Measure Conceptualization

From Ideas to Action

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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.

Presentation Objectives

- Review common steps taken during measure conceptualization
- Present case study of information gathering to illustrate some of the steps taken during this phase of the lifecycle

***Business Case development will not be covered in the case study. For more information on Business Case development, please visit the MMS Hub (mmshub.cms.gov).**

Objectives:

- Overview of steps comprising measure conceptualization as defined by the *Blueprint*.
- Primarily focus on information gathering conducted via an environmental scan.
- Discuss business case development in less detail.
- Present a case study based on a hypothetical example to illustrate this process functioning in a real-world scenario.

Measure Conceptualization

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

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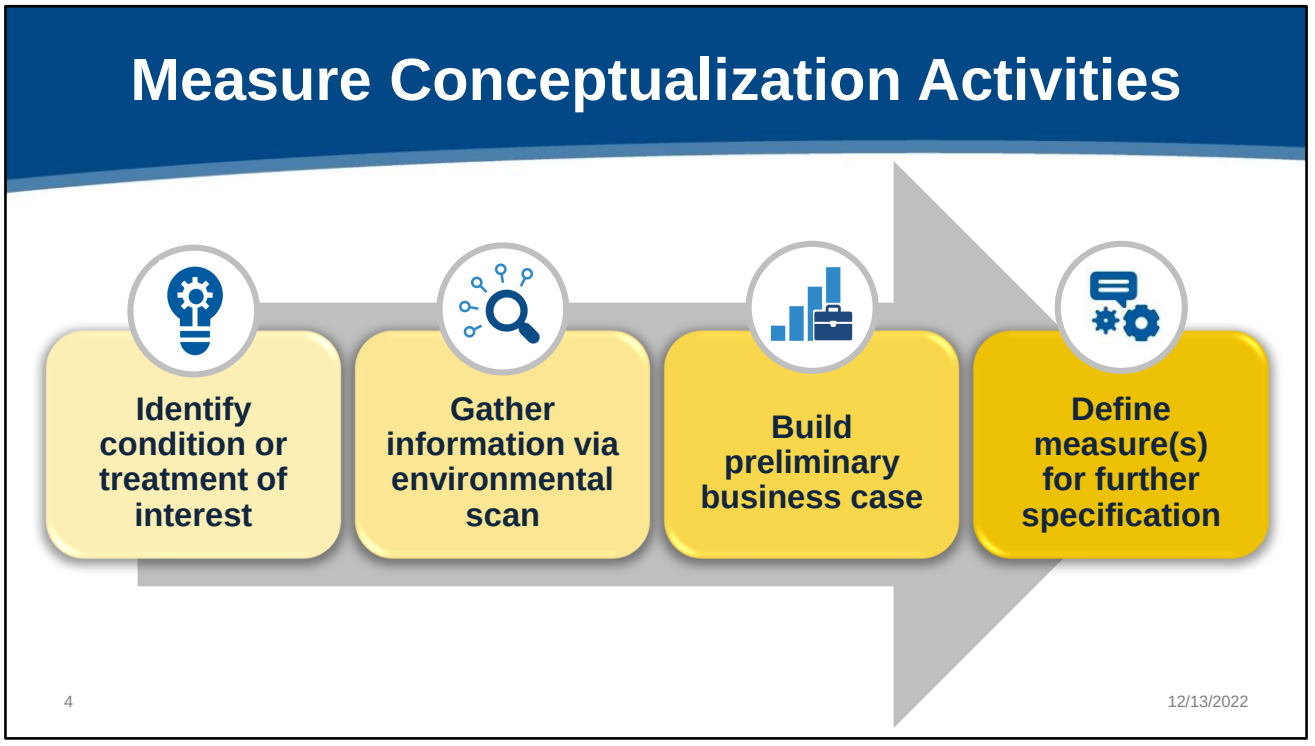
Measure conceptualization—Measure developers do the initial information gathering to identify high-priority topics that are important to patients and suitable to performance measurement. Developers may conduct an environmental scan to assess gaps among existing quality measures, and convene a TEP or post information for public comment to refine the list of measure concepts prior to measure specification.

Measure specification—Measure developers flesh out the initial measure concepts into testable measure specifications.

