHR) is just like it sounds: a systematic collection of health information about a patient or population in a digital format. At its simplest, an EHR is a computerized version of a doctor's traditional paper charts. Electronic information in EHRs can be more easily shared through connected systems and other information networks.

eMeasure

eMeasures are performance measures that have been developed for use in an EHR or other electronic system. eMeasures pull the information needed to evaluate performance directly from the electronic record. They can be far more efficient than traditional approaches of extracting data from paper charts or claims databases.

Value set

A value set is a list of specific clinical terms and the codes that correspond with them. A value set defines each of the clinical terms in the elements of a quality measure. Value sets support the calculation of eMeasures and the systematic exchange of health information.

EHR standards

Healthcare providers use different types of EHR systems that need to be able to communicate, translate, and use information from many sources. Standards are sets of rules or guidelines that allow for inter-operability (the exchange of useful data across different systems).

Code System / Code Set

Sometimes using ordinary spoken or written language is not the easiest way to communicate – like when complex and technical health information needs to be shared system-wide. A code system is a way to turn health information like a diagnosis or procedure name into numbers or code to make sharing information easier and faster. A code set is a specific version of that system's rules.

EXAMPLE: *ICD-10, Health Care Procedure Coding System (HCPCS)*

Multi-Stakeholder Input

NQF brings together different subject matter experts and organizations that want to improve healthcare quality. Because these groups include both government and private sector representatives, they are considered *public-private partnerships.*

Balancing different groups' perspectives in an open and honest dialogue is core to our work. NQF brings together many multi-stakeholder groups to build consensus. They include:

- Steering Committees and the Consensus Standards Approval Committee (CSAC) for measure endorsement,
- Health Information Technology Advisory Committee (HITAC) to provide guidance and expertise on HIT projects,
- Measure Applications Partnership (MAP) to provide input to the government on measure use, and,
- National Priorities Partnership (NPP) to provide input to the government on measurement priorities.

Measure Selection Criteria

To help guide its decisions, the Measure Applications Partnership (MAP) developed a set of Measure Selection Criteria. These criteria are guidelines for deciding the best measures to use in important programs. The criteria recommend that measures in a set:

- Are NQF-endorsed,
- Address each of the priorities of the National Quality Strategy,
- Address high-impact conditions for which measurement is needed,
- Align with measurement requirements in other programs,
- Include an appropriate mix of measure types,
- Cover a patient's entire care experience,
- Take into consideration healthcare disparities, and
- Promote efficiency in measurement.

Please see **MAP Measure Selection Criteria and the Measure Applications Partnership**

Burden

While crucial to improving healthcare quality, measurement can have a downside: *it takes a lot of hard work!* Measurement burden can be the result of a number of factors, including costs and time associated with increased, duplicative, or labor-intensive data collection, analysis, or reporting.

Parsimony

Being parsimonious with measures means using only as many measures as necessary to meet a program's goals – no more, no less. A negative view of parsimony is stinginess; a positive one is minimizing burden.

Alignment

Another way NQF is working to reduce the burden of measurement is by promoting alignment. Alignment is achieved when a set of measures works well across settings or programs to produce meaningful information without creating extra work for those responsible for the measurement.

Alignment includes using the same quality measures in multiple programs when possible. It can also come from consistently measuring important topics across settings. NQF uses several tools to promote alignment including measure harmonization and identifying families of measures and core measure sets.

Family of measures

A family of measures is a group of measures that addresses an NQS priority or high-impact condition across various settings of care, type of data analysis, populations, or reporting programs. High priority measure gaps are also included when there are few or no measures to address important elements of care for a topic. NQF's past work has defined families of measures for cardiovascular disease, diabetes, patient safety, and care coordination.

Core set of measures

A core set of measures is a group of measures identified as the best possible measures for a specific care setting. NQF's past work has developed core sets of measures for hospital care, long-term care, and ambulatory care.

Accountability programs

These programs vary in scope but all tie rewards to performance on quality measures. Accountability programs may also be referred to as incentive programs or high-stakes uses of measurement. When incentives such as payment and market competition are on the line, measurement programs have more impact and also come under more scrutiny.

- **PRIVATE REPORTING:** sharing quality measurement results with internal stakeholders only, such as within a single health system
- **PUBLIC REPORTING:** sharing quality measurement results with the general public, such as through a website or printed report.
- **PERFORMANCE-BASED PAYMENT:** payment for care that is contingent on performance measurement results.
- **MEANINGFUL USE OF HIT:** a well-known incentive program to expand the use of electronic health records. It allows eligible providers and hospitals to earn payments by meeting specific criteria regarding the use of electronic information to improve care.

Serious reportable events

Despite the doctor's vow to "first do no harm," medical errors injure or kill thousands of patients each year. NQF has defined a list of serious reportable events (SREs) that cause or could cause significant patient harm. They include preventable events such as giving medication to the wrong person, failing to follow up on critical test results, operating on the wrong side of a patient's body, or operating on the wrong patient altogether.

Please see **NQF's Serious Reportable Events In Healthcare—2011 Update: A Consensus Report**

Never events

This informal term is often used in place of *serious reportable event*. Eliminating harm completely is important but difficult to do. Because of this, NQF uses *serious reportable event* instead of *never event.*

Safe practices

Part of NQF's work in promoting patient safety includes recommending this set of actions to improve patient safety. Hand hygiene, teamwork training, and informed consent are all examples of safe practices.

Please see **NQF's Safe Practices for Better Healthcare–2010 Update: A Consensus Report**

Episode of Care

Treatment of many health conditions crosses time and place. An *episode of care* includes all care related to a patient's condition over time, including prevention of disease, screening and assessment, appropriate treatment in any setting, and ongoing management.

Please see **NQF's Episode of Care Framework**

Feedback Loops

Quality measurement is a constant work in progress. Feedback loops are a way to collect and share useful information. They can be used for healthcare quality measurement by identifying measures that need modification or areas where adequate measures are not available. Such an exchange of information promotes continuous learning and improvement across the entire healthcare system.

SEE YOU SOON!

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NATIONAL QUALITY FORUM

GLOSSARY OF TERMS

Also see the NQF Phrasebook -a guide to NQF's most commonly used terms. It is an attempt to translate our jargon into plain English.

Access The ability to obtain needed healthcare services in a timely manner including the perceptions and experiences of people regarding their ease of reaching health services or health facilities in terms of proximity, location, time and, ease of approach. Examples may include, but are not limited to, measures that address timeliness of response or services, time until next available appointment, and availability of services within a community.

Accountability An obligation or willingness to accept responsibility for performance.

Accountability Applications - Use of performance results about identifiable, accountable entities to make judgments and decisions as a consequence of performance, such as reward, recognition, punishment, payment, or selection (e.g., public reporting, accreditation, licensure, professional certification, health information technology incentives, performance-based payment, network inclusion/exclusion).

Accountability programs - These programs vary in scope but all tie rewards to performance on quality measures. Accountability programs may also be referred to as incentive programs or high-stakes uses of measurement. When incentives such as payment and market competition are on the line, measurement programs have more impact and also come under more scrutiny.

> PRIVATE REPORTING: sharing quality measurement results with internal stakeholders only, such as within a single health system
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> MEANINGFUL USE OF HIT: a well-known incentive program to expand the use of electronic health records. It allows eligible providers and hospitals to earn payments by meeting specific criteria regarding the use of electronic information to improve care.

Ad Hoc Review An ad hoc review may be conducted on an endorsed measure, practice, or event at any time with adequate justification to substantiate the review. Requests for ad hoc reviews will be considered by NQF on a case-by-case basis and must be justified by specific criteria. NQF can initiate an ad hoc review without an external request when material changes are made to a measure or emerging evidence suggests the need for a

review. The ad hoc review process follows a shortened version of the Consensus Development Process. If a measure remains endorsed after an ad hoc review, it is still subject to its original maintenance cycle.

Administrative Claims - Data derived from administering and/or reimbursing patient care.

Adverse - describes a consequence of care that results in an undesired outcome. It does not address preventability.

Affordability, measurement - Affordability is emerging as a high priority in performance measurement. Many terms related to this topic have subtle differences.

> **Cost** - An amount, usually specified in dollars, related to receiving, providing, or paying for medical care. Things that contribute to cost include visits to healthcare providers, healthcare services, equipment and supplies, and insurance premiums.

Costs can be direct, such as when a person gives a copay at a pharmacy window. They can also be indirect, such as when poor health leads to lost productivity in the workplace.

> **Resource Use** -Resources are the goods or services that are combined to produce medical care. They are inputs that have a price assigned to them. When a procedure is done many times, resource use can be measured and predicted. For example, the people and things needed to perform cataract surgery are a set of resources.
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> **Efficiency** - This concept combines cost and quality. At a given level of quality, services can be highly efficient or inefficient. Improved efficiency comes from providing high-quality healthcare at lower cost.
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> **Value** - The value of healthcare is subjective. It weighs costs against the health outcomes achieved, including patient satisfaction and quality of life.

Agency for Healthcare Research and Quality (AHRQ) – the lead Federal agency charged with improving the quality, safety, efficiency, and effectiveness of and effectiveness of health care for all Americans.

Ambulatory Care - Healthcare services that do not require a hospital admission. These may be provided in an ambulatory surgery center, clinician office, or clinic/ urgent care setting.

Ambulatory Surgery Center (ASC) - Setting where outpatient surgical services are provided.

Annual Measure Maintenance Update On an annual basis, measure stewards are responsible for submitting information to NQF that affirms the detailed measure specifications of the endorsed measure have not changed or, if changes have been made, the details and underlying reason(s) for the change(s). A full review of the NQF evaluation criteria will occur only at the three-year review. The annual maintenance for measures is staggered throughout the year, and the process typically last one quarter (three months) to complete.

Attribution—identifying and assigning of a responsible provider or entity (e.g., health plan) for the care delivered for an episode or population.

Behavioral Health/Psychiatric Behavioral health/psychiatric services may include, but are not limited to, diagnostic, therapeutic, and preventive mental health services, therapy and/or rehabilitation for substance-dependent individuals, and the use of community resources, individual case work, or group work to promote the adaptive capacities of individuals in relation to their social and economic environments.

Benchmarking—the process of comparing the performance of accountable entities with that of their peers or with external best practice results. In developing comparative estimates, results should be risk adjusted for patient-level attributes to support the valid comparisons of these accountable entitles.

