



Measure Lifecycle

An Iterative and Interactive Approach to Measure Development



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Welcome

- These Info Sessions are stakeholder outreach and education activities to engage those interested in CMS measure development.
- Info Sessions are an activity of the Measures Management System (MMS) contract.



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These Info Sessions are part of an ongoing effort to engage measure developers and other stakeholders in quality measurement topics, an effort that also includes the MMS Newsletter, special announcement emails, public webinars and routine updates to the Measures Management System (MMS) Hub.

Objectives

- Provide an overview of the Measure Lifecycle and discuss how the different stages interact and inform each other
- Find out which aspects of quality measurement you would like to discuss at a future Information Session

Looking Forward

- We are making some updates to our Info Session approach
 - Each Info Session will be centered around a different stage of the Measure Lifecycle
 - The sessions are not sequential, each one is self-contained
 - The goal of this approach is to create an innovative way for you to engage with measurement and maintain a sense of consistency throughout the year

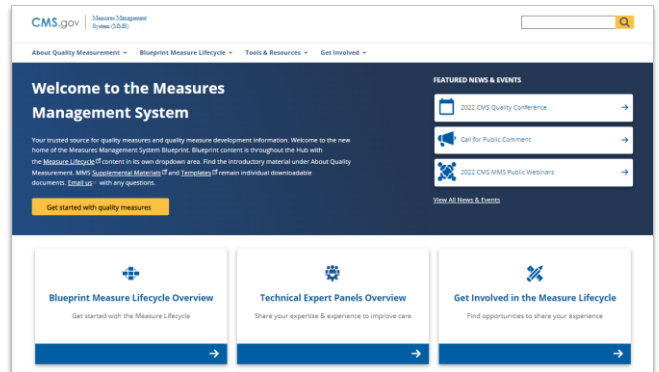
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This presentation kicks off with an overview of the entire measure lifecycle, and then the subsequent webinars will focus on each individual phase.

CMS MMS Hub

- Launched May 2022
- Transforms the MMS Blueprint into a comprehensive, user-friendly website
- All information from this presentation is on the MMS Hub!

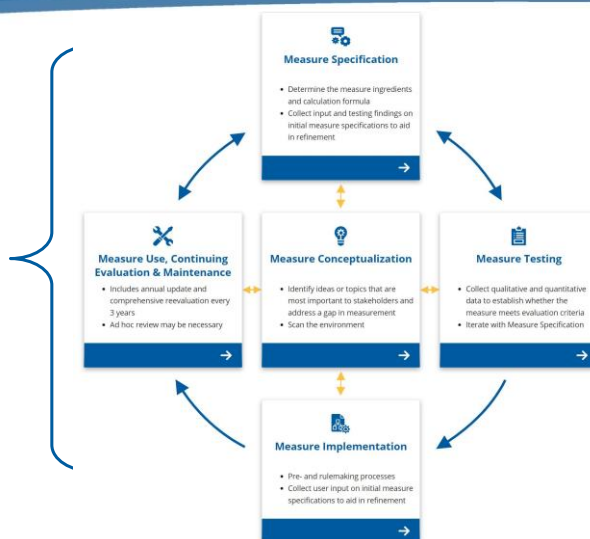


<https://mmshub.cms.gov/>

In addition to information on the measure lifecycle phases, also contained is the stakeholder engagement information, such as TEP or public comment opportunities, as well as tools and resources along with previous Info Session presentations.

Measure Lifecycle

Today's session is an overview of measure lifecycle



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<https://mmshub.cms.gov/measure-lifecycle/measure-conceptualization/overview>

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This diagram from the MMS Hub is our anchor graphic to navigate the measure lifecycle. As shown, this is not a linear process, but instead more circular in nature. Note the bidirectional arrows between many of the stages of the measure lifecycle.

We begin with measure conceptualization in the center, and then move to measure specification, clockwise to measure testing, down to measure implementation, and then to measure use, continuing evaluation and maintenance. Our focus here is not on any one particular stage of the lifecycle, but instead to provide an overview of these stages.

Measure Conceptualization



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<https://mmshub.cms.gov/measure-lifecycle/measure-conceptualization/overview>

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We will begin with the center box for measure *conceptualization*, highlighted in darker blue on this slide.