Measure testing—Involves the collection of quantitative/qualitative data to establish whether the measure meets the evaluation criteria. If a measure shows promise after testing and final specification, developers may submit their measures for use in federal programs.

Measure "use, continuing evaluation and maintenance"—Once a measure is adopted for use in a program, it undergoes an annual evaluation to ensure compliance with up-to-date clinical guidelines and comprehensive reevaluations to ensure the measure is still effective and necessary for use.



Identify condition/treatment of interest—Accomplished by researching the environment for existing measures, which encompasses researching sources, analyzing measure gaps, conducting analyses and engaging multiple stakeholders.

Gather information via environmental scan—Developing a business case goes hand in hand with this step, given that information used to make the business case for a measure often comes from the information gathering conducted via the environmental scan.

Define measures for further specification—Goal of measure conceptualization is to create a meaningful well-researched measure concept with well-defined components, meaning a target population, denominator and numerator, and is fleshed out further in the subsequent phases of the lifecycle.

Step 1: Identify Condition or Treatment of Interest

- **Determining topics for measurement is project-specific; may be triggered by:**
  - Known gaps in CMS programs identified by expert panels or via public comment
  - Publication of new or updated clinical guidelines
  - Emergence of high priority healthcare challenges (e.g., Covid-19, opioid epidemic)

Known gaps in CMS programs may prompt CMS to invest resources in developing measures to address any gaps. The publication of clinical guidelines may warrant the creation of quality measures that promote care consistent with those best practices.

- Developers define aspects of care the measure seeks to improve and crystalize its intended end use—payment programs, public reporting programs, or quality improvement work at a facility.
- Developers identify measures as high-priority areas sensitive to impacts of measurement.
- Developers give priority to outcome measures and PROMs, along with measures that promote healthcare equity and digital measures.

Step 2a: Information Gathering

- **Collection of data and information to narrow down the list of potential measure concepts. Typically involves an environmental scan that includes:**
  - Search for clinical practice guidelines
  - Search for existing measures
  - Review of literature
  - Input from experts
  - And other related activities

The purpose here is to confirm the existence of gaps in measurement and in performance, and then to demonstrate that the measure concepts impact a broad enough target population to enable measurement, and further to make a case for the topic as one that may be improved via quality measurement.

Step 2b: Business Case

- Documents anticipated impacts of a quality measure, including health and healthcare outcomes, financial outcomes, and resources required for measure development and use
- Aids decision-making about which measure concepts to fully develop
- During conceptualization, may be a simple description of pros and cons associated with each potential concept

Business case should demonstrate…

- The need for the measure and the performance gap intended to be addressed.
- How the measure will further the objectives of the project, the value of the measure, why this measure provides an appropriate balance of cost benefits and risks relative to new measures, or relative to a related or competing measure.
- Whether the measure is sensitive to changes in behavior or policy, such that improvements in measure performance reflect improvements in the delivery of care.
- Whether the costs of implementation are realistic, and whether the healthcare system has sufficient capacity to implement the measure.

Conceptualization—An early business case is limited to a simple description of the pros and cons associated with each potential concept — vis-à-vis the costs and benefits — until more detailed information becomes available, once the measure is either tested or put into use.

Step 3: Define Measure(s) for Further Specification

- Define numerator, denominator, and target population for most promising measure concepts
- Prioritize high-likelihood healthcare activities (numerators) that are sensitive to measurement

		Impact (of measurement)	
		Low	**High**
Likelihood (of measure focus)	**Low**	**Do not measure** (accept the risk of low quality)	**Quality improvement** (transfer the risk of low quality)
	High	**Communication or monitoring** (control the risk of low quality)	**Measure** (avoid the risk of low quality)

Case Study: Heart Failure (HF)