Burden - While crucial to improving healthcare quality, measurement can have a downside: *it takes a lot of hard work!* Measurement burden can be the result of a number of factors, including costs and time associated with increased, duplicative, or labor-intensive data collection, analysis, or reporting.

> **Parsimony** -Being parsimonious with measures means using only as many measures as necessary to meet a program's goals – no more, no less. A negative view of parsimony is stinginess; a positive one is minimizing burden.
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> **Alignment** -Another way NQF is working to reduce the burden of measurement is by promoting alignment. Alignment is achieved when a set of measures works well across settings or programs to produce meaningful information without creating extra work for those responsible for the measurement. Alignment includes using the same quality measures in multiple programs when possible. It can also come from consistently measuring important topics across settings. NQF uses several tools to promote alignment including measure harmonization and identifying families of measures and core measure sets.
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> **Family of measures** -A family of measures is a group of measures that addresses an NQS priority or high-impact condition across various settings of care, type of data analysis, populations, or reporting programs. High priority measure gaps are also included when there are few or no measures to address important elements of care for a topic. NQF's past work has defined families of measures for cardiovascular disease, diabetes, patient safety, and care coordination.

Cancer - Cancer may include, but is not limited to, bladder, breast, colorectal, gynecologic, hematologic, liver, lung, esophageal, pancreatic, prostate and skin.

Cardiovascular - Cardiovascular may include, but is not limited to, acute myocardial infarction, atrial fibrillation, congestive heart failure, hyperlipidemia, hypertension, ischemic heart disease, coronary artery disease, and percutaneous coronary intervention (PCI).

Care Coordination - Ensuring patients receive well-coordinated care within and across all healthcare organizations, settings, and levels of care. Examples may include, but are not limited to, measures that address care management across settings, care transitions, plan of care and follow up, and handoff communication.

Care Setting -Settings or services for which the measure applies and is assessed.

Carve-outs—the outsourcing of services, such as behavioral health or pharmacy claims, to specialty health plans or claims processing entities or organizations.

Center for Medicare and Medicaid Services (CMS) – The US federal agency which administers Medicare, Medicaid, and the State Children's Health Insurance Program

Children's Health - Individuals aged 17 years and younger.

Classification - In QPS, NQF-endorsed measures are classified into several categories by which the user can search (care setting, conditions, cross-cutting area, data source, level of analysis, measure type, purpose/use, target population).

Clinical hierarchy—an arrangement of clinical conditions that are ranked according to severity, as "high," "below," or "at the same level." For example, if a patient has COPD and develops bronchitis, COPD would be assigned a greater weight than bronchitis.

Clinical practice guidelines -Systematically developed statements to assist practitioner and patient decisions about appropriate healthcare for specific clinical circumstances.

Clinician -Various types of healthcare practitioners/providers, which may include but is not limited to, physicians, nurses, and allied health professionals.

Clinician Office - Setting in which outpatient healthcare services are provided by physicians or other healthcare providers, including but not limited to, primary care, family practice, general internal medicine, and faculty practice plans.

Clinic/Urgent Care -Setting in which urgent care services are provided. Urgent care services are medically necessary services which are required for an illness or injury that would not result in further disability or death if not treated immediately, but require professional attention and have the potential to develop such a threat if treatment is delayed longer than 24 hours.

Code System / Code Set - Sometimes using ordinary spoken or written language is not the easiest way to communicate – like when complex and technical health information needs to be shared system-wide. A code system is a way to turn health information like a diagnosis or procedure name into numbers or code to make sharing information easier and faster. A code set is a specific version of that system's rules.

Community (as a population) - A group of individuals within a community.

Competing Measures – Measure that have the same concepts for the measure focus (target process, condition, event, outcome) AND the same target population being measured

Complex measure – a measure that requires the use of a proprietary (non public domain) grouper, risk adjustment or other similar methodology that is essential to calculating the result of the measure.

Complications - Any harm (injury or illness) caused by medical care resulting in an undesirable clinical outcome. This includes measures that may address adverse events.

Composite - A combination of two or more component measures, each of which individually reflects quality of care, into a single performance measure with a single score.

Condition – Health conditions or topics intended to be measured.

Consensus (as defined by Office of Management and Budget) - general agreement, but not necessarily unanimity, and includes a process for attempting to resolve objections by interested parties, as long as all comments have been fairly considered, each objector is advised of the disposition of his or her objection(s) and the reasons why, and the consensus body members are given an opportunity to change their votes after reviewing the comments.

Consensus Development Process -- NQF uses its formal CDP to evaluate and endorse different types of consensus standards. Standards are most often performance measures. They can also include best practices, frameworks, and reporting guidelines. The CDP follows carefully delineated steps to balance the opinions of all stakeholders to reach consensus. The collection of measures and other resources resulting from CDP projects are sometimes called the *NQF portfolio*..

Consensus standard – a quality performance measure or practice that has been endorsed by NQF.

Consensus Standards Approval Committee (CSAC) - The Consensus Standards Approval Committee (CSAC) considers all candidate consensus standards recommended for endorsement by NQF. Members of the Committee possess breadth and depth of expertise in healthcare quality improvement and performance measurement and are drawn from a diverse set of stakeholder perspectives. After their detailed review of a candidate standard, the CSAC submits decisions regarding endorsement to the Board of Directors. The Board can affirm or deny CSAC's decisions.

Cost of care - a measure of the total healthcare spending, including total resource use and unit price(s), by payor or consumer, for a healthcare service or group of healthcare services, associated with a specified patient population, time period, and unit(s) of clinical accountability.

Cost/Resource Use - Counting the frequency of units of defined health system services or resources; some may further apply a dollar amount (e.g., allowable charges, paid amounts, or standardized prices) to each unit of resource use (i.e., monetize the health service or resource use units).

Cross-Cutting Area - Cross-cutting areas refer to broad topics that people are interested in measuring and improving across the healthcare system. Sometimes we think about high-quality healthcare in the context of a disease, such as cancer, and making the right choices for treatment. At other times we think about factors that affect everyone receiving healthcare regardless of disease, like how well doctors and nurses communicate with patients.

Data element, critical - Quality performance measures are based on many individual items of information. The data elements are often patient-level information on individual patients (e.g., blood pressure, lab value, medication, surgical procedure, death). Testing at the data element level should include those elements that contribute most to the computed measure score, that is, account for identifying the greatest proportion of the target condition, event, or outcome being measured (numerator); the target population (denominator); population excluded (exclusions); and when applicable, risk factors with largest contribution to variability in outcome. Structural measures generally are based on organizational information rather than patient-level data.

Data element, quality -A quality data element is a single piece of information that is used in quality measures to describe part of the clinical care process, including both a clinical entity and its context of use (e.g., diagnosis, active)

Data Source - Source(s) from which data are obtained for measurement.

Data types - A grouping of information that indicates the circumstance of use for any individual standard data type (e.g. outcome, process, composite)

Denominator Statement - A brief text description of the target population being measured.

Dialysis Center - Setting in which dialysis services are furnished to patients.

Disparities -Differences in the quality of healthcare that are not due to access-related factors or clinical needs, preferences, or appropriateness of intervention. Examples may include, but are not limited to, measures that address variation in care related to race, ethnicity, socioeconomic status, sexual orientation, cognitive or physical disabilities, and age.

Disparities-sensitive measure - Performance measures identified as *disparities-sensitive* highlight inequalities in care. Measure results can be split, or *stratified,* to show whether there are differences between two or more groups. Once disparities are visible, targeted strategies can be developed to address them.

Efficiency (Measure Type) -The cost of care associated with a specified level of health outcomes.

Efficiency of care - a measure of cost of care associated with a specified level of quality of care. "Efficiency of care" is a measure of the relationship of the cost of care associated with a specific level of performance measured with respect to the other five IOM aims of quality.

Electronic Clinical Data (Data Source) -Data derived from a repository of electronically maintained information about healthcare.

Electronic health record (EHR) system - An electronic health record (EHR) is just like it sounds: a systematic collection of health information about a patient or population in a digital format. At its simplest, an EHR is a computerized version of a doctor's traditional paper charts. Electronic information in EHRs can be more easily shared through connected systems and other information networks.

EHR standards - Healthcare providers use different types of EHR systems that need to be able to communicate, translate, and use information from many sources. Standards are sets of rules or guidelines that allow for inter-operability (the exchange of useful data across different systems).

eMeasure - eMeasures are performance measures that have been developed for use in an EHR or other electronic system. eMeasures pull the information needed to evaluate performance directly from the electronic record. They can be far more efficient than traditional approaches of extracting data from paper charts or claims databases.

Value set - A value set is a list of specific clinical terms and the codes that correspond with them. A value set defines each of the clinical terms in the elements of a quality measure. Value sets support the calculation of eMeasures and the systematic exchange of health information.

Empirical evidence: -Data or information resulting from studies and analyses of the data elements and/or scores for a measure as specified, unpublished or published.

Emergency Medical Services/Ambulance (Care Setting) -First responder care specifically designed, equipped, and staffed for lifesaving procedures and transporting the sick or injured.

Endocrine -Endocrine may include, but is not limited to, diabetes and thyroid disorders.

Endorsement Date -The date that the measure was endorsed.

Endorsement Maintenance - Because healthcare is always changing, measures need ongoing maintenance and updates. Endorsement maintenance is a review process completed every three years to ensure that measures continue to meet the measure evaluation criteria and that their specifications are up to date. The endorsement maintenance process creates an opportunity to consider all available measures in a topical area, harmonize them and endorse the "best in class."

Endorsement Type -There are three endorsement types: endorsed, time-limited endorsed, or endorsed with reserve status.

ESRD - End State Renal Disease

Environmental scan – systematic collection of external information to identify new ideas or concepts such as measures or practices

Episode of care - Treatment of many health conditions crosses time and place. An *episode of care* includes all care related to a patient's condition over time, including prevention of disease, screening and assessment, appropriate treatment in any setting, and ongoing management.

Event - Event means a discrete, auditable, and clearly defined occurrence.

Exclusions -A brief text description of exclusions from the target population.

Exclusion criteria—criteria applied before a measure is tested in order to remove any individuals with conditions that may skew the final measure score.

Facility (Level of Analysis) -A single entity that provides healthcare, which may include but is not limited to, a hospital, nursing home, dialysis center, and home health agency.