Measure Conceptualization



- Initiates the Measure Lifecycle
- The end goal of measure conceptualization is a meaningful measure concept with well-defined initial components
 - For instance, target/initial population, denominator, numerator
 - Involves stakeholder engagement through public comment and technical expert panels (TEPs)
- Two main components:
 - **Information Gathering**
 - **Business Case**

Measure conceptualization is the stage where topics for measure development are identified through research and through an environmental scan.

Measure Conceptualization (cont.)



- **Information Gathering***

- Activities include an environmental scan and data analysis



- **Business Case**

- Anticipated impacts of a quality measure, financial outcomes, and resources required for development and implementation

**Also important in respecification and reevaluation*

Join us December 13, 2022, for an Information Session on measure conceptualization ([register here](#)).

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Information Gathering

- Look to peer-reviewed literature, clinical practice guidelines, other existing measures, and input from experts.
- Compile knowledge base that includes any strengths and weaknesses of relevant scientific evidence, and any information that might contribute to the business case.

Business case

- Created for each measure concept in development.
- Serves to document the impacts of a quality measure to include health and healthcare outcomes, financial outcomes associated with a measure, and resources required for development and implementation.
- Not limited to only economic benefits and costs, but consider health and healthcare outcomes and

other harms and benefits of the measure.

- Proceed with developing a measure only when anticipated benefits outweigh the costs and burden of measure development, data collection and implementation.

Measure Specification



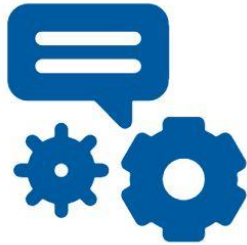
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<https://mmshub.cms.gov/measure-lifecycle/measure-conceptualization/overview>

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Here we move up in our anchor graphic, at about 12:00 to the measure *specification* box.

Measure Specification



- The goal is for the measure to reach its intended population
- Consists of both technical specification and harmonization
- Involves stakeholder engagement through public comment and technical expert panels (TEPs)
- Measure Specification is often concurrent with **measure testing**

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- What are the steps in care being captured with the measure?
- How is the numerator and denominator defined to calculate the measure?
- Are measure components and related measures defined the same way as your measure?

The goal of measure specification is a defined set of details that supports consistent and reliable collection of measure data and implementation. This stage also includes the technical specification of the measure, as well as harmonization with existing measures.

Measure Specification (cont.)



- Measure specifications describe the
 - **Data source** (e.g., administrative, claims, etc.)
 - **Data elements**, the pieces of information extracted from the data source that describe part of the clinical care process
 - **Timing and frequency** of data collection and reporting
 - **Specific instruments used** (if applicable, an example is a survey)
 - **Implementation strategies**

Measure Testing



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<https://mmshub.cms.gov/measure-lifecycle/measure-conceptualization/overview>

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Measure specification often occurs concurrently with measure testing. Here we move a quarter turn clockwise in the measure lifecycle to the *testing* stage, depicted to the right in dark blue.

Measure Testing



- Allows a measure developer to assess accuracy of the quality measure's technical specifications
- Developers generate evidence to help assess strengths/weaknesses of a measure against the CMS consensus-based entity (CBE) measure endorsement criteria
- Measure testing is an iterative process conducted concurrently with **measure specification**

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Measure Testing

- Occurs concurrently with measure specification, which allows for the revision of the draft specifications based on the testing results.
- Allows for the augmentation or reevaluation of earlier judgments about the measure's importance and to assess the other measure endorsement criteria.
- The phases of measure testing are called the alpha and beta testing.

Alpha Testing

- Also known as formative testing
- Assesses **feasibility** (i.e., the ability to implement the measure)
- Types of testing used in an alpha test vary depending on the measure's data source and specifications



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Alpha testing is limited in scope, since it occurs before the full development of detailed specifications. Here the focus is on feasibility, meaning whether the individual data elements are available and in a form consistent with the intent of the measure. The results of alpha testing will impact the measure specification, and so alpha testing is happening early in the process to help develop these detailed specifications.

Type of testing—For example, querying an integrated healthcare delivery system database with the aim of determining how data are captured and how best to express the query for accurate data results.