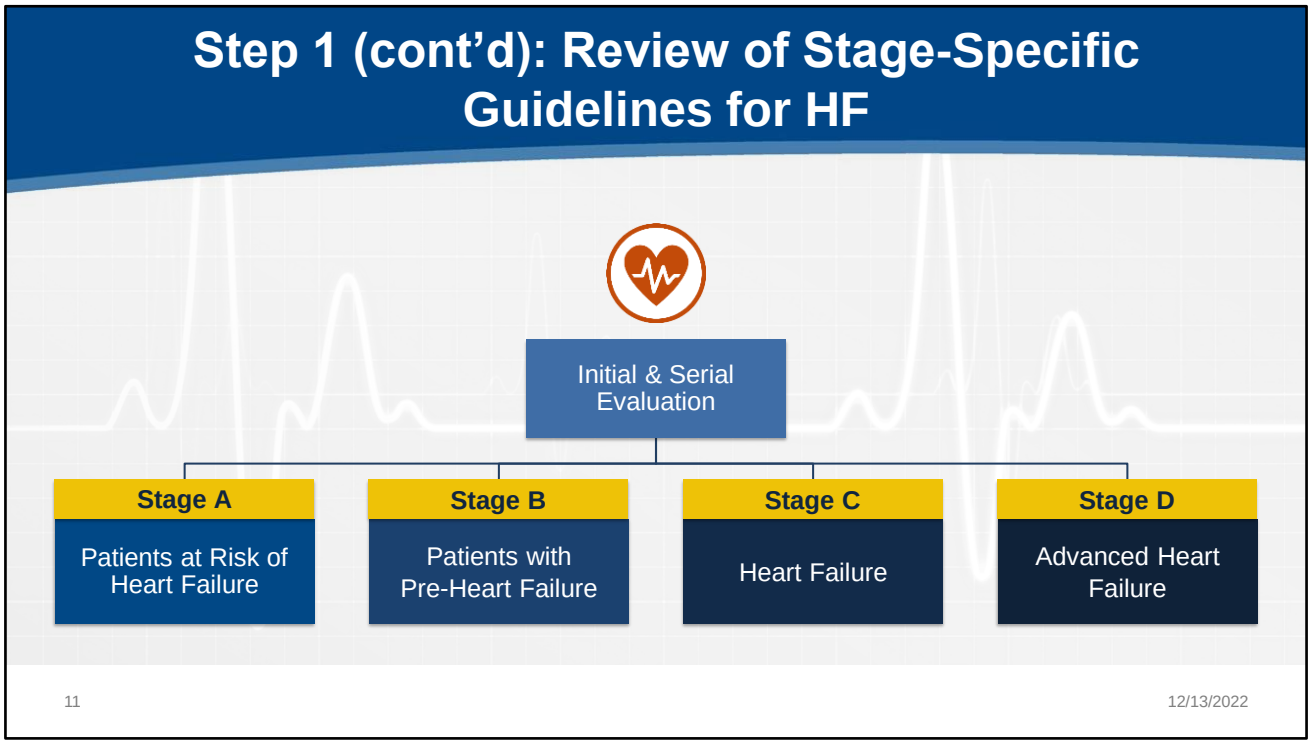
- Our goal is to identify potential measure concepts to:
  - **Address gap(s)** in the measurement landscape
  - **Promote high quality care** consistent with current clinical guidelines

*This is only an exercise and does not necessarily reflect current measures in development or use

Step 1: Identify Topic of Interest

- In 2022 the American Hospital Association/American College of Cardiology/Heart Failure Society of America updated their HF guidelines
- Review the guidelines for information about aspects of HF prevention and treatment that might benefit from quality measurement

For purposes of this hypothetical case study the measure team has been prompted by the release of updated heart failure (HF) guidelines, specifically the 2022 update of heart failure guidelines jointly authored by the AHA, ACC, and the HFSA.



Initial and serial evaluation—Recommendations related to history and physical exam, initial lab and echocardiographic testing, use of biomarkers for risk stratification, genetic evaluation and testing, cardiac imaging, invasive evaluation, wearables and remote monitoring, functional capacity testing, and other clinical assessments and risk scoring.

Stage A—For patients at risk of HF and includes recommendations related to primary prevention, such things as promoting healthy lifestyle habits, blood pressure, glucose management and the use of multivariable risk scores.

Stage B—For pre-heart failure patients and includes recommendations related to medication use to prevent the syndrome of clinical HF, including recommendations related to harm reduction and avoiding the use of certain medications that worsen symptoms, along with surgical interventions such as valve replacement.