Feedback Loops - Quality measurement is a constant work in progress. Feedback loops are a way to collect and share useful information. They can be used for healthcare quality measurement by identifying measures that need modification or areas where adequate measures are not available. Such an exchange of information promotes continuous learning and improvement across the entire healthcare system.

Functional Status (Cross-Cutting Area) -The level of activities performed by an individual to meet needs of daily living in many aspects of life including physical, psychological, social, spiritual, intellectual, and roles. Examples may include, but are not limited to, measures that address a patient's ability to perform activities of daily living (e.g. bathing, toileting, dressing, eating) or instrumental activities of daily living (e.g., medication management, shopping, food preparation).

Functional Status - A patient's ability to perform activities of daily living (e.g., bathing, toileting, dressing, eating) or instrumental activities of daily living (e.g., medication management, shopping, food preparation) due to musculoskeletal conditions.

GI -Gastrointestinal (GI) may include, but is not limited to, cirrhosis, gallbladder disease, GI bleeding, gastroenteritis, gastro-esophageal reflux disease (GERD)/peptic ulcer, and polyps.

Group/Practice -Two or more healthcare clinicians/providers who practice together, either at a single geographic location or at multiple locations.

GU/GYN -Genitourinary (GU)/Gynecologic (GYN) may include, but is not limited to, male and female reproduction and incontinence.

Harmonization - Having multiple similar measures can make it difficult to choose one to use**.** *Harmonization* is the process of editing the design of similar measures to ensure they are compatible. Measure developers can make changes to the way a topic or population is defined. Harmonization helps reduce the confusion of having measures that are similar but different.

Competing measures - address the same topic *and* the same population.

Related measures - address *either* the same topic or the same population.

Health Information Technology (HIT) - HIT is of increasing importance for healthcare. Using HIT means that computer hardware and software are doing the work of storing, retrieving, sharing, and analyzing healthcare data. HIT helps healthcare providers to communicate securely, coordinate care, and better manage services for their patients. HIT can include the use of electronic health records (EHRs) as well as personal health records (PHRs).

Health IT Advisory Committee (HITAC) - The Health IT Advisory Committee (HITAC) provides ongoing guidance to NQF's HIT portfolio and offers specific expertise on HIT projects, including specification of testing requirements for eMeasures and maintenance of the quality data set. HITAC is a standing committee of the Board of Directors and was created in December 2009.

Health Information Technology Expert Panel (HITEP) - An Agency for Healthcare Research and Quality-funded panel convened by NQF.

Health Information Technology Standards Panel (HITSP) -A cooperative partnership between the public and private sectors, formed in 2005 for the purposes of harmonizing and integrating standards that will meet clinical and business needs for sharing information among organizations and systems.

Healthcare Associated Infections -Infections that patients acquire during the course of receiving treatment for other conditions.

Healthcare Provider Survey (Data Source) -Data derived from surveys (computerized, pencil-and-paper, verbal, etc.) of healthcare clinicians/providers.

Healthcare setting - any facility or office, including a discrete unit of care within such facility, that is organized, maintained, and operated for the diagnosis, prevention, treatment, rehabilitation, convalescence or other care

of human illness or injury, physical or mental, including care during and after pregnancy. Healthcare settings include, but are not limited to, hospitals, nursing homes, rehabilitation centers, medical centers, office-based practices, outpatient dialysis centers, reproductive health centers, independent clinical laboratories, hospices, ambulatory surgical centers, and pharmacies. The boundary of a healthcare setting (the "grounds") is the physical area immediately adjacent to the setting's main buildings. It does not include nonmedical businesses such as shops and restaurants located close to the setting.

Health Plan -An organization that acts as an insurer for an enrolled population.

HEENT -Head, Eyes, Ears, Nose, and Throat (HEENT) may include, but is not limited to, dental, ear infection, hearing, pharyngitis, and vision.

HL7 (Health Level 7) -A standards-developing organization that provides standards for the exchange, integration, sharing, and retrieval of electronic health information that supports clinical practice and the management, delivery, and evaluation of health services.

High-impact condition - When a condition affects a large group of people, is expensive to treat, or has a large and long-lasting impact on a person's well-being, it is a high-impact condition. NQF has developed two lists of high-impact conditions and health risks, one for children and another for people with Medicare.

High quality data –HITEP criteria for high quality data includes a) data are captured from an authoritative/accurate source; 2) data are coded using recognized data standards; c) method of capturing data electronically fits the workflow of the authoritative source; d) data are available in EHRs; and e) data are auditable.

Home Health (Care Setting) -Limited part-time or intermittent skilled nursing care and home health aide services, physical therapy, occupational therapy, speech-language therapy, medical social services, durable medical equipment (such as wheelchairs, hospital beds, oxygen, and walkers), medical supplies, and other services that are provided to a patient in his/her home or place of residence.

Hospice (Care Setting) -Palliative services provided to terminally ill patients and their families/caregivers in the patient's place of residence or in an inpatient facility.

Hospital/Acute Care Facility (Care Setting) -Setting in which healthcare services, including but not limited to, diagnostic, therapeutic, medical, surgical, obstetric, and nursing are provided, by or under the supervision of physicians, to patients admitted for a variety of health conditions.

HVBP - Hospital Value-Based Purchasing - a program implemented by CMS to update payment policies and payment rates for hospitals beginning in October 2012.

Imaging/Diagnostic Study (Data) -Data derived from an imaging/diagnostic study.

Imaging Facility (Care Setting) - Setting with the equipment to produce various types of radiologic and electromagnetic images and the necessary healthcare staff to interpret the images obtained.

Infectious Diseases - Infectious diseases may include, but are not limited to, hepatitis, respiratory infections, tuberculosis, and sexually transmitted infections.

Informed consent - a process of shared decision-making in which discussion between a person who would receive a treatment, including surgery or invasive procedure, and the caregiver/professional person who explains the treatment, provides information about possible benefits, risks and alternatives, and answers questions that result in the person's authorization or agreement to undergo a specific medical intervention. Documentation of this discussion should result in an accurate and meaningful entry in the patient record, which could include a signed "consent form." Signing a consent form does not constitute informed consent; it provides a record of the discussion.

Infrastructure Supports - Community and system capacity, health information technology, and workforce development. Examples may include, but are not limited to, measures that address the physical buildings of hospitals, clinics, and office components; the informational capabilities comprising paper records, electronic data, voice, and visuals; and the participating physicians, nurses, and support staff.

Inpatient - a patient admitted to a hospital or other facility

IRF - Inpatient Rehabilitation Facility

Integrated Delivery System -A healthcare entity that may include a variety of facilities and/or services including, but not limited to, hospitals, medical groups, skilled nursing facilities, home health, and/or insurance vehicles. This includes delivery systems that assume responsibility across settings for the complete patient-focused episode of care, such as accountable care organizations.

Laboratory (Care Setting) - Setting certified to test or evaluate specimens for clinical and/or diagnostic results.

Laboratory (data) -Data derived from a laboratory.

Last Updated Date - The date that the measure was last reviewed and updated.

Level of Analysis - Level(s) at which measurement is assessed.

LTCH- Long-Term Care Hospital

Management Data - Data derived within an organization's management systems such as facility census, staffing ratios or payroll.

Maternal Care - Women during preconception, pregnancy, childbirth and/or the postpartum period.

Measure - A healthcare performance measure is a way to calculate whether and how often the healthcare system does what it should. Measures are based on scientific evidence about processes, outcomes, perceptions, or systems that relate to high-quality care. NQF-endorsed measures are tools that show whether the standards for prevention, screening, and managing health conditions are being met.

Structural measures -Structural measures assess healthcare infrastructure.

Process measures - Process measures assess steps that should be followed to provide good care.

Outcome measures -Outcome measures assess the results of healthcare that are experienced by patients. They include endpoints like well-being, ability to perform daily activities, or even death. An

intermediate outcome measure assesses a factor or short-term result that contributes to an ultimate outcome, such as having an appropriate cholesterol level. Over time, low cholesterol helps protect against heart disease.

Patient engagement and patient experience measures - Patient engagement and patient experience measures use direct feedback from patients and their caregivers about the experience of receiving care. The information is usually collected through surveys.

Composite measures - Composite measures combine multiple measures to produce a single score. The information can be greater than the sum of its parts because it paints a more complete picture.

MAP - Measure Application Partnership -

The federal government and others who run healthcare programs are often considering new measures for their public reporting and performance-based payment programs. MAP is a large group of stakeholders that reviews those measures and makes recommendations about how they should be used. MAP also works to improve the consistency of measures being used in public- and private-sector programs.

MU - Meaningful Use - The American Recovery and Reinvestment Act authorizes the Centers for Medicare & Medicaid Services (CMS) to provide a reimbursement incentive for physician and hospital providers who are successful in becoming “meaningful users” of an electronic health record (EHR). These incentive payments begin in 2011 and gradually phase down. Starting in 2015, providers are expected to have adopted and be actively utilizing an EHR in compliance with the “meaningful use” definition, or they will be subject to financial penalties under Medicare.

Measure Description - A brief text description of the measure that includes the type of score, measure focus, target population, or time.

Measure Developer - Measure developers are individuals or organizations that design and build measures. Many people think that NQF develops measures but we do not.

Measure, EHR - An EHR measure is a healthcare quality measure specified for use with electronic health records; it is composed of data elements from the quality data set (see below), including code lists and measure logic, and can be translated to computer-readable specifications.

Measure, quality (also quality performance measure) - Numeric quantification of healthcare quality for a designated healthcare provider, such as hospital, health plan, nursing home, clinician, etc.

Measure Endorsement Maintenance - Every three years, endorsed measures in a topical area, as well as newly submitted measures, will undergo the nine-step consensus development process, including review against updated NQF evaluation criteria. In addition to ensuring currency of specifications, endorsement maintenance provides the opportunity to harmonize specifications and to ensure that an endorsed measure represents the "best in class."

Measure Evaluation Criteria - NQF uses standard criteria to evaluate a measure and decide if it should be recommended for endorsement.

Importance to measure and report -This principle asks if there is evidence that measuring this topic will improve healthcare quality. The goal of this principle is to keep the focus on the most important areas for quality improvement. As the saying goes, "Not everything that can be counted counts." There must also be scientific evidence to support the topic being measured and a significant opportunity to improve achievement.

Scientific acceptability of the measurement properties -This principle asks if a measure will provide consistent and credible information about the quality of care by evaluating its reliability and validity.

RELIABILITY reflects the amount of error in a measure and how well it distinguishes differences in performance. An unreliable measure doesn't function well across users or over time.

