



Contract Number: HHSM-500-2013-13005I

Task Order HHSM-500-T00001

Centers for Medicare & Medicaid Services (CMS)

Measure & Instrument Development and Support (MIDS)

Measures Management System Task Order (MMS)

Quality Measure Development: Supporting  
Efficiency and Innovation in the Process of  
Developing CMS Quality Measures

# Technical Expert Panel Meeting Summary

Meeting Date: January 18, 2018

## Contents

1.0	Executive Summary.....	3
2.0	Background.....	5
3.0	Meeting Proceedings.....	5
3.1	Welcome.....	5
3.2	Overview and Purpose of the Meeting; Review of Recommendations from October 2017 TEP Meeting.....	6
3.3	Measure Testing.....	7
3.4	Measure Implementation.....	11
3.5	Large Group Discussion/Wrap Up.....	15
4.0	References.....	17
5.0	List of Appendixes.....	18

## 1.0 Executive Summary

### 1.1 Background

On January 18, 2018, the second in-person meeting of the technical expert panel (TEP), titled *Quality Measure Development: Supporting Efficiency and Innovation in the Process of Developing CMS Quality Measures*, was convened to continue discussions regarding the development of recommendations for improving the Centers for Medicare & Medicaid Services (CMS) measure development process.

Members of this multidisciplinary TEP included CMS Measure Instrument Development & Support (MIDS) measure development contractors, non-CMS measure developers, electronic health record (EHR) vendors, hospital/clinician system representatives, and patient and caregiver advocacy group representatives. Seventeen of the 20 TEP members attended the meeting in person and one member attended portions of the meeting via the TEP Listening Line.

### 1.2 Meeting Proceedings

To set the stage for the discussion, members of the Measures Management System (MMS) Team welcomed participants and summarized the meeting purpose and agenda.

The meeting format was large group discussions punctuated by smaller breakout discussions. The initial large group discussion focused on reviewing recommendations put forth during the October 2017 in-person meeting. The smaller group discussions centered on questions related to the topics of measure testing and measure implementation.

Members of the TEP provided comments and recommendations relevant to each of the topic areas. High-level summaries of central conversation themes are summarized in this report, along with recommendations that the MMS team will provide to CMS leadership. Recommendations for making the measure development process more efficient and agile included

- Institute a governance process to help plan, develop, and manage shared measure testing resources.
- Incentivize participation in measure testing.
- Promote data element standardization and education.
- Implement a framework with a long-term plan on how CMS will approach measurement.
- Institute an acceptable “quick path to failure” mechanism in the measure development process with well-defined steps.
- To facilitate development of cross-program measures, consider a different organizing structure for measure development contracts/projects that cuts across programs.
- Provide funding for the development and implementation of a national testing collaborative.
- Develop an objective scoring system to evaluate measure testing concepts that are currently assessed subjectively such as importance, burden, and feasibility.

The meeting concluded with a large group discussion and wrap up. The TEP will reconvene in for an all-day meeting in Spring 2018.

## 2.0 Background

The Centers for Medicare & Medicaid Services (CMS) contracted with Battelle to manage CMS's Measures Management System (MMS) and provide periodic updates to the [CMS MMS Blueprint](#). As part of this contract, Battelle convened a technical expert panel (TEP), titled *Quality Measure Development: Supporting Efficiency and Innovation in the Process of Developing CMS Quality Measures*, for the purpose of developing a set of recommendations to assist CMS with improving the measure development process – in particular, ways to make the measure development process more efficient, lean, and agile. In the context of MMS, *lean* means creating more value for stakeholders with fewer resources. *Waste* occurs when behavioral responses to quality measures by clinicians and consumers are not well aligned with CMS goals and priorities. *Agile* in the context of the MMS means a systematic reduction in uncertainty about this alignment through small, incremental, and iterative minimum viable work products informed by empirical feedback.

Members of this multidisciplinary TEP included CMS Measure Instrument Development & Support (MIDS) measure development contractors, non-CMS measure developers, electronic health record (EHR) vendors, hospital/clinician system representatives, and patient and caregiver advocacy group representatives.

The purpose of this report is to provide a summary of the TEP's perspectives and recommendations on the topics of measure testing and measure implementation relayed during the second in-person meeting held in Baltimore, MD, on January 18, 2018. The meeting format was a series of large group discussions punctuated by smaller breakout discussions. The focus of the initial large group discussion was reviewing recommendations put forth during the October 2017 in-person meeting. The smaller group discussions centered on questions related to measure testing and measure implementation. A copy of the meeting agenda is included as Appendix A.

In preparation for the meeting, participants were referred to the National Quality Forum's report titled [Variation in Measure Specifications: Sources and Mitigation Strategies](#) (December 21, 2016). Participants also received a copy of the agenda and meeting slides (Appendix B).

## 3.0 Meeting Proceedings

### 3.1 Welcome

Jennifer Brustrom, the Battelle TEP Coordinator, welcomed the participants and thanked them for attending. She noted that portions of the meeting would be accessible via audio to the Listening Line.<sup>1</sup> Seventeen of the 20 TEP members attended the meeting in person and one individual attended portions of the meeting via the Listening Line.

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<sup>1</sup>The Listening Line was a toll-free telephone line established for non-TEP members interested in listening to non-confidential portions of the TEP meetings. The Listening Line was established to reduce potential conflicts of interest for TEP members working on other CMS measure development efforts and to provide transparency for the TEP proceedings.

## 3.2 Overview and Purpose of the Meeting; Review of Recommendations from October 2017 TEP Meeting

Nicole Brennan, the Project Director for Battelle’s MMS Task Order, reviewed the meeting objectives and agenda (Appendix B, slides 3-5). Dr. Brennan then read an email from one of the TEP members who was unable to attend, urging the group to identify strategies for moving the industry forward. Dr. Brennan then reviewed the recommendations put forth by TEP members during the October 2017 TEP meeting. As documented in the meeting slides (Appendix B, slides 6-17) and the [October 2017 TEP Summary Report](#), recommendations were classified according to four primary themes (sharing of best practices, process refinement, refinements to the MMS Blueprint, and data sources and collaboration for measure testing) and timeframe for implementation (i.e., whether the recommendation could potentially be implemented within a six-month timeframe [“short term”], within 12 months [“medium term”], or one to three years [“long term”]).

### 3.2.1 Review of Recommendations from October 2017 TEP Meeting: Large Group Discussion

Discussion focused initially on processes for sharing best practices with measure developers and who should lead these efforts. The approach would help developers avoid making mistakes that other developers have already made and resolved. Some members indicated that organizations such as the National Quality Forum (NQF) or CMS could potentially lead these efforts; another TEP member argued that a patient-focused approach would be more effective for driving quality improvement efforts.

One suggestion introduced during the initial discussion, which the group returned to throughout the day, was the idea that the measure development process be modified to include a built-in, accepted “quick path to failure” mechanism that enforces what the measure development stopping point should be. A TEP member noted that because a lot of measure development is funded by government contracts, developers are under pressure to ensure that their measures “succeed,” which may result in the continued development and endorsement of measures that are not clinically relevant, not feasible to implement, and not reliable or valid.

Another theme of the initial discussion that recurred during the meeting was the need for patients to be involved throughout the measure development process. A member of the TEP noted that his group has a well-defined process for involving patients in measure development, which begins with patients leading identification of the concepts that should be developed. Another TEP member noted the importance of involving patients with diverse characteristics. He noted that much of the patient input developers receive is from the same small group of patients. The challenge of engaging populations from whom input would be especially useful (e.g., Medicaid patients and patients who are disengaged from the medical system) was acknowledged.

#### Recommendations

- Institute a proscriptive process for sharing measure development best practices. Examples of best use cases (i.e., “what does good look like?”) would be especially useful.
- Modify the measure development process such that there is a built-in, accepted “quick path to failure” mechanism that defines decision point gates that help to enforces what the measure development stopping point should be. At the outset, each measure would be required to pass a stringent test

justifying its importance and establishing that there is a credible evidence base to support its development. At each subsequent step of the development process, each measure would need to pass a “hurdle” before it is allowed to proceed to the next step and before resources are spent on reliability and validity testing.