Stage C—For patients living with HF with interventions suited to this population, including self-care support, evaluation of barriers to effective self-care, diuretics and decongestion strategies, pharmacological treatments and harm reduction measures related to the avoidance of medications that can worsen existing HF.

Stage D—For patients with advanced HF with recommendations related to advanced care, including specialty referrals, mechanical support, cardiac transplantation, hospitalization management, the management of cardiogenic shock and the integration of care.

Step 2: Environmental Scan

- **Search for related clinical practice guidelines**
  - American College of Cardiology's 2022 Heart Failure guidelines on patients at risk for health failure are an update from an earlier version
- **Search for existing measures in databases such as**
  - CMS Measures Inventory Tool (CMIT)
  - CMS Consensus-Based Entity (CBE) Quality Positioning System (QPS)
  - Quality Payment Program (QPP) Quality Measures: Traditional MIPS Requirement

Note that existing measures do not equal active or endorsed or in-use measures. The scan should identify any relevant measures either retired, inactive, in development, etc., in addition to those currently in use, since developers can leverage completed prior work on the topic to inform the focus or other aspects of the measure.

Environmental Scan Resources

- **CMS developed two resources housed on the CMIT platform to help developers conduct an environmental scan**
  - **Environmental Scanning Support Tool (ESST),** a tool that uses a natural language processing to rapidly scan literature in PubMed, PubMed Central, and CINAHL related to the measure focus, target population, and evidence for an existing measure
  - **De Novo Measure Scan (DNMS)** is a feature of the ESST that scans the literature for measure concepts related to the measure developer's work*

*log in to CMIT required

The De Novo Measure Scan (DNMS) requires a CMIT login for use; however, you can request one free of charge by contacting MMSsupport@battelle.org.

Findings: Current Guidelines

- The "**2022 AHA/ACC/HFSA Guideline for the Management of Heart Failure**" replaces the 2013 Guideline and the 2017 update.
- The 2022 guideline is intended to provide patient-centric recommendations for clinicians to prevent, diagnose, and manage patients with heart failure
- The guideline includes new clinical recommendations for all stages of HF, including prevention

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Since this is an update from prior guidelines, there may be existing quality measures that align with prior versions. Here a natural next step is to map out the measures identified in the last step against the stage of HF care being addressed.

Findings: Existing Measures

~33 measures related to Heart Failure in CMIT, covering the following aspects of HF care:

	Stage A	Stage B	Stage C	Stage D
Initial and Serial Evaluation	**Patients at Risk of HF**	**Patients with Pre-HF**	**HF**	**Advanced HF**
▪ Comprehensive evaluation	▪ Functional status assessment ▪ Multiple chronic conditions management	▪ Medication therapy ▪ Functional status assessment ▪ Multiple chronic conditions management	▪ Unplanned admissions ▪ Medication therapy ▪ Functional status assessment	▪ Hospital readmissions ▪ Excess hospital day ▪ Mortality ▪ Medication therapy ▪ Cost ▪ Functional status assessments

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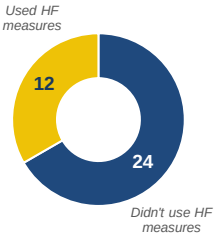
Of approximately 33 measures related to HF, we mapped the measure standard to the stage of HF care. The analysis included a review of the process vs. outcome measures, and an assessment of the setting and level of analysis for each measure.

Limitations to our approach:

- Reviewed measures included in CMIT which includes measures in CMS programs. In a real environmental scan it is key to review additional repositories.
- In a thorough scan we would do a systematic review of related terms, especially those related to the management of conditions such as high blood pressure, or other conditions that feed into the initial and serial evaluation stage.

Findings: Programs Using HF Measures

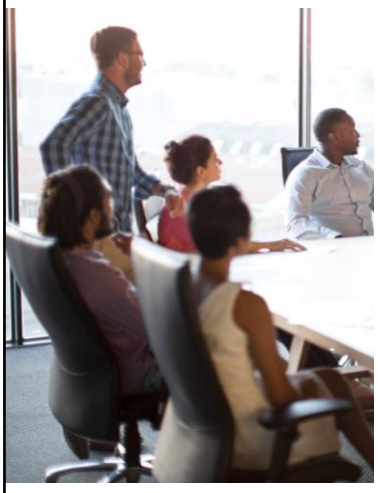
- To identify gaps and opportunities in HF measures we reviewed **CMS Quality Reporting and Value-Based Programs**
- Of the 36 programs reviewed we identified 12 programs that use HF measures and 24 that did not use HF measures
- Alternatively, measure developers could use the **Needs and Priorities Report** published on the pre-rulemaking website.