VALIDITY asks if a measure truly provides the information that it claims to. A measure that isn't valid is mistakenly evaluating something besides the topic of the measure. Such a measure will not lead to sound conclusions about the quality of care provided.

Feasibility -This criterion makes sure that the information needed to calculate a measure is readily available so that the effort of measurement is worth it. The most feasible measures use electronic data that is routinely collected during the delivery of care.

Use and Usability -This criterion checks that users of a measure—employers, patients, providers, hospitals, and health plans—will be able to understand the measure's results and find them useful for quality improvement and decision-making. It asks if the measure is strong enough to be used for various types of measurement programs, including public reporting, whether it leads to actual improvement for patients, and whether the benefits of the measure outweigh any potential harms.

Measure score - The numeric result that is computed by applying the measure specifications and scoring algorithm. The computed measure score represents an aggregation of all the appropriate patient-level data (e.g., proportion of patients who died, average lab value attained) for the entity being measured (e.g., hospital, health plan, home health agency, clinician, etc.). The measure specifications designate the entity that is being measured and to whom the measure score applies.

Measure specifications - Measure specifications are the technical instructions for how to build and calculate a measure. They describe a measure's building blocks: numerator, denominator, exclusions, target population, how results might be split to show differences across groups (stratification scheme), risk adjustment methodology, how results are calculated (calculation algorithm), sampling methodology, data source, level of analysis, how data are attributed to providers and/or hospitals (attribution model), and care setting.

Taken together, measure specifications are a blueprint that tells the user how to properly implement the measure within their organization.

Measure Steward - An individual or organization that owns a measure is responsible for maintaining the measure. Measure stewards are often the same as measure developers, but not always. Measure stewards are also an ongoing point of contact for people interested in a given measure.

Measure testing Empirical analysis to demonstrate the reliability and validity of the measure as specified including analysis of issues that pose threats to the validity of conclusions about quality of care such as

exclusions, risk adjustment/stratification for outcome and resource use measures, methods to identify differences in performance, and comparability of data sources/methods.

Measure Type - A domain of measurement such as process, outcome or patient experience with care.

Measure Under Review - There are four different types of review a measure could be under-going: ad hoc review, annual update review, time-limited review or endorsement maintenance.

Medical device - an instrument, apparatus, implement, machine, contrivance, implant, in vitro reagent, or other similar or related article, including a component part, or accessory, which is recognized in the official National Formulary, or the United States Pharmacopoeia, or any supplement to them; intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease, in man or other animals; or intended to affect the structure or any function of the body of man or other animals, and which does not achieve any of its primary intended purposes through chemical action within or on the body of man or other animals and which is not dependent upon being metabolized for the achievement of any of its primary intended purposes**.**

Medication error - any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the healthcare professional, patient, or consumer. Such events may be related to professional practice, healthcare products, procedures, and systems, including prescribing; order communication; product labeling, packaging and nomenclature; compounding; dispensing; distribution; administration; education; monitoring; and use.

Medication Safety - Any process or event surrounding medication use that may cause or lead to patient harm while the medication is in the control of the healthcare professional, patient, or consumer. Examples may include, but are not limited to, measures that address prescribing, order communication, product labeling, and medication administration.

Mental Health - Mental health may include, but is not limited to, depression, serious mental illness, suicide, substance (alcohol and other drugs) use/abuse, and domestic violence.

Misclassification – an invalid reporting of performance

Multi-Stakeholder Input - NQF brings together different subject matter experts and organizations that want to improve healthcare quality. Because these groups include both government and private sector representatives, they are considered *public-private partnerships.* Balancing different groups' perspectives in an open and honest dialogue is core to our work. NQF brings together many multi-stakeholder groups to build consensus.

Musculoskeletal - Musculoskeletal may include, but is not limited to, osteoarthritis, rheumatoid arthritis, hip/pelvic fracture, joint surgery, low back pain, osteoporosis, and functional status related to musculoskeletal conditions.

National (e.g., Level of Analysis: Population) - A group of individuals within a single national entity (e.g., United States).

National Priorities Partnership (NPP) -

NPP is a partnership of 52 major national organizations with a shared vision to achieve better health, and a safe, equitable, and value-driven healthcare system. NPP was an early advocate for the creation of the National Quality Strategy (NQS) as a blueprint for achieving a high-value healthcare system. NPP continues to provide direction on healthcare policy and helps organizations pursuing the NQS to achieve quality improvement by making connections and helping to share information about innovative approaches.

National Quality Strategy (NQS) – The NQS is a nationwide effort to provide direction for improving the quality of health and healthcare in the United States. It is guided by three aims: better care, healthy people and communities, and affordable care.

Neurology - Neurology may include, but is not limited to, dementia, delirium, stroke and transient ischemic attack (TIA).

NQF Endorsement - NQF endorsement, which involves a rigorous, evidence-based review and a formal Consensus Development Process, has become the "gold standard" for healthcare performance measures.

NQF Number - A unique number is assigned to a measure once it is submitted to NQF.

Numerator Statement -A brief text description of what is being measured within the target population.

Nursing Home/Skilled Nursing Facility -Setting in which healthcare services are provided under medical supervision and continuous nursing care for patients who do not require the degree of care and treatment which a hospital provides and who, because of their physical or mental condition, require continuous nursing care and services above the level of room and board.

Outcome (Measure Type) -The health state of a patient (or change in health status) resulting from healthcare—desirable or adverse.

Overuse (Cross-Cutting Area) - where the “the potential for harm exceeds the possible benefits of care”. Examples may include, but are not limited to, measures that address inappropriate and excessive care (tests, drugs, procedures and visits), preventable emergency department visits and hospitalizations, and harmful preventive services with no benefit.

Paired Measures -Two or more individual measures that are endorsed for use together as a unit of measures but results in individual scores.

Palliative Care and End-of-Life Care -Appropriate and compassionate care for patients with serious, advanced illnesses. Examples may include, but are not limited to, measures that address the evaluation and effective management of physical symptoms (e.g., pain, shortness of breath, nausea) and psychological, social, and spiritual needs; effective communication, and access to palliative and hospice care services.

Paper Records (Data Source) -Data derived from manual abstraction from a medical record.

Patient and Family Engagement (Cross-Cutting Area) - Engaging patients and families in managing and evaluating their health and healthcare, and in making decisions about their care. Examples may include, but are not limited to, measures that address if patients are asked for feedback on their experience with care, have

access to tools and support systems enabling them to navigate and manage their care, and have access to information, and assistance that enables them to make informed decisions.

Patient Engagement/Experience (Measure Type) - The use of feedback from patients and their families/caregivers about their experience and/or engagement in decision making around care (e.g., CAHPS, other patient surveys).

Patient Reported Data/Survey (Data Source) -Data derived from surveys (computerized, pencil-and-paper, verbal, etc.) of patients and/or caregivers.

Patient-reported outcomes and measurement - Patients are a great source of information on health outcomes. Who better to answer questions such as, "Did you understand your doctor's instructions?" or "Can you walk several steps without pain?" NQF is working to increase the use of patient-generated information as part of performance measurement.

> **PATIENT-REPORTED OUTCOME (PRO)**: information about the patient, as communicated by that person
>
> **PRO MEASURE (PROM)**: an instrument, scale, or single-item measure that gathers the information directly from the patient
>
> **PRO-BASED PERFORMANCE MEASURE (PRO-PM):** a way to aggregate the information that has been shared by the patient and collected into a reliable, valid measure of health system performance.

Payment Program -Intended for use in payment programs (e.g. P4P, shared savings programs, etc.)

Peer groups—the ways in which [resource use] measures ensure providers and health plans are compared to similar providers and health plans.

Per capita measure—counts all services provided to a person within a specific population, regardless of condition or encounters with system.

Per episode measure—counts resources based on bundles of services that are part of a distinctive event provided by one or multiple entities (e.g., health services provided associated with an event or series of events for acute myocardial infarction).

Perinatal - Perinatal may include, but is not limited to, conditions affecting women and/or fetuses/newborns during pregnancy, childbirth, newborn and post-partum periods as well as during the pre-pregnancy period.

Pharmacy (Care Setting) -Setting where medications and other medically related items and services are sold, dispensed or otherwise provided directly to patients.

Pharmacy (Data) -Data derived from a pharmacy.

PQRS -**Physician Quality Reporting System** - A voluntary reporting program implemented by CMS. The program provides an incentive payment to practices with eligible professionals (identified on claims by their individual National Provider Identifier [NPI] and Tax Identification Number [TIN]) who satisfactorily report data on quality measures for covered Physician Fee Schedule (PFS) services furnished to Medicare Part B Fee-for-Service (FFS) beneficiaries

Population (Level of Analysis) - A group of individuals defined by geography.

Population Health -Improving the health of the population through the delivery of effective preventive services, the promotion of healthy lifestyle behaviors, the use of community indices of health, and the assessment of environmental factors. Examples may include, but are not limited to, measures that address whether communities foster health and wellness as well as reflect national, state, and local systems of care that are reliable and effective in the prevention of disease, injury, and disability.

Post-Acute/Long-Term Care Facility -A variety of services that help people with health or personal needs and activities of daily living over a period of time. Long-term care can be provided in the community or in various types of facilities, including but not limited to nursing homes, skilled nursing facilities, rehabilitation facilities, and assisted living facilities.

Prevention -Prevention may include, but is not limited to, wellness, child development, immunization, malnutrition, obesity, physical activity, tobacco use and health screening.

Process (measure type) - A healthcare service provided to, or on behalf of, a patient. This may include, but is not limited to, measures that may address adherence to recommendations for clinical practice based on evidence or consensus.

Professional Certification or Recognition Program -Intended for use in professional certification or recognition programs.

Public Reporting - Making comparative performance results about identifiable, accountable entities freely available (or at nominal cost) to the public at large (generally on a public website).

Public Health/Disease Surveillance - Intended for public health and disease surveillance.

Pulmonary/Critical Care - Pulmonary/critical care may include, but is not limited to, asthma, chronic obstructive pulmonary disease (COPD), dyspnea, and pneumonia.

Purpose/Use -The purpose(s)/use(s) for which the measure is intended.

Quality - Quality is how good something is. For healthcare, it is often expressed in a range. When a person receives high-quality healthcare, he or she has received the right services, at the right time, and in the right way to achieve the best possible health.

Quality construct - A hypothetical concept of quality.