- Make the patient engagement section of the CMS *Blueprint* more robust. Provide more detail on best practices for identifying and recruiting patients for measure development efforts, especially diverse groups of patients.
- Revise the Business Case template and scoring criteria such that the patient perspective is given equal weight to other sections.
- Provide resources to measure developers that they can use to educate patients involved in measure development. The training materials developed by groups such as the International Liaison Committee on Resuscitation (ILCOR) and the Patient Centered Outcomes Research Institute (PCORI) were cited as notable examples.
- Make a simplified version of the *Blueprint* for patients and clinicians that explains measure concepts at an 8<sup>th</sup> grade level. Patient and clinician engagement efforts often require explaining measure concepts; it would be useful for developers to have a standardized set of simplified definitions they can draw upon for this purpose.

### 3.3 Measure Testing

Much of the morning session was dedicated to continuing the discussion of measure testing that was initiated during the October 2017 TEP meeting. To set the stage for this conversation, Jeffrey Geppert, a subject matter expert from Battelle, reviewed the measure testing process and where it fits within the measure lifecycle (Appendix B, slides 19-21).

Mr. Geppert emphasized that measure development should focus on overarching goals --such as a measurable future state that can be quantified and tracked against - with a comprehensive strategy that is constructed around those goals. In its current state, the measure development process lacks both a comprehensive strategy and process for goal determination. Mr. Geppert next described the process of integrated measure testing and introduced the concept of synthetic data and its potential application to measure testing. He then addressed attendant pros and cons of both integrated measure testing and synthetic data (Appendix B, slides 22-25).

#### 3.3.1 Measure Testing: Large Group Discussion

Much of the ensuing conversation focused on concerns and challenges associated with using synthetic data. One member noted that using synthetic data appeared to be adding an “extra step” to the measure testing process because developers will eventually need to use actual patient data if the measure does not fail with synthetic data.

### Recommendations

- Modify the measure development process such that end users are involved earlier in the measure testing process to ensure that measure usability/feasibility is established earlier.
- Institute a governance process to help plan, develop, and manage shared measure testing resources.

### 3.3.2 Measure Testing: Small Group Discussions

Following the initial discussion of measure testing, the TEP was divided into three groups of five to seven members, each facilitated by a Battelle moderator. The composition of the groups was based on the members' primary interests and expertise in the area of measure development and/or implementation (Groups 1 and 2) or consumer advocacy (Group 3). The discussion questions posed to each group were tailored accordingly (Appendix B: slide 27; Appendix C).

Small group discussions of measure testing revolved around five central themes: integrated measure testing, reorganization of the measure development system to facilitate integrated measure testing, use of synthetic data for measure testing, measure testing collaboratives, and consumer priorities for measure testing.

**3.3.2.1. Measure testing theme 1: Integrated measure testing.** The barriers and complexities associated with integrated measure testing, and measure testing more broadly such as collecting data related to social determinants of health, the non-representativeness of single care setting data, lack of integrated data sources, the large number of resources required to do measure testing, challenges associated with engaging stakeholders, and requirements for gaining access to testing data were discussed. TEP members suggested a number of strategies for promoting integrated measure testing including offering incentives to executive hospital leadership and vendors, providing libraries for data elements and logic, standardization of data elements, and providing resources to help developers assess measure feasibility.

### Recommendations

TEP members' recommendations for strategies to promote integrated measure testing fell roughly into three categories: incentivizing/encouraging participation in measure testing, creating and promoting testing resources, and promoting data element standardization and education:

#### Incentivize/encourage participation in measure testing

- Make participation in measure testing a requirement of relevant CMS programs.
- Offer incentives to engage hospital stakeholders beyond those who are already involved in quality improvement activities (e.g., executive leadership).
- Explore a model where there is a tradeoff for hospitals to engage in measure development (e.g., providing some kind of credit for participating).
- Encourage health information exchanges (HIEs) to be more involved in measure testing.
- Encourage patients to be involved in measure testing by educating them about why measure testing is important and relevant to them.



## Create/promote data testing resources

- Create open source libraries for both data elements and logic.
- Investigate ways to integrate data across multiple data sources and providers for a single patient.

## Promote data element standardization and education

- Promote data element standardization so that EHR vendors are required to break down and record data elements the same way.
- Educate developers on the ways that localized EHR definitions of data elements can affect measure calculations and the results of measure testing.
- Invite measure developers into smaller healthcare systems for the purpose of educating staff on processes such as accessing data.
- Develop resources around feasibility assessment to help developers avoid creating measures that are not feasible to implement.

*3.3.2.2 Measure testing theme 2: Reorganization of the measure development system to facilitate integrated measure testing.* TEP members suggested several ways that the current measure development system could be reorganized to facilitate integrated measure testing. Throughout the meeting, developers mentioned repeatedly that they would like a built-in, accepted “quick path to failure” mechanism that enforces what the measure testing stopping point should be. Several TEP members suggested that CMS consider organizing measure development projects around principles other than CMS programs. CMS could consider finding ways to bring together multiple people with different (but complementary) types of expertise to implement development projects.

## *Recommendations*

- Institute an acceptable “quick path to failure” mechanism in the measure development process with well-defined steps. Procedures already in use by the Pharmacy Quality Alliance (PQA) and The Joint Commission may be good models.
- To facilitate development of cross-program measures, consider a different organizing structure for measure development contracts/projects that cuts across programs.
- Encourage developers to conduct measure testing on an ongoing basis throughout the measure lifecycle (“test early and test often”). Modify the Blueprint to emphasize this point.
- Require healthcare providers to report on social determinants of health.
- Institute new standards and certification requirements that will encourage vendors to participate in all phases of measure development.
- Revise feasibility standards so that new measures are not constrained by current feasibility standards. Be open to new measure concepts that don’t meet feasibility standards based on existing data.

**3.3.2.3 Measure testing theme 3: Use of synthetic data for measure testing.** While developers agreed that having a large data set to use for measure testing would be useful, most had concerns about using a synthetic data set for this purpose. A few noted that the advantage of using synthetic data was not readily apparent, as measures that did not fail with synthetic data would ultimately need to be tested using actual patient data. Other potential drawbacks that were mentioned included the likelihood that high quality synthetic data sets would be time intensive and expensive to maintain. Many of TEP members' concerns about synthetic data revolved around perception – for example, some members expressed apprehension that measures tested with synthetic data might not be perceived as valid; others thought that the testing process might not be viewed as transparent; still others noted that the mere term “synthetic” might arouse suspicion. Arguments in favor of using synthetic data were that it would provide a bigger “sandbox” for measure testing and could encourage testing collaboration that might not otherwise occur. Some members felt that synthetic data could be useful for some aspects of measure testing (e.g., component and logic testing) but not others (e.g., feasibility assessment).

Within the consumer-oriented discussion group, the consensus was that most patients would find the idea of synthetic data used for measure testing acceptable provided that their demographic/medical profile was reflected in the synthetic data set and that the testing efforts promoted the construction of effective measures.

**3.3.2.4 Measure testing theme 4: Measure testing collaboratives.** Several TEP members noted that a testing collaborative among healthcare organizations, vendors/developers, and other key stakeholders would improve measure testing efficiency and access. Specific entities within the collaborative would have responsibility for conducting activities that all measure developers must complete (e.g., establishing data use agreements [DUAs], site recruitment). Collaborative participants would have access to a centralized data source.

#### **Recommendation**

- Provide funding for the development and implementation of a national testing collaborative.

**3.3.2.5 Measure testing theme 5: Consumer priorities for measure testing.** There was clear consensus within the consumer group that consumers' top measure testing-related priority is that measures be important and make sense. Consumers are unlikely to be concerned about specific details of the measure testing process (e.g., the criteria or kind of data that were used for testing); their primary concerns are that testing was conducted and that it was conducted by qualified staff. Consumers also expressed interest in knowing why each measure was developed and by whom so that they might understand the underlying incentive structure.