Beta Testing

- Also known as field testing
- Assesses **scientific acceptability**
 - **Reliability**: If the measure consistently provides the same result when applied to the same phenomena (e.g., quality construct)
 - **Validity**: If the measure quantifies what it is supposed to
- Assesses **usability** of a measure
- Includes evaluation of the measure's suitability for **risk adjustment** or **stratification**



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Beta testing assesses the usability of a measure, the likelihood that an entity can use the measure to improve care. Beta testing should include evaluation of the measure's suitability for risk adjustment, which is a model that corrects for differing characteristics in a population, or for stratification which is an approach that enables the analysis of specific subgroups.

Measure Implementation



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<https://mmshub.cms.gov/measure-lifecycle/measure-conceptualization/overview>

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Here at 6:00 in the measure lifecycle we delve into measure *implementation*, which is comprised of all the activities associated with moving from the development state into an active state.

Measure Implementation



- Includes all activities associated with moving a measure from the development state into an active, in-use state
- **Measure selection** is the process for measure selection and implementation in CMS quality programs
 - The measure selection process depends on the program, not all measures go through the pre-rulemaking and rulemaking process

Includes activities such as consensus endorsement and measure selection, such as the CMS pre-rulemaking and rulemaking processes and measure rollout. Measure implementation varies substantially depending on factors related to your measures, including the ultimate use of the measure and the scope of measure implementation.

Measure Implementation (cont.)



- **Measure rollout** occurs after measure approval for use in a program and varies by program
 - May include collection of data for a **dry run** from all measured entities across the country
 - As part of measure rollout, the measure developer creates materials for measure users that explain what is being measured and how to interpret the results

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Measure rollout—Includes the collection of data for a dry run, which is full-scale testing of measure implementation intended to finalize the required data collection and reporting methodologies.

Dry run—Entails the collection of data from all measured entities who will receive their calculated measure performance rates. The dry run data is used as a baseline for future payment years, but generally dry run data themselves are not used for payment. The purpose is to improve the usability of the measure reports to measured entities, to identify and respond to questions about the measure, and to address issues with report production processes for future improvements.

Communication and education—An aspect of measure rollout which is important that the developer prepare and present materials. These activities include web-based presentations and workshops or train-the-trainer events. It is best practice to document the activities, such as counting the number of events, keeping track of attendee characteristics, as well as documenting the results of your activities and their effectiveness.

Measure Use, Continuing Evaluation & Maintenance



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<https://mmshub.cms.gov/measure-lifecycle/measure-use/overview>

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So once a measure is implemented, we arrive at our next stage which is *measure use, continuing evaluation and maintenance*.

Measure Use, Continuing Evaluation & Maintenance



- Includes **measure production and monitoring**, **continuing evaluation**, and **maintenance reviews**
- **Measure production & monitoring** are the ongoing tasks necessary to use the measure over time
 - Conduct data collection and ongoing surveillance
 - Respond to questions
 - Monitor and analyze the measure performance rates
 - Perform measure maintenance

Measure Use, Continuing Evaluation & Maintenance (cont.)



- **Continuing evaluation**, the developer makes any changes to the technical specifications so that the measure continues to meet the CMS consensus-based entity evaluation criteria
- **Measure maintenance**, every measure must go through an annual update and triennial comprehensive reevaluation
 - Early maintenance review only occurs if there are significant unforeseen problems

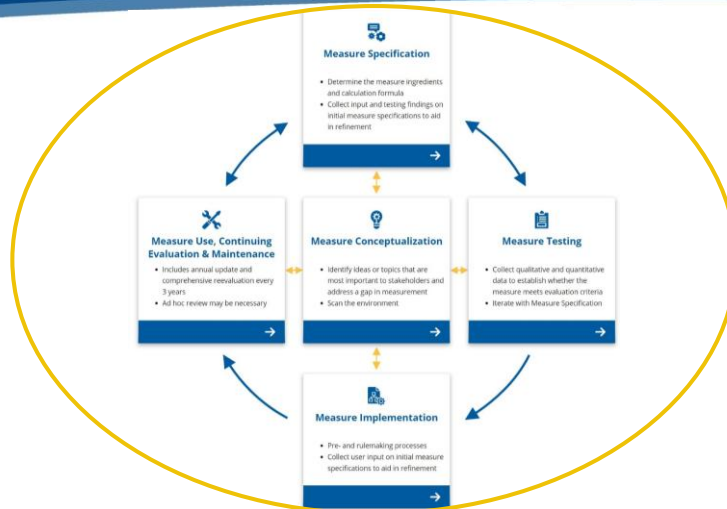
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Continuing evaluation is the process through which technical specifications are modified to ensure the measure meets the measure evaluation criteria of importance, feasibility and scientific acceptability, etc.