Quality Data Model (**QDM** The QDM is part of NQF's work in health information technology. It is an "information model" that defines concepts used in quality measures and clinical care so that users can clearly and concisely locate and communicate pieces of electronic information.

The QDM can be used to help the designers of electronic health records to improve consistency between different systems. This improves automation and the ability of different systems to exchange electronic information..

Quality Improvement *Quality improvement (QI)* encompasses all of the work people are doing to improve healthcare and the health of individuals and populations. QI is both systematic and ongoing. Healthcare professionals and providers, consumers, researchers, employers, health plans, suppliers and other stakeholders all contribute to effective quality improvement.

Clinical quality improvement is a type of QI specifically designed to raise the standards for preventing, diagnosing, and treating poor health.**Quality Improvement with Benchmarking (external benchmarking to multiple organizations)** -Intended for quality improvement with external benchmarking.

Quality of care - a measure of performance on the six Institute of Medicine (IOM) specified healthcare aims: safety, timeliness, effectiveness, efficiency, equity, and patient-centeredness.

Quality Positioning System (QPS) - The Quality Positioning System (QPS) is a web-based tool developed by NQF to help people more easily select and use NQF-endorsed® measures. You can search QPS for many helpful details about endorsed measures.

QPS Portfolio- A portfolio is a customized collection of NQF-endorsed measures selected by a QPS user. Some users have created portfolios of measures about specific topics or programs and published them in the system for others to view and use.

Random error – errors that are not systematic and create "noise" in the measure results.

Rationale – Succinct statement of the need for the measure. Usually includes statements pertaining to Importance criterion: impact, gap in care and evidence.

Regional -A group of individuals within a geographical area that exists within or across one or more states (e.g., Northeast, QIO).

Registry (data) - Data derived from a registry.

Regulatory and Accreditation Programs - Intended for use in regulatory and accreditation programs.

Rehabilitation -Setting in which long-term, comprehensive rehabilitation services are provided to patients for the alleviation or amelioration of the disabling effects of illness. These services are provided by various health professionals including, but not limited to, nurses and physical, occupational, and speech therapists.

Related measures – Measures that have either 1) the same target population being measured but a different concept for the measure focus (process, condition, event, outcome) OR the same concept for the measure focus (process, condition, event, outcome) and a different target population being measured

Reliability –the repeatability or precision of measurement. Reliability of data elements refers to repeatability and reproducibility of the data elements for the same population in the same time period. Reliability of the measure score refers to the proportion of variation in the performance scores due to systematic differences across the measured entities (signal) in relation to random variation or noise.

Reliability testing -Empirical analysis of the measure as specified that demonstrate repeatability and reproducibility of the data elements in the same population in the same time period and/or the precision of the computed measure scores. Reliability testing focuses on random error in measurement and generally involves

testing the agreement between repeated measurements of data elements (often referred to as inter-rater or inter-observer, which also applies to abstractors and coders) or the amount of error associated with the computed measure scores (signal vs. noise).

Reliability, threats -Some aspects of the measure specifications or the specific topic of measurement can affect reliability. Ambiguous measure specifications can result in unreliable measures. Small case volume or sample size, or rare events can affect the precision (reliability) of the measure score.**Renal** -Renal may include, but is not limited to, chronic kidney disease (CKD) and end stage renal disease (ESRD).

Reserve Status - Highly credible, reliable, and valid measures that have high levels of performance due to quality improvement actions. The purpose of reserve status is to retain endorsement of reliable and valid quality performance measures that have overall high levels of performance with little variability so that performance could be monitored in the future if necessary to ensure that performance does not decline.

Resource use measures - comparable measures of actual dollars or standardized units of resources applied to the care given to a specific population or event—such as a specific diagnosis, procedure, or type of medical encounter.

Resource use service categories—categories of resource units or services provided care for a patient or population. Resource units are generally are identified through claims data and grouped into categories with similar types of claims (e.g., x-rays grouped into imaging category). Categories are generally are and measured in terms of dollars, but also can also include resources not captured on a claim (e.g., nursing hours).

Risk Adjustment - The method of adjusting for clinical severity and conditions present at the start of care that can influence patient outcomes for making valid comparisons of outcome measures across providers. A corrective approach designed to reduce any negative or positive consequences associated with caring for patients of higher or lower health risk or propensity to require health services.

Risk factors – patient-related attributes or characteristics that contribute to outcomes

Safety -The reduction and mitigation of unsafe acts within the healthcare system. Examples may include, but are not limited to, measures that address reduction in healthcare-associated infections, serious adverse events, readmissions, and mortality rates.

Selection Use of performance results to make or affirm choices regarding providers of healthcare or health plans (e.g., an individual choosing a surgeon; an employer choosing a health plan to offer; a health plan choosing specialists to empanel; a family doctor choosing an oncologist to refer a cancer patient; an employee or Medicaid enrollee choosing a health plan during open enrollment).

Serious Reportable Events (SRE) – Despite the doctor's vow to "first do no harm," medical errors injure or kill thousands of patients each year. NQF has defined a list of serious reportable events (SREs) that cause or could cause significant patient harm. They include preventable events such as giving medication to the wrong person, failing to follow up on critical test results, operating on the wrong side of a patient's body, or operating on the wrong patient altogether.

Never events - This informal term is often used in place of *serious reportable event*. Eliminating harm completely is important but difficult to do. Because of this, NQF uses *serious reportable event* instead of *never event.*

Safe practices - Part of NQF's work in promoting patient safety includes recommending this set of actions to improve patient safety. Hand hygiene, teamwork training, and informed consent are all examples of safe practices.

Severity levels—pre-determined levels of acuity used to rank and assign patients based on an assessment of the aggregate of their conditions/diagnosis codes.

Standardized pricing—pre-established uniform price for a service, typically based on historical price, replacement cost, or an analysis of completion in the market; removes variation in resource costs due to differences in negotiated prices or geographic differences based on labor or other input costs.

Stratification—division of a population or resource services into distinct, independent strata, or groups of similar data, enabling analysis of the specific subgroups. This type of adjustment can be used to show where disparities exist or where there is a need to expose differences in results.

Structure (as a measure type) -Features of a healthcare organization or clinician relevant to the capacity to provide healthcare. This may include, but is not limited to, measures that address health IT infrastructure, provider capacity, systems, and other healthcare infrastructure supports.

Structured rules - Widely accepted clinical recommendations expressed as coded logic statements made freely available via the Internet, developed by the AHRQ funded Structuring Care Recommendations for CDS project. These statements, or eRecommendations, will be structured in a standard fashion and use standard codes to identify patients for whom the recommendation applies and the actions that should be taken. Such logic statements can then be further adapted by clinical information system suppliers and care providers to generate automated reminders for specific clinicians and/or patients within deployed systems.

Surgery -Surgery may include, but is not limited to, general surgery, perioperative, thoracic, cardiac and vascular.

System Capacity -The physical capacity, workflow and throughput of facilities. Examples may include, but are not limited to, measures that address the presence or number of certain types of rooms or beds at a facility and the length of time between arrival and departure from the emergency department.

Target Population -The population intended to be measured.

Taxonomy - Generally, a model with hierarchy and classification assembled with a descriptive purpose.

Team -Two or more healthcare clinicians/providers, at one location or across different settings, who collaborate together for the care of a single patient or multiple patients.

Time-limited endorsement - Under rare circumstances, a measure can receive time-limited endorsement for up to a year. In addition to meeting the NQF the Measure Evaluation Criteria, a measure with time-limited endorsement must relate to a topic not addressed by an endorsed measure; meet a critical timeline for

implementing an endorsed measure (e.g., legislative mandate); not be complex (e.g., requiring risk adjustment or a composite); and, have testing completed within the 12 month time-limited endorsement period.

Transparency - Extent to which performance results about identifiable, accountable entities are disclosed and available outside of the organizations or practices whose performance is measured. The degrees of transparency are described in Table 2 and range from making performance results available only to a few selected staff within an organization to reporting the results to the public at large. The capability to verify the performance results adds significantly to measure transparency.

Validation - Process (testing) to determine if a measure has the property of validity. The term validation is often used in reference to the data elements and is another term for validity testing of data elements. Validation also is used in reference to statistical risk models where model performance metrics are compared between two different samples of data called the development and validation samples.

Validity - Validity refers to the correctness of measurement. Validity of data elements refers to the correctness of the data elements as compared to an authoritative source. Validity of the measure score refers to the correctness of conclusions about quality that can be made based on the measure scores (i.e., a higher score on a quality measure reflects higher quality)**.**

Validity testing - Empirical analysis of the measure as specified that demonstrates that data are correct and/or conclusions about quality of care based on the computed measure score are correct. Validity testing focuses on systematic errors and bias. It involves testing agreement between the data elements obtained when implementing the measure as specified and data from another source of known accuracy. Validity of computed measure scores involves testing hypotheses of relationships between the computed measure scores as specified and other known measures of quality or conceptually related aspects of quality. A variety of approaches can provide some evidence for validity. The specific terms and definitions used for validity may vary by discipline, including face, content, construct, criterion, concurrent, predictive, convergent, or discriminant validity. Therefore, the proposed conceptual relationship and test should be described. The hypotheses and statistical analyses often are based on various correlations between measures or differences between groups known to vary in quality.

Validity, threats - In addition to unreliability, some aspects of measure specifications and data can affect the validity of conclusions about quality. Potential threats include patients excluded from measurement; differences in patient mix for outcome and resource use measures; measure scores generated with multiple data sources/methods; and systematic missing or “incorrect” data (unintentional or intentional).