The importance of engaging patients in the measure testing process was another discussion theme. TEP members noted that patients will only want to be engaged in measure testing if they view it as important. One patient advocate noted the inadequacy of current procedures for identifying unintended consequences of measures. The advocate noted a need for more upfront communication about potential harms to patients and a need to collect data from patients firsthand about their experience. Patients are much more concerned about patient satisfaction as a measurement endpoint than other outcomes.

### *Recommendations*

- Limit measure development and testing efforts to a core set of measures that are important to patients.
- Provide guidance to developers to ensure that the measures they create assess constructs that are important to patients.
- Improve procedures for identifying unintended consequences of measures.

## 3.4 Measure Implementation

Measure implementation was the focus of the afternoon discussions. Dr. Lesh first provided an overview of measure implementation – first, by defining measure implementation, and then by discussing it in the context of the measure lifecycle and timeline. She concluded her presentation by discussing gaps between measure developers and measure implementers (Appendix B, slides 30-34).

Dr. Lesh posed several questions to be addressed in small group breakout sessions (Appendix B, slides 35-37). TEP members' responses to the questions are summarized below.

### 3.4.1 Measure Implementation: Small Group Discussions

Comments from the TEP focused on the themes of evaluating/optimizing CMS's current measure portfolio, the reasons scientifically sound measures may not be implemented, defining measure burden, determining whether patient benefit outweighs measurement burden, methods for assessing/reporting on measurement burden, the impact of variation in measure specifications, and consumer engagement in measure implementation. One TEP member noted that conversations about measure development should always begin with a discussion of implementation and that end users should be part of this initial conversation.

**3.4.1.1 Measure implementation theme 1: Evaluating/optimizing CMS's current measure portfolio.** There was general agreement that CMS's current measure portfolio could be improved. Areas for improvement included overrepresentation of selected measurement areas, redundancy among measures, and apparent arbitrariness in the number of measures used by each CMS program. TEP members also noted that additional, excellent measures have been developed but CMS is not using them.

Discussion evaluating and optimizing CMS's current measure portfolio oscillated between the ideas of introducing a new conceptual framework (e.g., Meaningful Measures, life course framework, population health framework) to be applied to new and existing measures and moving to an episode-based model (versus an attribution model) when considering new measures. It was suggested that if a new conceptual framework were to be developed and implemented to guide the measure development process, then the criteria under the new framework should be applied to all existing measures to remove/retire non-meaningful measures, effectively "cleaning up" the measure portfolio. There was general agreement that the current attribution nature of most measures is inherently flawed and doesn't encourage the care coordination that's needed. The importance of transparency in the process, standardized criteria, and reporting requirements were emphasized throughout the discussion.

Key discussion themes about ways to optimize the measure portfolio included returning to the basics of defining the underlying intent of a measure when deriving measure specifications, developing certification standards, and providing measure developers with more flexibility in identifying data sources. Currently, apples-to-apples comparisons across programs is not possible because measure specifications are based on submission methodology (e.g., electronic health record [EHR], registry) instead of measure intent. Additionally, developing certification standards so that all stakeholders are interpreting specifications and criteria the same way would be helpful. TEP members suggested that CMS move to a single standard per measure because currently there are too many ways to report and interpret measures. Finally, members stated that measure developers need more flexibility in identifying the appropriate data source when developing measures instead of having the data source specified within the CMS contract.

### *Recommendations*

- Develop measure specifications and criteria in a transparent and standardized way that speaks to the intent of the measure and not based on its submission methodology.
- Give measure developers more flexibility in identifying the appropriate data source when developing measures instead of having CMS specify and restrict the data source that must be used within the contract.
- Develop a single standard for reporting per measure.
- Promote communication among reporting programs (beyond care coordination measures) to remediate attribution problems (e.g., the over-prescription problem that led to the opioid crisis).
- Develop and implement a new conceptual framework to define CMS's measure portfolio. The criteria for the new framework would be applied to existing measures as well to "clean up" the current measure portfolio.
- Move to an episode-based model, instead of attribution-based model, when considering the implementation of new measures. Care coordination should happen naturally when providers are accountable for the same measures.
- CMS should implement a framework with a long-term plan on how it will approach measurement. There should be some space for addressing immediate priorities.

*3.4.1.2 Measure implementation theme 2: Reasons scientifically sound measures may not be implemented.* The group discussed several reasons that scientifically sound measures may not be implemented. Many of the barriers noted related to measure-related perceptions. For example, an otherwise sound measure may not be implemented if it is not clear to people what the plan or purpose for the measure is or if the criteria used during the development process are not transparent. In other instances, measures may not be implemented if providers feel that the burden of data collection does not outweigh the benefit to patients, particularly if a given measure is not applicable to their patient population. Another barrier related to practitioner perception is that front line practitioners may not implement a measure if they are not in agreement with the required treatment conventions. Timing was also noted as a factor that scientifically sound measures may fail to be implemented. Because measurement priorities change over time, by the time a measure has been through the two-year

development process and then the two-year pre-rulemaking and rulemaking process, the focus/policy/importance of the measure may have changed.

Members noted that shifting the focus to the patient level would make it easier to understand why and how a measure will be implemented and lead to a higher implementation success rate. Moreover, significant actors (e.g., the Measure Applications Partnership [MAP]) are unable to identify how measures are connected because of how they categorize measures (e.g., MAP's structure splits measures between physician-based and hospital-based measures).

### *Recommendations*

- Shift the focus of measure development to the patient level; this will allow people to understand why and how measures fit into the bigger picture.
- Engage front line clinicians.
- Promote measurement harmonization.

**3.4.1.3 Measure implementation theme 3: Defining measurement burden.** The group consensus was that it is difficult to define and calculate measurement burden. A TEP member proposed that some burden is necessary and determining how to identify the additional “marginal” burden that doesn’t result in quality improvement should be the goal. A recurring theme throughout the conversation was that most of the burden lies in the reporting phase (e.g., frequency of reporting, reporting the same data to various sources vs. reporting only once, documentation for the sake of documentation). Members noted that providers/clinicians/hospitals have recruited specialists to focus on documentation and reporting, which results in additional burden. Another potential source of burden is using the information collected to implement quality improvement activities. Members agreed that quality measurement reporting in and of itself was not a burden if it improved the quality of care for the patient and enhanced the healthcare system. Measurement burden is the additional “marginal” burden from quality improvement activities that does not result in better health outcomes for patients or enhance the healthcare system.

TEP members also discussed the fact that reporting burden is context specific. For example, reporting burden is much likely to be lower for providers affiliated with large healthcare systems or group practices than for providers in small or individual practices because the former is much more likely to have the resources and infrastructure to support reporting-related activities.

### *Recommendation*

- Find a way to identify “marginal” burden.

### **3.4.1.4 Measure implementation theme 4: Determining whether patient benefit outweighs measurement burden.**

Developer and consumer-oriented TEP members agreed that the effort required to collect measurement data is worthwhile if the measure improves patient care. A consumer noted that he would rather that healthcare providers spend time providing patient care than fulfilling reporting responsibilities.

### *Recommendation*

- Consider improvement burden separately from measure reporting burden.

**3.4.1.5 Measure implementation theme 5: Methods for assessing/reporting on measurement burden.** Members reported that currently measure developers consider only two types of burden when developing measures: (1) *reporting burden* and (2) *implementation burden*. Of these two types of burden, only the *reporting burden* is measured during the measure development process. *Implementation burden* is more difficult to measure, it is viewed as composed of two components: (1) level of effort of the individual documenting the data and (2) the level of effort required to obtain the data. The first component is easier to quantify, but the second component is nearly impossible to measure because it can vary greatly (e.g., to obtain the data, one may need one clinician or a group of clinicians). Measure developers resort to conducting qualitative interviews to measure the level of effort of the second component. A member commented that better methods to estimate burden that are bound to reality need to be developed.