Given the prevalence of HF and the low barriers to preventive care, HF is well-represented in these relevant programs, with 12 having one or more measures related to HF/HF prevention. The others focus on populations/care settings where other priorities take precedence.

Needs and Priorities Report—Published annually and includes information from programs going through pre-rulemaking and includes information about their gaps in measure sets.

Technical Expert Panel (TEP)



- After you identify several measure concepts of pre- heart failure prevention convene a TEP, a diverse group of stakeholders, to provide feedback and refine the measure concepts
  - Given the topic, the TEP should include individuals with clinical expertise and lived experience related to heart failure and cardiology
- More information on TEPs is available here.

The November 2022 *Info Session* on Technical Expert Panel Engagement identified the measure conceptualization phase as a prime opportunity for measure developers to seek expert input on their measure concepts. The team would opt to convene a TEP at this step, once having reviewed the landscape and identified any gaps.

Questions for the TEP

- Do the existing medication management measures align with current guidelines?
- Potential gap: harm reduction related to medications that can worsen HF. Worth exploring further?
- Are there other outcomes, besides readmissions, that we should consider measuring?
- Are there aspects of the 2022 clinical guidelines that are controversial or not widely accepted?

Harm reduction—Specifically related to medications that can worsen HF. Here we present this information to the TEP to determine whether this is a topic worth exploring further, and if so, whether there are specific medications or comorbid conditions that we would prioritize.

Readmissions—Given that most outcome measures for HF address readmissions, we could ask the TEP whether there are other outcomes that should be measured, and if so, what types of barriers or unintended consequences might we encounter by doing so.

Clinician buy-in— For aspects of the 2022 clinical guidelines that are controversial or not widely accepted, where might there be the most buy-in for a potential quality measure? We would rely on our TEP chair to help navigate this discussion to ensure that all voices are heard, and that actionable input is collected.

Step 3: Measure Concept Development

- Based on information gathering, ask yourself:
  - Is measurement the best option for addressing HF?
  - What aspects of HF care would benefit most from quality measurement? Consider the prevalence of the problem and the potential impact of measuring it
  - What is the target population for HF measures?
  - What care setting will the data be captured in?
- Develop several measure concepts that include target population, denominator, and numerator

The information gathering report template found on the MMS Hub can assist your team in organizing the findings from measure conceptualization to inform those next steps. Based on all that information, the team may then develop several measure concepts that include information as high level as the target population and the denominator and numerator.

Step 3: Draft Measure Components

- Based on Information Gathering and TEP input, the measure development team has identified a need for harm reduction measures among late-stage HF patients
  - **Target population**: Patients 65 and older
  - **Numerator**: Medications known to worsen HF symptoms (e.g., NSAIDs, thiazolidinediones)
  - **Denominator**: Patients 65+ with Heart Failure with Reduced Ejection Fraction (HFrEF)
- Note: This may be contingent on findings from the initial business case

The remaining work in the next steps will inform how the components are defined and any exclusions or exceptions; however, this serves more at a high level of what to anticipate towards the end of conceptualization.

Summary and Next Steps

- Measure conceptualization encompasses all the preliminary steps needed to identify promising measure concepts for further development (including business case development)
- In this example, next steps would include creation of detailed measure specifications to enable preliminary testing
  - Defining data elements comprising measure numerator, exceptions, exclusions, and denominator
  - Identifying data source(s)
  - Detailing measure logic
  - Establishing research questions to be addressed in testing

For more information on measure development visit: https://mmshub.cms.gov/

Questions

We Want to Hear from You!

- What topics and/or speakers would you like to hear from in 2023?

Announcements

- January 25 Info Session from 2-3pm ET
  - What's in a Name? Terminology in Measure Specification
  - Registration: https://www.zoomgov.com/webinar/register/WN_NN3JAqyIRvGCsqvHzE0avA

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