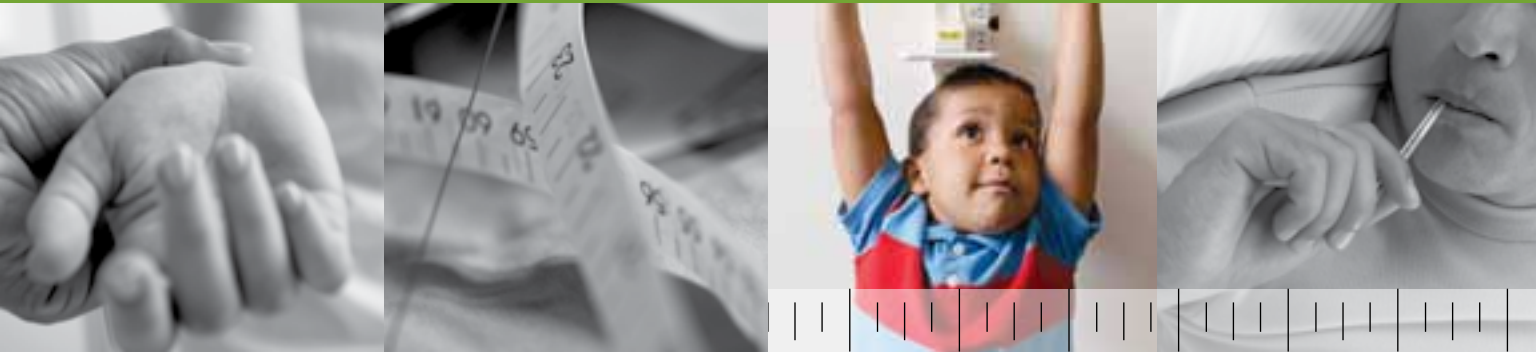
Value of care - a measure of a specified stakeholder’s (such as an individual patient’s, consumer organization’s, payor’s, provider’s, government’s, or society’s) preference-weighted assessment of a particular combination of quality and cost of care performance.

Value set -A set or collection of concepts from one or more vocabulary code systems and grouped tougher for a specific purpose. A value set is a uniquely identifiable set of valid concept representations. A value set may be a simple flat list of concept codes drawn from a single code system, or it might be constituted by expressions drawn from multiple code systems (a code system is a system consisting of designations and meanings, for example LOINC, SNOMED-CT, ICD-10, or ISO 639 Language Codes).

Venous Thromboembolism -The prophylaxis of two related conditions: deep vein thrombosis (DVT) and pulmonary embolism (PE).

Workforce - All disciplines of healthcare professionals as well as others working in healthcare facilities. Examples may include, but are not limited to, measures that address the composition and characteristics of the workforce, staffing and skill mix, accreditation/certification, and workforce satisfaction surveys.

The ABCs *of* Measurement



NATIONAL QUALITY FORUM

Meas•ure *n.* A standard: a basis for comparison; a reference point against which other things can be evaluated; "they set the measure for all subsequent work." *v.* To bring into comparison against a standard.

How do we know? We measure.

How do patients know if their healthcare is good care? How do providers pinpoint the steps that need to be improved for better patient outcomes? And how do insurers and employers determine whether they are paying for the best care that science, skill, and compassion can provide? Performance measures give us a way to assess healthcare against recognized standards.

While measures come from many sources, those endorsed by the National Quality Forum have become a common point of reference. An NQF endorsement reflects rigorous scientific and evidence-based review, input from patients and their families, and the perspectives of people throughout the healthcare industry.

The science of measuring healthcare performance has made enormous progress over the last decade, and it continues to evolve. The high stakes demand our collective perseverance. Measures represent a critical component in the national endeavor to assure all patients of appropriate and high-quality care.

"Measurement matters. When clinicians see their numbers, they act to improve them, using their professional pride and competitiveness to find solutions."

RANDALL D. CEBUL, MD, DIRECTOR, BETTER HEALTH GREATER CLEVELAND

The Difference a Good Measure Can Make

Healthcare professionals work hard to deliver skilled, thoughtful care. But no one person can see across the complexity of the healthcare enterprise to make sure the end result adds up to the best patient care. Measures light the way, showing where systems are breaking down and where they are succeeding to help patients get and stay well.

WHY MEASURE?

Measures drive improvement. Teams of healthcare providers who review their performance measures are able to make adjustments in care, share successes, and probe for causes when progress comes up short — all on the road to improved patient outcomes.

Measures inform consumers. As a growing number of measures are publicly reported, consumers are better able to assess quality for themselves, and then use the results to make choices, ask questions, and advocate for good healthcare. Some providers now post performance measures on their websites, and consumers can consult national sources such as HospitalCompare.hhs.gov and Medicare.gov/NHCompare.

Measures influence payment. Increasingly, private and public payers use measures as preconditions for payment and targets for bonuses, whether it is paying providers for performance or instituting nonpayment for complications associated with NQF's list of "Serious Reportable Events."

Measures for Diabetes

NQF-endorsed measures included in Better Health Greater Cleveland's benchmarks for progress include:

Comprehensive Diabetic Care HbA1c control (<8.0%) - adult patients with diabetes keeping their blood sugar under control.

Diabetes eye exam diabetes patients receiving eye exams

A YARDSTICK FOR DIABETES CARE

"It was a wake-up call," says Jan Bautista, MD, of the Cleveland Clinic's Lakewood Family Health Center. He recalls vividly the first report that showed missed steps in the care process and lower results than expected for diabetes patients in Better Health Greater Cleveland (Better Health), a coalition of hospitals, practitioners, health plans, and employers. "We all realized we had to do better."

A partner in Aligning Forces for Quality, the Robert Wood Johnson Foundation's signature effort to drive quality improvement by aligning local players in 17 communities nationwide, Better Health has pledged to reduce disparities in care and lift the quality of care for all patients with common chronic conditions, including heart failure, high blood pressure, and diabetes. Within Better Health, 26,000 adults with diabetes receive care from 387 primary care physicians in eight healthcare systems, so the stakes in improving their care throughout the alliance were high.

Measurement mattered. Across Better Health, healthcare providers found different ways to improve their performance on key measures. Kathy Lehman, a nurse at MetroHealth Medical Center, created an innovative program to improve pneumococcal vaccination rates for patients with diabetes. At his small Kaiser Permanente primary care practice in Strongsville, Nicholas Dreher, MD, optimized the roles of nurses, medical assistants, and pharmacists so that everyone who "touched" diabetes patients shared responsibility for their outcomes. By reviewing records related to routine care before each patient's visit, a MetroHealth System community health center achieved a 27-percent improvement on one performance measure in a single year.

In three years, 33 of Better Health's 34 medical groups showed improvements in both consistency of care for patients with diabetes and in their outcomes. Overall, almost half of patients received all recommended tests and immunizations, an improvement of nearly 10 percent — from 39 percent in 2007 to 48 percent in 2009.

At the Cleveland Clinic Foundation Lakewood Family Health Center, Jan Bautista contends that measuring and reporting his team's performance made them more aggressive about referring patients for education on managing their diabetes. In the most satisfying improvement, more patients showed good control of hemoglobin A1c, an indicator of blood sugar control. Reducing blood sugar meant lowering the likelihood of eye disease or blindness, kidney disease, nerve damage, and heart disease in those patients. "That change is particularly gratifying," says Bautista, "because it suggests that some of the improvements we made in monitoring and counseling are having their intended effect."

Diabetes: Urine protein screening Percentage of adult diabetes patients aged 18-75 years with at least one test for microalbumin during the measurement year or who had evidence of medical attention for existing nephropathy (diagnosis of nephropathy or documentation of microalbuminuria or albuminuria)

Diabetes: Lipid profile Percentage of adult patients with diabetes aged 18-75 years receiving at least one lipid profile (or ALL component tests)

Diabetes Measure Pair: A Lipid management: low density lipoprotein cholesterol (LDL-C)<130, B Lipid management: LDL-C<100: Percentage of adult patients with diabetes aged 18-75 years with most recent (LDL-C) <130 mg/dL B: Percentage of patients 18-75 years of age with diabetes whose most recent LDL-C test result during the measurement year was <100 mg/dL

Choosing What to Measure

So much of healthcare benefits from good measures. How do we figure out which measures can give us the biggest return in better quality of life for patients? Who sets the priorities, and who carries them out?

Since 2008, the National Priorities Partnership, a group of 48 organizations convened by NQF, has helped galvanize healthcare's expansive and fragmented system around priorities and goals where concerted action makes the biggest difference for patients. Initial priorities have been patient and family engagement, care coordination, safety, population health, overuse, and palliative and end-of-life care. At the request of HHS, NPP has provided feedback on the proposed National Quality Strategy and stands ready to assist with alignment of private-sector initiatives with the Secretary's initial plan. NPP's recommendations built on its initial focus to encompass such areas as equal access to care and critical foundations, including health information technology and a strong evidence base, essential to improve results for patients.

The national priorities guide NQF's agenda for endorsement of standards and educational outreach to its members. In addition, NQF is convening panels of stakeholders, including consumer representatives, from across the healthcare arena to identify areas where new measures are especially needed.

Locally, healthcare systems can turn to NPP priorities for guidance as they develop or customize measures to address the needs of their specific patients. Regionally, communities may select measures to focus on better outcomes for patients at risk in their populations — say, Latinos with diabetes. Professional societies create measures to support their members in achieving standards of care, as the Society of Thoracic Surgeons has done, and health plans develop measures to guide what they pay for and how much they pay.

It is a complex landscape, but one benefitting from increased collaboration as healthcare leaders work together to use measures to drive better health for Americans.

Humboldt County's Care Transitions Program addresses NPP's priority for care coordination: *Ensure patients receive well-coordinated care within and across all healthcare organizations, settings, and levels of care.*

MAKING TRANSITIONS IN CARE A PRIORITY

People in northern California's rural Humboldt County like to joke that they are "behind the Redwood Curtain," cut off culturally and economically from the more cosmopolitan Bay Area by pristine forests. Yet this sparsely populated area is the site of some very forward-looking models of healthcare delivery.

Several years ago, Tory Starr, MSN, RN, CIC, regional director of performance improvement and quality management at St. Joseph Health System-Humboldt County, realized that many patients discharged from St. Joseph Hospital were receiving little to no follow-up care. "Seventy-five percent of our patients had been sick enough to be in the hospital, yet did not get follow-up care," says Starr. The St. Joseph team began to look at rates of hospital readmission, 30-day mortality, and core measures of care for heart failure, heart attack, and pneumonia.

Even when process measures showed solid preparation of patients for discharge, the team found those critical measures were not improving enough. Patients in Humboldt County needed more follow-up: more education, more explicit linking back to primary care, and more help managing their chronic conditions. Starr's solution is the Care Transitions Program, a joint venture of St. Joseph Health System-Humboldt County; Humboldt State University's Department of Nursing; and the Robert Wood Johnson Foundation's Aligning Forces for Quality grantee, the Community Health Alliance of Humboldt-Del Norte. The program gives special attention to higher-risk patients, including those with chronic diseases, those with frequent readmissions who have five or more medications, and those who don't have access to home healthcare. The program is working: readmission rates have been cut by 20 percent for populations receiving services from the Care Transition Program (CTP).