TEP members emphasized that CMS's current method for determining level of effort to participate in its reporting programs results in unrealistically low costs compared to actual costs to the providers/clinicians. Another member commented that the measures most likely to be viewed as burdensome by providers are measures that appear to be more focused on improving documentation practices instead of healthcare quality.

### *Recommendations*

- Explore clinically enhanced claims-based data as a lower-burden source for quality measure calculation.
- Require developers to assess measure burden as part of the testing process.
- Provide clinicians and hospitals with tools that help them improve their reporting practices, consequently reducing their reporting burden.

**3.4.1.6 Measure implementation theme 6: Impact of variation in measure specifications.** TEP members noted that variation in specifications concerned them less than variation in reporting requirement standards, and that remediation efforts should be more heavily focused on the latter. Creating certification standards was mentioned several times as a way to ensure that all stakeholders and vendors were interpreting the data and reporting procedures the same way. Finally, a member commented that until there was confidence in the process and variation was reduced as much as possible, CMS should not rush in the direction it is headed in relation to its work with the Physician Compare website because it is providing a misleading indicator of quality of care performance. TEP members from both the developer and consumer discussion groups suggested that there be increased transparency around how the Star Ratings are calculated and should be interpreted.

### *Recommendations*

- Reconsider the current approach to rating and comparison guidance disseminated to the public until variation is reduced as much as possible.
- Increase transparency around how the Star Ratings are calculated and how they should be interpreted.

**3.4.1.7 Measure implementation theme 7: Consumer engagement in measure implementation.** Members of the consumer discussion group agreed that describing quality measures in ways that resonate with consumers is key. Messages such as “help us ensure you get the best quality care possible” and “help us understand how to make things better” would resonate with consumers. To assist CMS with evaluating which measures under development should be adopted, TEP members suggested seeking input from large patient groups. Communicating opportunities for patient involvement in measure development activities broadly was also recommended.

Consumers indicated that they would like to have access to quality measure results for their healthcare providers and the facilities at which they receive care. One TEP member suggested that a list of the measures collected for each provider/facility and how that provider/facility scores on those measures be posted publicly within the walls of the facility. There was also interest in having information about how the provider and/or facility scored over time. TEP members felt that consumers are unlikely to consult CMS’s website for information and consequently suggested that links to CMS quality measures be promoted on other websites to enhance their visibility.

#### **Recommendations**

- Seek input from large patient groups to evaluate which measures under development should be adopted.
- Communicate opportunities for patient involvement in measure development activities broadly.
- Require providers/facilities to post the quality measures they report on and their scores on these measures. Ideally, information for multiple time points would be displayed.
- Include links to CMS quality measure ratings on other websites to promote the visibility of this information to consumers.

## **3.5 Large Group Discussion/Wrap Up**

The final group discussion of the day touched on developers’ concerns about the ways measures are currently developed and measure scoring systems, among other themes.

### **3.5.1 Theme 1: Concerns about Current Procedures for Measure Development and Use**

Several members discussed the fact that quality measures are sometimes used a) for purposes other than the purpose for which they were originally intended or b) outside of the setting or program for which they were originally developed. Members were concerned that these practices could result in unintended harms. Other members noted that measures should be re-tested when applied within new settings to ensure they are valid and reliable. Another individual suggested moving towards a set of measures that together best predict meaningful outcomes like life-years as opposed to continually trying to apply existing measures in different settings.

One TEP member opined that the current measure development process is “backwards.” The member noted that the endpoint of measure development should be improving quality of care, not NQF endorsement. He remarked that the measure development process should start with patients and physicians who determine what measures will help improve quality of care. Once a measure has been shown to be effective for improving quality of care, then payors can then decide if they want to use it.

### *Recommendations*

- Move towards use of composite measures rather than picking one measure in isolation.
- Develop measures in the field with clinician input using agile techniques. Evidence that a measure improves quality of care is the critical endpoint.

### 3.5.2 Theme 2: Measure Scoring Systems

Another theme of the conversation was scoring systems. One member suggested implementing an objective scoring system to measure concepts such as importance, burden, and feasibility. This objective score could be used to evaluate the business case and be used as part of the NQF evaluation process. Another member expressed concern that the Quality Payment Program (QPP) reflects things that are easy to measure and believes that its use should be discontinued until the system is perfected and truly reflects physician performance.

### *Recommendation*

- Develop an objective scoring system to evaluate concepts that are currently assessed subjectively such as importance (which could be scored by patient advocacy groups), burden, and feasibility.

### 3.5.3 Concluding Remarks

Kim Rawlings, the Contracting Officer’s Representative (COR) for the MMS Task Order thanked the panel for their participation and their recommendations. She noted that the TEP’s feedback would be recorded in a summary report.



## 4.0 References

Battelle. Quality Measure Development: Supporting Efficiency and Innovation in the Process of Developing CMS Quality Measures. Technical Expert Panel Meeting Summary (Meeting Date: October 16, 2017). January 2018. Columbus, OH: Battelle. <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/TEP-Current-Panels.html>

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## 5.0 List of Appendixes

Appendix A – Meeting Agenda

Appendix B – Meeting Slides

Appendix C – Discussion Questions

## Appendix A – Meeting Agenda



**Quality Measure Development: Supporting Efficiency and Innovation in the Process of Developing  
CMS Quality Measures Technical Expert Panel  
Meeting Agenda  
January 18, 2018, 8:30AM – 3:30PM ET  
Measure Testing and Measure Implementation**

**Meeting objective:** Formulate recommendations for making the measure development process more efficient and agile.

<b>Agenda Item</b>	<b>Discussion Topic</b>	<b>Presenter/ Moderator</b>	<b>Time (ET)</b>	<b>Listening Line Status*</b>
1.	Welcome	Kim Rawlings, CMS; Jennifer Brustrom, Battelle	8:30 – 8:45AM	Open
2.	Overview and purpose of the meeting	Nicole Brennan, Battelle	8:45 – 9:00AM	
3.	Review of recommendations from October TEP meeting and large group discussion	Nicole Brennan	9:00 – 9:30AM	
4.	Topic 1: Measure testing	Jeffrey Geppert, Battelle	9:30 – 10:15AM	
	Break		10:15 – 10:30AM	Closed
5.	Small group discussions: Measure testing	Nicole Brennan, Jeffrey Geppert, Kathy Lesh, Battelle	10:30 – 11:30AM	
6.	Report out on small group discussions of measure testing	Nicole Brennan	11:30 – 12:00PM	
	Lunch		12:00- 12:45PM	
7.	Topic 2: Measure implementation	Kathy Lesh	12:45 – 1:15PM	
8.	Small group discussions: Measure implementation	Nicole Brennan, Jeffrey Geppert, Kathy Lesh	1:15 – 2:15PM	
	Break		2:15 – 2:30PM	Open
9.	Report out on small group discussions of measure implementation	Nicole Brennan	2:30 – 3:00PM	
10.	Conclusions/wrap-up Next steps	Nicole Brennan Jennifer Brustrom	3:00 – 3:30PM	

\*The TEP Listening Line will be accessible during the times indicated above by dialing (toll free) 1-844-712-3247 and entering access code 596 621 683.