Measure maintenance is the period of reviewing and evaluating and updating the measure, during which developers analyze performance trends, including feedback through help desks and trainings to determine whether the measure is still the best, most relevant measure, and whether any unintended consequences need to be addressed.

Stakeholder Engagement



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<https://mmshub.cms.gov/measure-lifecycle/stakeholder-engagement/overview>

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Here we address a set of activities that infuse and inform all stages of the measure lifecycle, *stakeholder engagement*. It is represented here by the yellow circle around the measure lifecycle.

Stakeholder Engagement



Occurs throughout the Measure Lifecycle from conceptualization through to maintenance



Measure developers request input from a diverse group of stakeholders when developing quality measures



This engagement helps them balance a variety of perspectives and interests and leads to better clinical outcomes

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The goal of stakeholder engagement is to gather input from a diverse group of stakeholders, including providers, private payers, government agencies, patients and caregivers, EHR vendors, other measure developers, potential users, and other consensus and standard-setting bodies.

Stakeholder engagement is also critically important to support CMS' aim to gather information about future measurement needs and to conduct its measurement activities transparently.

Stakeholder Engagement (cont.)

There are different types of engagement:

Person and Family Engagement



Technical Expert Panels (TEPs)



Public comments



Other (e.g., focus groups)



See Nov. 2 Info Session
for more information on
stakeholder
engagement ([link](#))

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Person and family engagement (PFE)—Helps developers produce easy-to-understand, high quality measures that are relevant and useful to consumers, thus hitting the target on matters relevant and useful to persons and families.

Technical expert panels (TEPs)—Multi-stakeholder groups convened for measure developers to receive input that represents different perspectives, such as scientific or clinical experts, but also including person and family member representatives.

Public comment—An opportunity for the broadest array of interested parties to provide input on a measure with the potential to surface critical suggestions not previously considered by the measure developers.

Other activities— May include focus groups or one-on-one interviews with subject matter experts (SMEs).

Summary

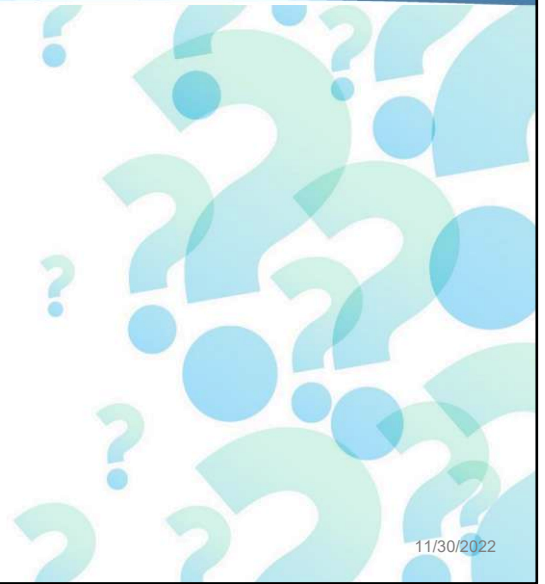
- The Measure Lifecycle is a process with five iterative stages that interact with one another
 - Steps may occur concurrently rather than sequentially
 - Stakeholder engagement occurs throughout
- The end product is a precisely specified, valid, and reliable measure that is meaningful to clinicians, individuals, and caregivers

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Please visit the MMS Hub for additional information about each stage of the measure lifecycle, including the download of the business case template, guidance on measure testing plans, as well as other useful and helpful documents.

Questions



We Want to Hear from You!

- What topics and/or speakers would you like to hear from during this year's Info Sessions?

Announcements

- December 13 Information Session “Measure Conceptualization: From Ideas to Action” from 2-3 p.m. ET
 - [Register today!](#)



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