Humboldt's CTP "coaches" have found medication problems in three quarters of the clients they see. "People's capacity to receive information about new or different medications at the end of an acute hospital stay is limited," says Starr. "Even if we educate them at discharge, many are still not clear about the medications they need to take. That's why follow-up is so important."

For the Care Transitions team, enhanced follow-up is part of a larger reshuffling of priorities that calls for expanded emphasis on transitions in care. "We're stepping back and realizing that it's not so much about the amount of service we provide," says Starr. "It's about providing the right kind of service at the right time."

Humboldt's program is right in line with NQF's endorsed Care Continuation Practice.

Care Transition Measure (CTM-3)
Uni-dimensional self-reported survey that measures the quality of preparation for care transitions.

Preferred Practice 20
Systematic Care transitions programs that engage patients and families in self-management after being transferred home.

The Right Tools for the Job

Just as a ruler can't determine air temperature, different measures prove useful for different jobs. Some measures focus on specific steps in providing care, such as whether heart attack patients receive prescriptions for beta blockers and antilipid medications at discharge. Other measures use a wide-angle lens to look at results — for example, whether patients sent home from the hospital have improved health or end up coming back with complications that could have been avoided. Each tool provides a different view — assessing performance from a specific angle. The more we see, the more information we have to choose wisely and make improvements.

NQF endorses a portfolio of tools designed to create a way of seeing and knowing whether care is achieving defined benchmarks.

Process Measures show whether steps proven to benefit patients are followed correctly. They measure whether an action was completed — such as writing a prescription, administering a drug, or having a conversation. **Examples:**

Universal Documentation and Verification of Current Medications in the Medical Record	Percentage of patients whose medical record contains a list of current medications with dosages verified with the patient or authorized representative.
Initial antibiotic received within 6 hours of hospital arrival	Percentage of patients with pneumonia who receive their first dose of antibiotics promptly after arrival at the hospital.
Cervical Cancer Screening	The percentage of women who had a cervical cancer screening with a Pap test.
Childhood Immunization Status	Percentage of children 2 years of age who had four DtaP/DT, three IPV, one MMR, three H influenza type B, three hepatitis B, one chicken pox vaccine (VZV), and four pneumococcal conjugate vaccines by their second birthday.

Outcomes Measures take stock not of the processes, but of the actual results of care. They are generally the most relevant measures for patients and the measures that providers most want to change. **Examples:**

Falls with injury	Rate of patient falls with injury in a hospital.
Surgical Site Infections	Percentage of surgical site infections occurring within 30 days after the operative procedure.
Controlling High Blood Pressure	Percentage of hypertension patients whose blood pressure is under control.
Acute Myocardial Infarction 30-day Mortality	Rate of deaths from any cause within 30 days after hospitalization for a heart attack.
Body Mass Index (BMI) in adults > 18 years of age	Percentage of adults who had an evaluation of their weight.

Patient Experience Measures record patients' perspectives on their care. **Examples:**

CAHPS Clinician/Group Surveys — (Adult Primary Care, Pediatric Care, and Specialist Care Surveys)	Surveys of patient experience with primary care for adults and children and with specialist care.
HCAHPS	Patient experience with care survey for patients who have been in the hospital.
Family Evaluation of Hospice Care	Family Evaluation of Hospice Care.

Structural Measures reflect the conditions in which providers care for patients. These measures can provide valuable information about staffing and the volume of procedures performed by a provider. **Examples:**

Nursing Care Hours per Patient Day	Number of productive hours worked by nursing staff with direct patient care responsibilities per patient day.
Adoption of Medication e-Prescribing	Documents whether provider has adopted a qualified e-prescribing system and the extent of use in the ambulatory setting.
Medical Home System Survey	Percentage of practices functioning as a patient-centered medical home by providing ongoing, coordinated patient care.

Composite Measures combine the result of multiple performance measures to provide a more comprehensive picture of quality care. **Examples:**

Mortality for Selected Conditions	Measure of in-hospital mortality indicators for selected conditions.
Pediatric Patient Safety for Selected Indicators	Measure of potentially preventable adverse events for selected pediatric indicators.

Patient-Centered Measures = Patient-Centered Results

Let's face it. Nobody wants to be in a hospital. The lost sense of independence and control is… at best, unpleasant. A winner of NQF's National Quality Healthcare Award, North Shore-Long Island Jewish Health System (LIJ) shifts power back to patients through extraordinary performance measurement of patient care and satisfaction and public reporting of results. Not surprisingly, the practice of continuous measurement and public reporting creates a feedback loop that improves patient care.

"At North Shore-Long Island Jewish we believe that we must earn patients' trust by reporting our outcomes and errors and enabling them to make informed decisions about which provider to choose."

KENNETH ABRAMS, MD, SENIOR VICE PRESIDENT OF CLINICAL OPERATIONS AT NORTH SHORE LIJ

WHAT YOU SAY MATTERS

What patients say about care really matters at North Shore-LIJ. Patients, families, and community members are actively engaged in improving quality by reporting errors, near misses in their care, and complaints. North Shore routinely includes patients in advisory positions when a major decision about patient care is on the table. A database tracks all patient feedback, which system leaders then use to identify trends and determine priorities for improvement. Areas of concern are boldly reported across the system from the boardroom to doctors, nurses, and support staff.

The results are impressive. Using a video-monitoring program that displays progress on priorities throughout the hospital, North Shore-LIJ increased hand-washing compliance by 81 percent. The hand-hygiene vigilance undoubtedly contributed to a 60-percent drop in infections associated with central lines, a 45-percent reduction in *Clostridium difficile* infection rates (from 1.74 to 0.95 percent), and an 80-percent decrease in Methicillin-resistant *Staphylococcus aureus* infection rates (0.35 percent to 0.07 percent).

Better communication with patients is also helping to ensure that patients who are discharged from North Shore-LIJ get and stay better. After implementing a process of weekly, post-discharge phone calls to heart-failure patients, one North Shore-LIJ hospital reduced its readmission rate from 32 percent to 9 percent — saving money and giving more patients precious time at home. Medicare reports that unplanned return visits to hospitals generate $17 billion in unnecessary costs each year.

QUALITY, FRONT AND CENTER

North Shore-LIJ's commitment to measurement, transparency, and patient-centered care is front and center for all 38,000 employees, from the parking valets to surgeons. CEO and President Michael Dowling meets with every new employee to present the system's quality improvement dashboard, which lays out the organization's quality measures, performance targets, and results.

"Quality is not a department. It's not just one process," said Dowling. "It is everyone's business. You want it to be part of the DNA of the organization."

INVESTING IN EHRs

Dowling is working to spread performance measurement and quality improvement beyond the walls of North Shore-LIJ through a $400 million investment in an electronic health record (EHR) system for inpatient and outpatient settings. The healthcare system is subsidizing community physicians' purchase of EHRs with the condition that their performance on quality measures be shared. It's another extraordinary display of the system's commitment to transparency and improvement. Under the new integrated program, North Shore-LIJ will provide physicians with feedback that shows where their performance falls in comparison to doctors nationwide and in their community.

What NQF Endorsement Means

Most developers put their measures through a rigorous process long before NQF considers them for endorsement. NQF's careful review and assessment gathers input from stakeholders across the healthcare enterprise and develops consensus among those stakeholders about which measures warrant endorsement as the "best in class."

According to Tim Ferris, co-chair of NQF's Consensus Standards Approval Committee, "Measures are the only way we can really know if care is safe, efficient, effective, and patient-centered. Performance measures also help us improve faster. We can make corrections earlier in providing care."

NQF USES FOUR CRITERIA TO ASSESS A MEASURE FOR ENDORSEMENT:

Important to measure and report to keep our focus on priority areas, where the evidence is highest that measurement can have a positive impact on healthcare quality.

Scientifically acceptable, so that the measure when implemented will produce consistent (reliable) and credible (valid) results about the quality of care.

Useable and relevant to ensure that intended users — consumers, purchasers, providers, and policy makers — can understand the results of the measure and are likely to find them useful for quality improvement and decisionmaking.

Feasible to collect with data that can be readily available for measurement and retrievable without undue burden.

"The reason this works really well is because you get input from everyone involved in healthcare — those who receive, give, and pay for care. That allows everyone to have a voice about whether the measure is important to measure, is valid, and is feasible. I make sure our top clinical experts on an issue contribute to the NQF process."

LEE A. FLEISCHER, MD, UNIVERSITY OF PENNSYLVANIA HEALTHCARE SYSTEM, CO CHAIR, OUTCOMES STEERING COMMITTEE

Measures for Cardiac Care

The NQF-endorsed measures of care for heart attack used in Expecting Success include:

AMI-1
Aspirin at arrival

AMI-2
Aspirin at discharge

AMI-3 Angiotensin converting enzyme (ACE) inhibitor or angiotensin receptor blocker (ARB) for left ventricular systolic dysfunction

EXPECTING SUCCESS WITH COMPOSITE MEASURES

How can measurement be used to ensure that all patients receive high-quality care? In 2002, the Institute of Medicine's *Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care*, revealed that racial and ethnic disparities are more likely to occur in the treatment of heart disease — a condition that requires long-term, sustained interaction with the healthcare system. The Robert Wood Johnson Foundation introduced Expecting Success to address this troubling finding. Expecting Success is a pilot program aimed at analyzing hospital performance in treating cardiac patients of all races at 10 hospitals around the country.

Using composite measures to track the multiple steps in cardiac care given to patients from varying races, ethnicities, and primary languages produced data that raised critical questions for the hospitals. Why were some black patients not getting aspirin when they arrived at the hospital with heart attack symptoms? Why were some Hispanic patients consistently not receiving all discharge instructions? Why were readmission rates so much higher for minority patients?

Hospitals reported on eight core NQF-endorsed measures of care for acute myocardial infarction (AMI), or heart attack, and four core measures for heart failure (HF). Performance on these measures is regularly collected and reported on HospitalCompare.hhs.gov. The Expecting Success hospitals took measurement one step further by reporting key composite measures — measures that combine individual measures to summarize performance. These composite measures allowed participating hospitals to see the percentage of their patients who received all the recommended care they were supposed to receive during their time in the hospital, across settings and points in time.

Such measurement enabled the hospitals to focus on developing interventions and putting systems in place to ensure that their heart patients would consistently receive all of the recommended care, putting more emphasis on patient follow-up and care coordination. As a result, the percentage of hospital patients who received appropriate heart failure care increased from 41 percent to 78 percent over two years, and the percentage of patients who received all the recommended standards of heart attack care increased from 74 percent to 86 percent over two years.