## Appendix B – Meeting Slides



## **Technical Expert Panel (TEP)**

# **Quality Measure Development: Supporting Efficiency and Innovation in the Process of Developing CMS Quality Measures**



## ***Measure Testing & Measure Implementation***

### ***Speakers/Moderators:***

***Nicole Brennan, DrPH, MPH***

***Jennifer Brustrom, PhD, PMP***

***Kathy Lesh, PhD, RN-BC, CPHQ***

***Jeffrey Geppert, JD, EdM***

***Battelle***

***January 18, 2018***

***8:30am – 3:30pm ET***

***Westin BWI, Baltimore, MD***



**Welcome and Thank You**

# Announcements

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- Lunch payment procedures
- Expense reports and copies of receipts are due to Martin Alvarado (alvarado@battelle.org) by February 2
- Posting of October 2017 TEP Report to the [MMS Website](#)
- Review TEP ground rules
- Moderator introduction



# Quality Measure Development TEP

## Overview and Purpose of the Meeting

- Formulate recommendations for making the measure development process more efficient and agile
- Today's discussion topics
  - Measure testing
  - Measure implementation

# Quality Measure Development TEP

## Agenda

Agenda Item	Discussion Topic	Presenter/ Moderator	Time (ET)	Listening Line Status*
1.	Welcome	Kim Rawlings Jennifer Brustrom	8:30 – 8:45AM	Open
2.	Overview and purpose of the meeting	Nicole Brennan	8:45 – 9:00AM	
3.	Review of recommendations from October TEP meeting and large group discussion	Nicole Brennan	9:00 – 9:30AM	
4.	Topic 1: Measure testing	Jeffrey Geppert	9:30 – 10:15AM	
	Break		10:15 – 10:30AM	Closed
5.	Small group discussions: Measure testing	Nicole Brennan Jeffrey Geppert Kathy Lesh	10:30 – 11:30AM	
6.	Report out on small group discussions of measure testing	Nicole Brennan	11:30 – 12:00PM	
	Lunch		12:00- 12:45PM	

# Quality Measure Development TEP

## Agenda

Agenda Item	Discussion Topic	Presenter/ Moderator	Time (ET)	Listening Line Status*
7.	Topic 2: Measure implementation	Kathy Lesh	12:45 – 1:15PM	Closed
8.	Small group discussions: Measure implementation	Nicole Brennan, Jeffrey Geppert, Kathy Lesh	1:15 – 2:15PM	
	Break		2:15 – 2:30PM	
9.	Report out on small group discussions of measure implementation	Nicole Brennan	2:30 – 3:00PM	Open
10.	Conclusions/wrap-up Next steps	Nicole Brennan Jennifer Brustrom	3:00 – 3:30PM	

## Review of Recommendations from October Meeting

- Themes
  - Sharing of best practices
  - Process refinement
  - Refinements to the MMS Blueprint
  - Data sources and collaboration – measure testing
- Timeframe for implementation
  - Short-term (within 6 months)
  - Medium-term (within 12 months)
  - Long-term (1-3 years)

## Sharing of Best Practices

### *Short term*

- Share measure testing documentation and examples of best practices with multiple measure developers.
  - This could be accomplished by making measure testing deliverables accessible to all Measure Instrument Development & Support (MIDS) Contractors in the MIDS Library.

# Review of Recommendations from October Meeting

## Process Refinement

### *Medium term*

- Continue examining ways that measure development processes could be made less costly and more efficient.
- Explore Failure Modes and Effects Analyses (FMEA) and how these might be integrated into the measure development process by outlining the steps required.
- Explore how pre-testing measures prior to actual development could make the measure testing process more efficient. For example, interview developers who have used this strategy successfully and identify the steps involved and best practices.

# Review of Recommendations from October Meeting

## Refinements to the MMS Blueprint

### *Short term*

- Add detail to the Blueprint describing the process for measure refinement.
- Add language to the Blueprint clarifying that the Blueprint does not address measures at the portfolio-level; it addresses single measures or small set of closely related measures.
- Add clear definitions for measure categories and domains.
- Add examples clarifying the distinction between process and outcome measures, and all measure types.
- Clearly define/describe the distinctions between the terms “metric,” “measure,” “performance measure,” and “quality measure.”

# Review of Recommendations from October Meeting

## Refinements to the MMS Blueprint

### *Short term*

- Provide plain language explanations of different concepts – for example what the objective of a quality measure is, possibly in a document separate from Blueprint.
  - Aim for an eighth-grade reading level.
- Identify ways to support measure developers in how to better engage patients.
  - Offer guidance on effective methods for delivering information to patients/patient advocates and explaining to them why they should care about quality measurement.
  - In addition to elaborating on this topic in the Blueprint, CMS could consider addressing these topics in future Information Session and/or Communication, Collaboration, and Cooperation (C3) Forum presentations.



# Review of Recommendations from October Meeting

## Refinements to the MMS Blueprint

### *Short term*

- Create training materials for TEP members describing measure development processes in simple terms.
- Provide guidance to developers to ensure that the measures they create measure what's important to patients and caregivers.
- Add text to the Blueprint recommending that developers identify alpha testing sites early. Find the right people and the right data to ensure that measure testing is conducted as quickly and efficiently as possible.

# Review of Recommendations from October Meeting

## Refinements to the MMS Blueprint

### *Medium term*

- Identify the areas of the measure development process developers (especially non-CMS developers) find burdensome and consider amending the Blueprint to provide additional flexibility.
- If FMEA-related analysis supports its routine use in the measure development process, update Blueprint accordingly (for example, consider making results of FMEA a requirement for the Business Case).
- If measure pre-testing exploration supports routine use in the measure development process, update the Blueprint accordingly and outline pre-testing steps.
- Provide information about future plans for measure development that is written at a level easily understood by patients and family members

# Review of Recommendations from October Meeting

## Refinements to the MMS Blueprint

### *Long term*

- Create simplified version of the Blueprint written at a level easily understood by patients and family members

# Review of Recommendations from October Meeting

## Data Sources and Collaboration – Measure Testing

### *Short term*

- Explore in depth what is needed to break down barriers that interfere with collaboration/data sharing amongst organizations by conducting interviews and/or focus groups with stakeholders.
- Identify new data sources, such as health information exchanges, quality improvement organizations, and subspecialty boards.
- Explore the feasibility of using CMS historical data for measure testing.
- Add the concepts of proprietary data and harmonization to the list of topics to be addressed in depth during future meetings of this TEP.
- Interview staff who were involved with the National Testing Collaborative to identify what barriers were encountered and potential solutions for developing future collaborations.

# Review of Recommendations from October Meeting

## Data Sources and Collaboration – Measure Testing

### *Medium term*

- Begin developing collaborative partnerships with new data sources and fostering partnerships between developers and data sources.
- Facilitate use of CMS historical data for measure testing.
- Encourage data collection instrument standardization.
  - e.g., increasing standardization of how information is captured in patient records

# Review of Recommendations from October Meeting

## Data Sources and Collaboration – Measure Testing

### *Long term*

- Continue developing collaborative partnerships with data sources and fostering close partnerships between developers and data sources.
- Provide financial incentives to data sources that are willing to assist with measure testing. Emphasize that this is an opportunity for organizations to influence measure development and policy.
- To the extent possible, reduce administrative barriers to collaboration – e.g., Institutional Review Board/Business Associate requirements
- Establish an indefinite delivery/indefinite quantity (IDIQ) contract for testing collaboratives.