AMI-5
Beta blocker prescribed at discharge

AMI-6
Beta blocker on arrival

AMI-7a Thrombolytic agent received within 30 minutes of hospital arrival

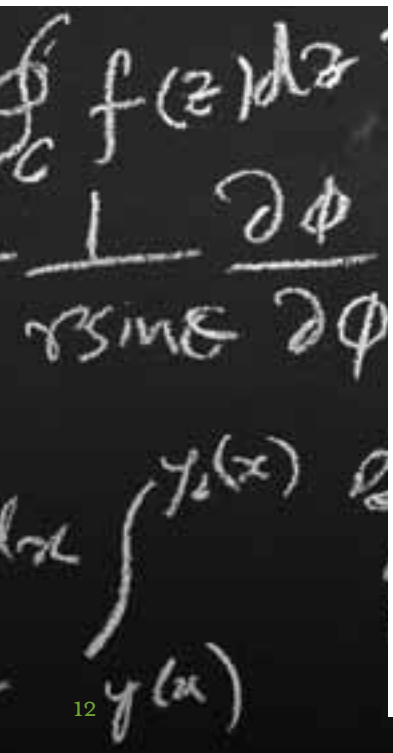
AMI-8a Percutaneous coronary intervention (PCI) received within 90 minutes of hospital arrival

How Endorsement Happens

For more than a decade, the National Quality Forum has crafted and continually improved a process to make sure endorsed standards have cleared NQF's bar for rigor and balance. The process is designed to produce consensus from a broad spectrum of groups that each touch a different part of the healthcare system.

NQF has adopted a three-year schedule for measure endorsement in 22 areas, such as cardiology, neurology, perinatal care, and infectious disease. To respond to new developments that signal a need for updated standards for patient care, NQF also has a process to consider endorsement projects that fall outside the schedule.

For each Consensus Development Project, NQF follows a careful nine-step process that ensures transparency, public input, and discussion among representatives across the healthcare enterprise.



WHAT PATIENTS WANT

As an IBM retiree with more than 30 years in the information technology industry, Patricia Haugen knows performance measures matter. From sales to customer satisfaction to equipment reliability, measures maintain everyone's focus on what matters most to customers.

Haugen was diagnosed with inflammatory breast cancer in 1997 and has worked since for high-quality research and healthcare that are focused on what is best for consumers. She was disappointed to learn how little performance and outcomes measurement occurred in healthcare settings. As an active volunteer with the National Breast Cancer Coalition and as a consumer representative on NQF committees, Haugen is an advocate for healthcare performance measures that matter for patients.

"Because healthcare is an industry that everyone counts on and that receives public funding, there should be quality and outcome measurement, public reporting, transparency and accountability," Haugen said. "That's where NQF comes in: giving us agreed-upon standards that help ensure patients receive quality care that makes a difference."

1 **CALL FOR INTENT TO SUBMIT MEASURES** represents the formal launch of a project. Interested measure stewards and developers are invited to notify NQF of their intent to submit measures for endorsement.

2 **CALL FOR NOMINATIONS** allows anyone to suggest a candidate for the committee that will oversee the project. Committees are diverse, often encompassing experts in a particular field, providers, scientists, and consumers. After selection, NQF posts committee rosters on its website to solicit public comments on the composition of the panel and makes adjustments as needed to ensure balanced representation.

3 **CALL FOR STANDARDS** starts a 30-day period for developers to submit a measure or practice through NQF's online submission forms.

4 **STEERING COMMITTEE REVIEW** puts submitted measures to a four-part test to ensure they reflect sound science, will be useful to providers and patients, and will make a difference in improving quality. The expert steering committee conducts this detailed review in open sessions, each of which starts a limited period for public comment.

5 **PUBLIC COMMENT** solicits input from anyone who wishes to respond to a draft report that outlines the steering committee's assessment of measures for possible endorsement. The steering committee may request a revision to the proposed measures.

6 **MEMBER VOTE** asks NQF members to review the draft report and cast their votes on the endorsement of measures.

7 **CSAC REVIEW** marks the point at which the NQF Consensus Standards Approval Committee (CSAC) deliberates on the merits of the measure and the issues raised during the review process, and makes a recommendation on endorsement to the Board of Directors. The CSAC includes consumers, purchasers, healthcare professionals, and others. It provides the big picture to ensure that standards are being consistently assessed from project to project.

8 **BOARD RATIFICATION** asks for review and ratification by the NQF Board of Directors of measures recommended for endorsement.

9 **APPEAL** opens a period when anyone can appeal the Board's decision.

How Measures Can Work: Safety

Though far from enough, we are seeing some remarkable advances in patient safety nationally. That progress demonstrates the power of performance measures to drive improvement of healthcare. Almost one in six NQF-endorsed measures directly addresses an issue of patient safety, on topics ranging from hand washing to administering antibiotics. Without question, these measures have contributed strongly to the significant reductions in hospital-based infections nationwide.

Measures can best succeed when they are backed by all involved in healthcare, reported to the public, and used for continuous improvement. Other tools may complement them and help them do their job. For instance, NQF also endorses Safe Practices, which offer guidance to practitioners on processes that support safe care.

As an example, there are safe practices for a number of healthcare-associated infections that offer improvement strategies to reduce the number of infections. NQF-endorsed outcomes measures allow those improvements to then be tracked. A performance measure may then be developed to help providers see how often they carry out such a practice. NQF's list of Serious Reportable Events (SREs) is another proven tool supporting patient safety.

SREs are serious adverse events that hospitals can be required to report publicly. More than half of the states now use NQF's list as the basis for reporting to the public on hospitals' performance. NQF's list has become the basis for decisions by the federal government about whether to pay for specific events affecting patients covered by Medicare and Medicaid.

NQF is now updating its list of Serious Reportable Events for hospitals and expanding it beyond the acute-care setting. NQF has also contributed to continuous improvement through monthly safety webinars and online updates, all widely used by practitioners across the nation.

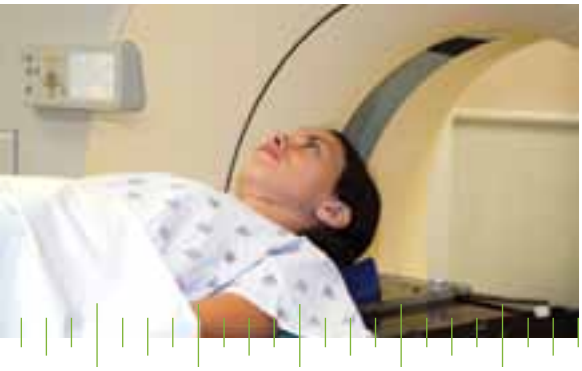
WHEN A PICTURE SAYS ENOUGH

It's a typical weekend night in the busy emergency department at Louisville's Kosair Children's Hospital. A frantic parent brings in a four-year-old after a serious fall. Concerned about internal injuries, the emergency physician orders a CT scan.

Before the little boy is wheeled down the hall to the CT scanning room, staff start to perform one of the National Quality Forum's Safe Practices. They select a CT scanning protocol that will help the team lower the dose of radiation the child receives during the scan to safe levels for his height and weight.

"New computer technology allows us to adjust and read images using lower doses of radiation," adds Jeffrey L. Foster, MD, radiologist-in-chief at Kosair. According to Foster, six different pediatric patients will receive six different doses of radiation at Kosair. Each scan is carefully tailored to the specific child's size and clinical needs. "You don't need a whole lot of radiation to get a picture of a fractured ankle," he says. "You may need more radiation to get a sharper image to diagnose cancer or a fungal infection in the liver."

As imaging technology changes rapidly, it's key to patient safety for national standards and protocols to reflect these changes. "The goal is to make everyone in the country aware of these best practices," says Foster. "Children are not simply little adults. As a result of the work of NQF and others on safe practices, radiologists and technologists have become aware of the need to 'right-size' imaging for children, ensuring that children do not get adult doses of radiation."



Pediatric Imaging when CT imaging studies are undertaken on children, "child-size" techniques should be used to reduce unnecessary exposure to ionizing radiation.

How Measures Will Serve Our Future

Measures are becoming both more precise and more complex. The next generation of measures will span healthcare settings and episodes of care to present a more complete picture of care. In the public arena, reporting of measures will become clearer and easier for patients and their families to understand and use.

Wider adoption of electronic health records (EHRs) can spur measure use enormously. A tremendous boon for patient care and patient experience, EHRs put all the relevant information, including a patient's medical history, at a provider's fingertips. Patients can avoid duplicate tests or imaging. EHRs will also make measurement and performance data available on a real-time basis, making healthcare much more responsive to patient needs. Without good data, healthcare systems simply cannot accurately measure and assess performance.

What You Can Do

Measures will also gain value as more people become involved. Here are steps anyone can take:

- Ask your providers how they measure and report results to improve care and raise awareness among patients.
- Use HospitalCompare.hhs.gov, Medicare.gov/NHCompare, some of the AF4Q examples, and other public reporting venues to learn about providers' performance. Share the information with your friends and family.
- Participate in NQF's public comment periods.
- Nominate or serve on an NQF Steering Committee.
- Attend public meetings (in person or virtually).

For information about measure endorsement, please visit: www.qualityforum.org

YOUR COMMENTS MATTER

Public input plays an important role in NQF's decisions about measure endorsement. One example comes from debate about endorsing a measure for the proportion of patients who achieve 20/40 vision through cataract surgery. The committee was leaning against endorsement, but public comments suggested greater variability in outcomes among physicians and patient groups than research was showing. As a result, NQF endorsed the measure, which will help us learn more about outcomes of this surgery, especially in non-academic and community hospitals. The answers have high stakes since more than half of all Americans have the procedure by age 80.

This brochure was developed with support from the Robert Wood Johnson Foundation.

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Essentials of Quality Measurement
September 28, 2017
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Objectives - After attending this program you should be able to:
1. Know the basic terminology of quality measurement
2. Understand the lifecycle of quality measurement
3. Describe specific examples of how measures are used in the field (when, where, why and how)

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How to get your certificate:

1. Go to http://nqf.cmecertificateonline.com/
2. Click on the "Essentials of Quality Measurement" link

Please print all pages of your certificate for your record.

Questions? Email Certificate@AmedcoEmail.com