# Review of Recommendations from October Meeting

## Data Sources and Collaboration – Measure Testing

### *Long term*

- Align interests with the many networks that are ready to become testing collaboratives to facilitate potential collaborations
  - e.g., practice-based research networks (PBRNS, to include community health-based research networks) and the network of federally qualified health centers (FQHCs)
- Establish a measure test bed

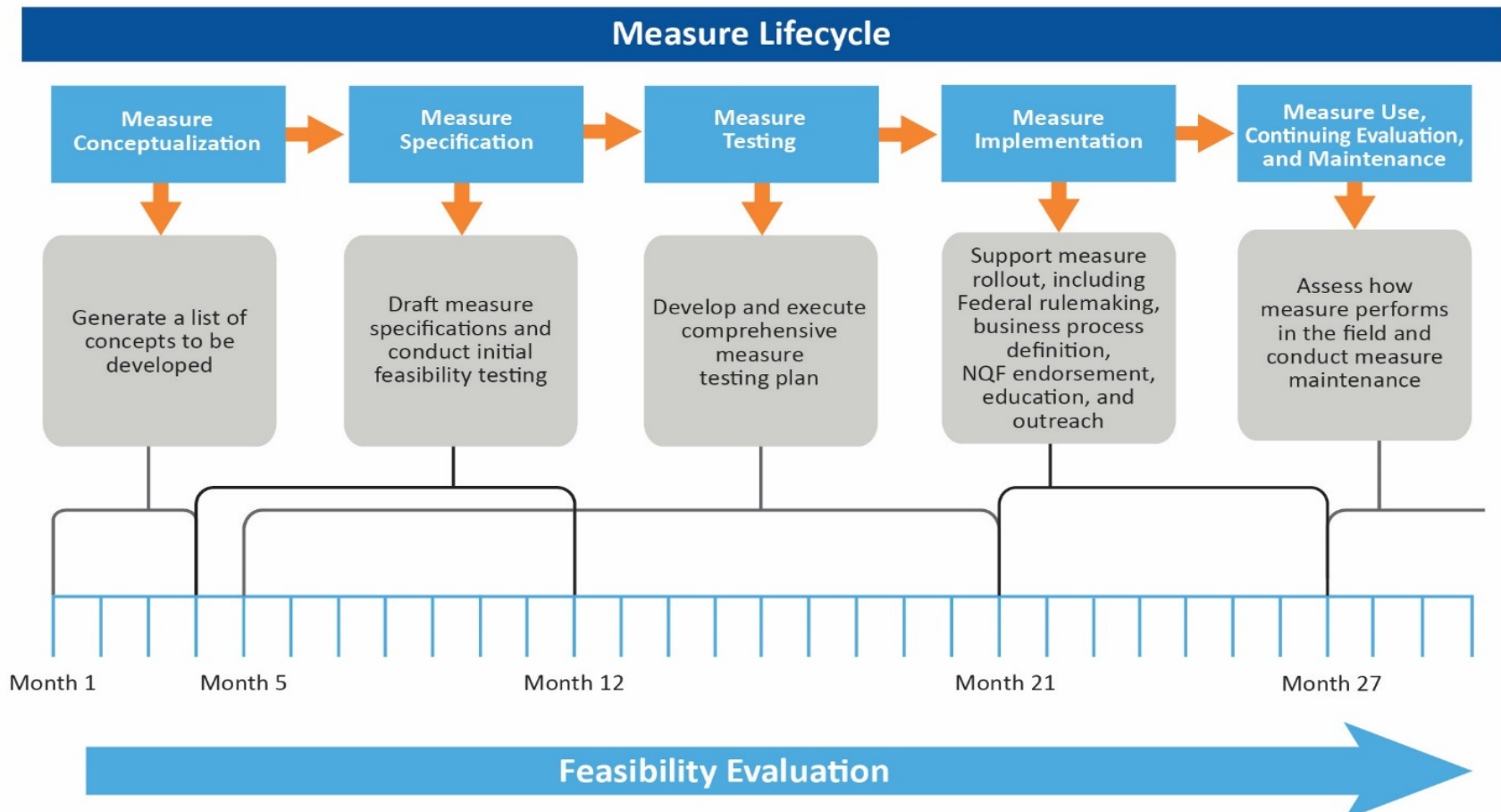


# Topic 1: Measure Testing



# Quality Measure Development TEP

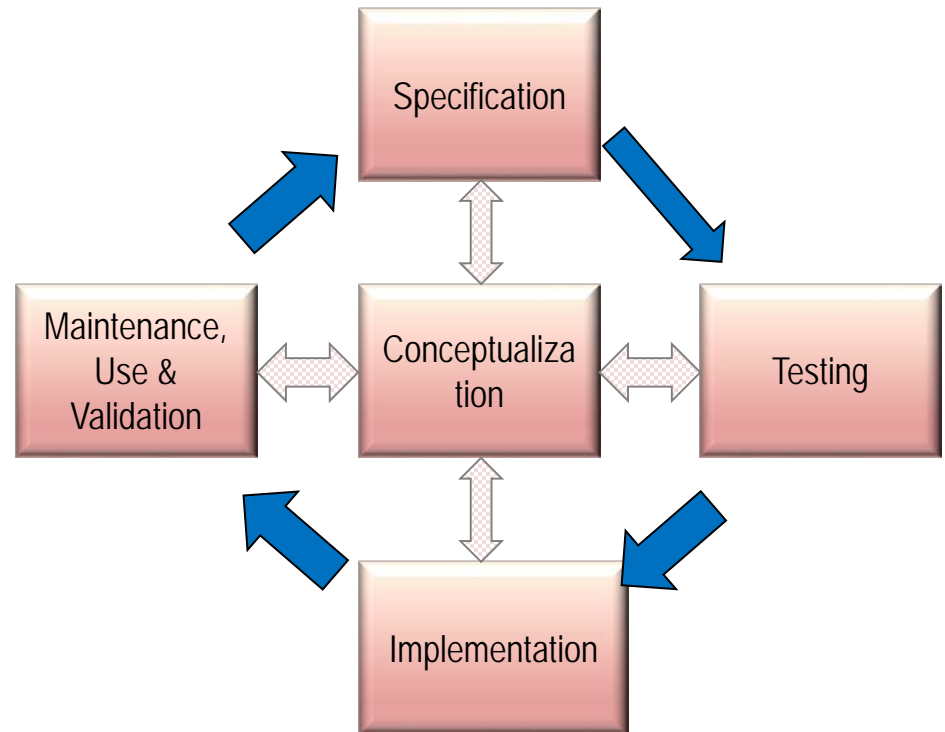
## Measure Lifecycle



# Measure Development

## Measure Testing

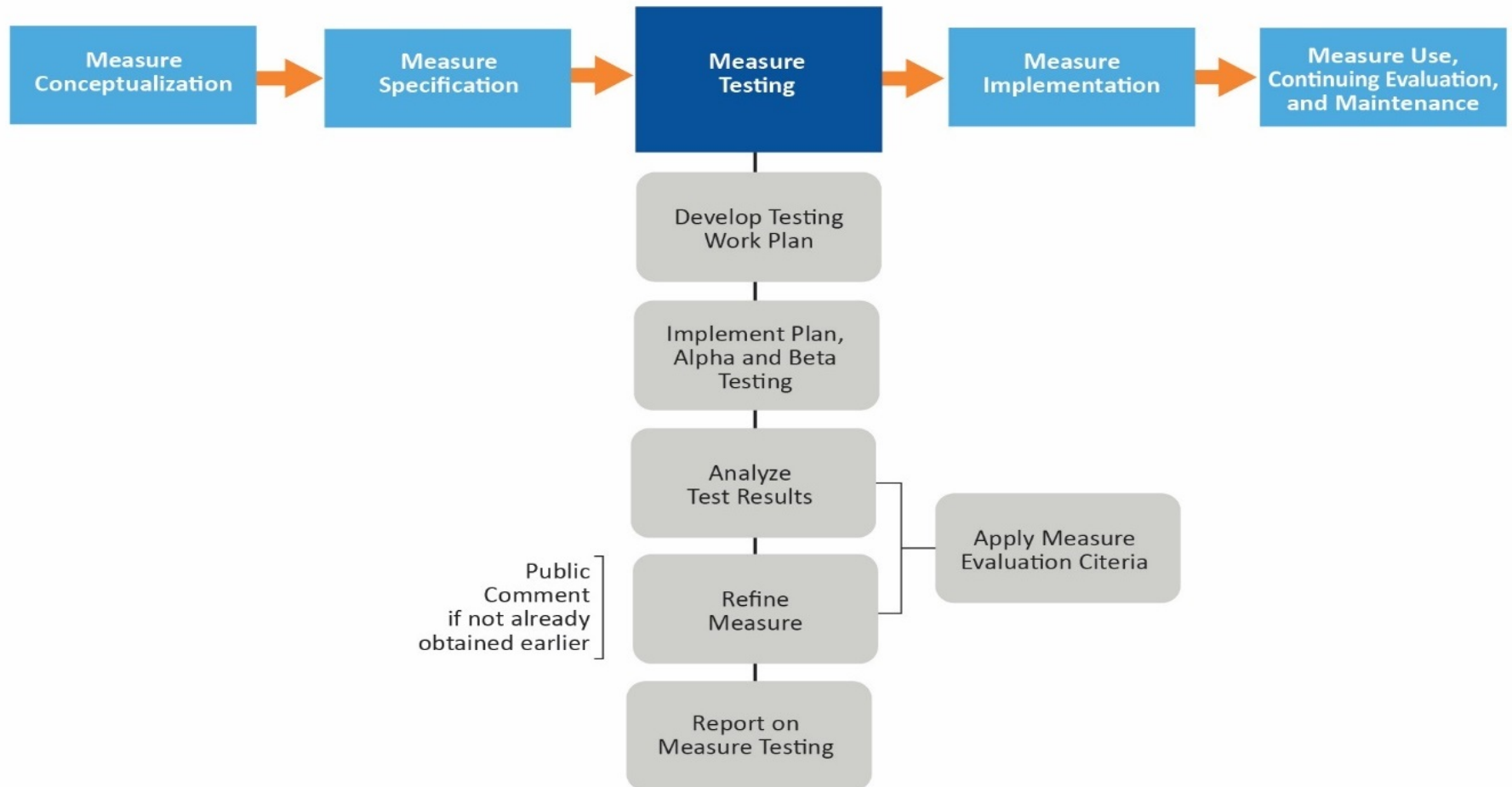
**Measure Testing** means testing quality measures, including the components of the quality measure such as the data elements, the scales (and items in the scales if applicable), and the performance score.



# Measure Lifecycle

## Measure Testing

### Measure Lifecycle



# Integrated Measure Testing – What is it?

- Specification testing, measure level testing, and user acceptance testing occurs as soon as information is available (and iteratively)
- Measure level testing is performed early to identify evaluation criteria concerns that could impact ability to implement measure in programs
- Each evaluation criterion is tested once and only once if at all possible to minimize redundant testing
- Separate organizations might conduct specification testing and measure level testing
- Testing may be performed simultaneously by the measure level test organization and by the user community

# Integrated Measure Testing – Pros/Cons

- Pros:
  - If the data element/logic specifications are in a state that can be integrated, measure level testing may be started early to reduce schedule and costs
  - Early specification and measure level testing provides the opportunity to discover and resolve evaluation criteria concerns early in the life cycle
  - Early user acceptance testing provides early discovery and prioritization of issues
- Cons:
  - Early user involvement may be detrimental to schedule
  - Users may burn out from multiple iterations
  - Integration of specification and measure level testing takes coordination

# Synthetic Data – What is it?

- Synthetic data are not actual patient data, but rather data that retains the characteristics of actual patient data
  - For example, the same data value frequencies, means, variances, and covariances
- Synthetic data are different than de-identified data since the data are not person specific
- However, because the process used to generate synthetic data are based on actual data, there remains some residual privacy risk
  - Therefore synthetic data are generally treated as a Limited Data Set (LDS) under HIPAA

# Synthetic Data – Pros/Cons

- Pros:
  - *Access*. Synthetic data may be made more widely available, and all measure developers would have access to the same testing source, making results more comparable
  - *Burden*. Synthetic data would impose fewer burdens on clinicians, and the data itself would be a benefit to clinicians, increasing the incentive to participate
  - *Validation*. Any statistics or test results calculated from the synthetic data may be reported with uncertainty to ensure the validity of any inference
  - *Augmentation*. Synthetic data may be augmented relative to the actual data, such as emulating interoperable health information exchange
- Cons:
  - Testing may still require “real” data prior to program implementation
  - Cost and complexity of developing and maintaining the synthetic data
  - Residual privacy risk

# Small Discussion Groups

Group 1	Group 2	Group 3
Kyle Campbell	Matt Austin	Derek Forfang
Erin Crum	Mary Barton	Shelley Fuld Nasso
Cindy Cullen	Rim Cothren	Kate Niehaus
Joe Kunisch	Marsida Domi	Ellen Schultz
Frank Opelka	Tricia Elliott	
Galina Priloutskaya	Charles Gallia	
Patrick Romano	Julie Kuhle	



# Measure Testing

## Small Group Discussion Questions

Groups 1&2	Group 3
<ul style="list-style-type: none"><li>- What are resources that CMS might encourage/support that would enable integrated measure testing (e.g. a database of available data elements)?</li><li>-How might the measure development system be re-organized better to enable integrated measure testing?</li></ul>	<ul style="list-style-type: none"><li>- What measure testing criteria would be most meaningful to consumers?</li></ul>
<ul style="list-style-type: none"><li>- Should CMS encourage /support the development and use of synthetic data for measure testing? Why or why not? What would the attributes of such data be? What would a governance structure be?</li></ul>	<ul style="list-style-type: none"><li>- Should CMS encourage/support the development and use of synthetic data for measure testing? Why or why not?</li><li>- What type of testing data would be the most relevant to consumers?</li></ul>
<ul style="list-style-type: none"><li>-How can measure developers ensure patient engagement during measure testing regardless of the data source(s) utilized? Would it help to express measures in terms of impact on outcomes meaningful to consumers?</li></ul>	<ul style="list-style-type: none"><li>How can measure developers ensure that patients are adequately engaged during the measure testing process?</li><li>How might consumers participate in user acceptance testing in an integrated measure testing framework?</li></ul>

# Measure Testing

## Small Group Report Out on Proposed Recommendations

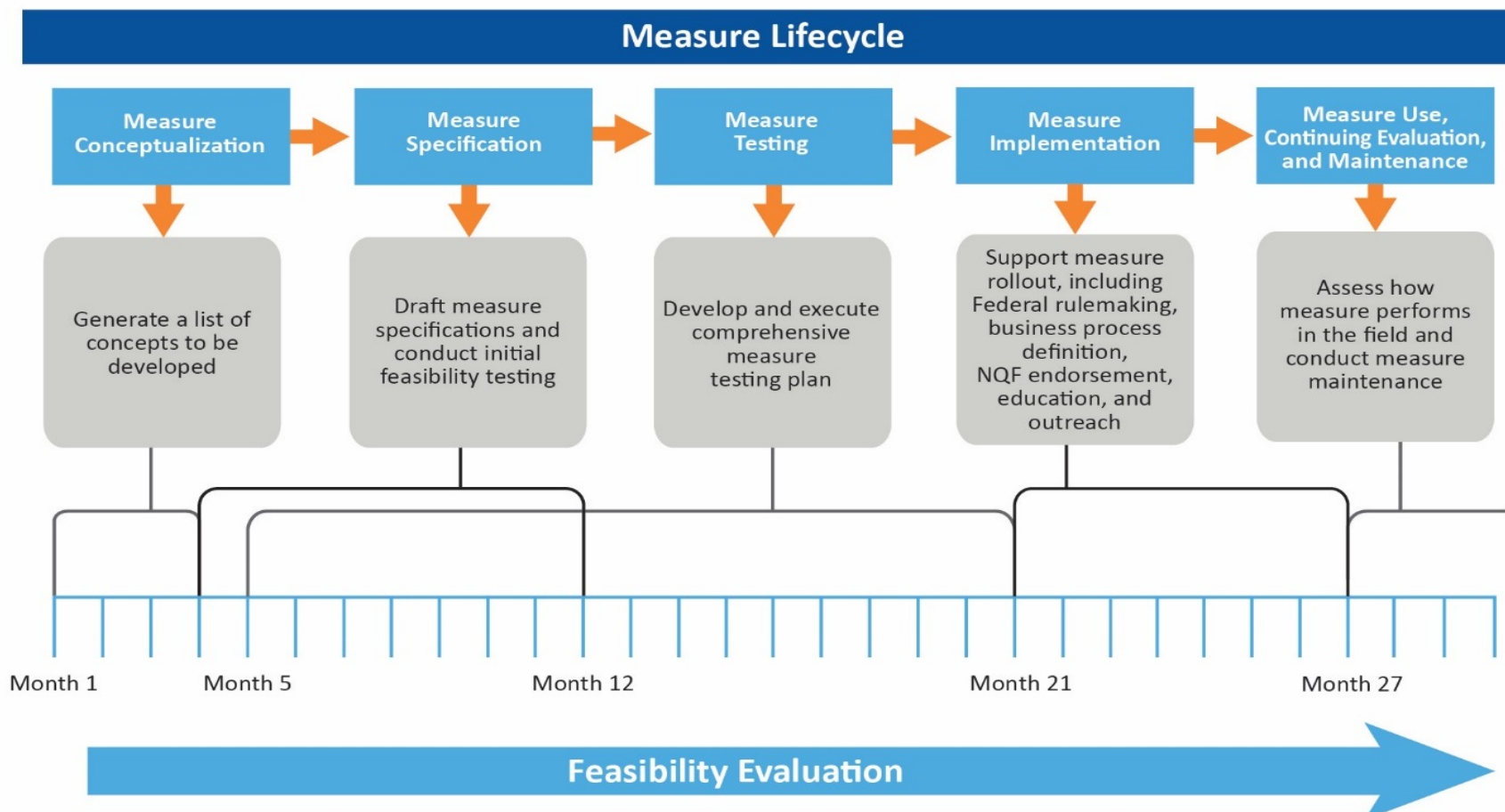
- Group 1
- Group 2
- Group 3



# Topic 2: Measure Implementation

# Quality Measure Development TEP

## Measure Lifecycle

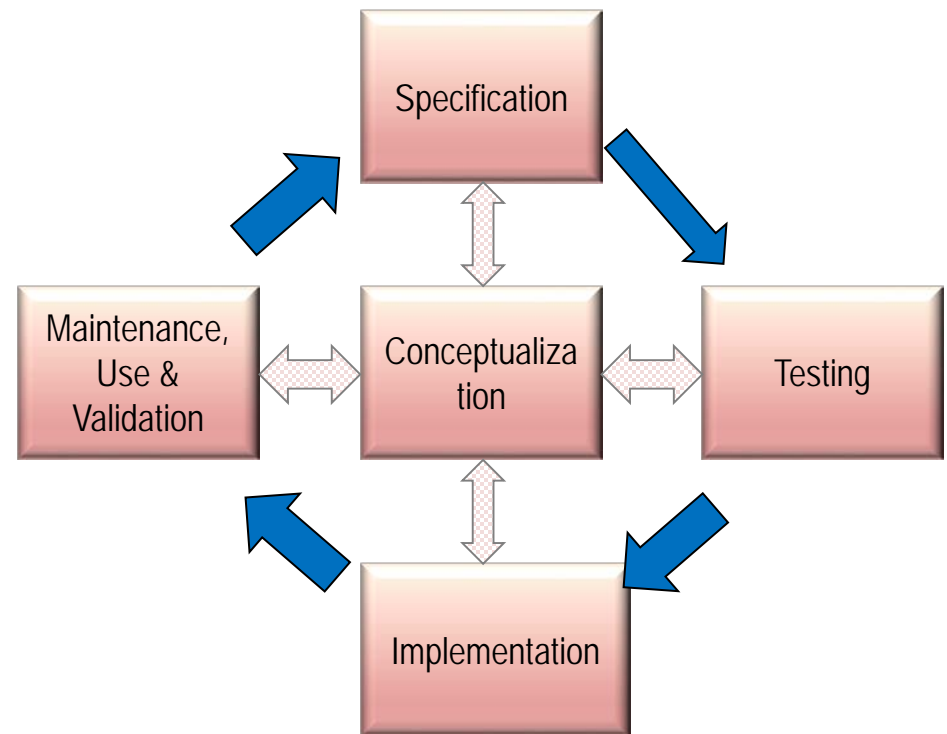


# Measure Development

## Implementation

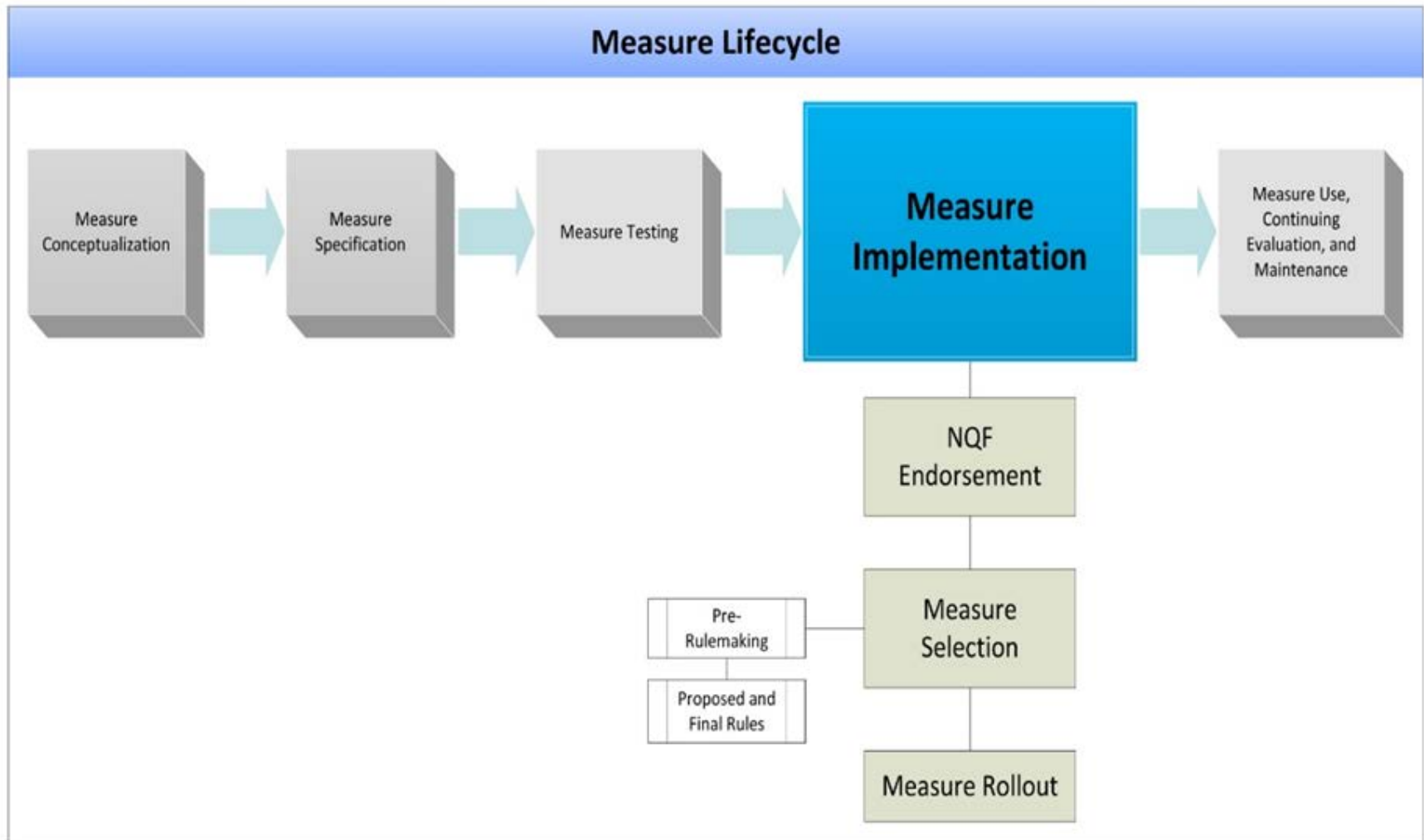
### Measure Implementation

includes all activities associated with taking a measure from a development state to an active, in-use state. This includes but is not limited to consensus endorsement processes, measure selection processes, and measure rollout.



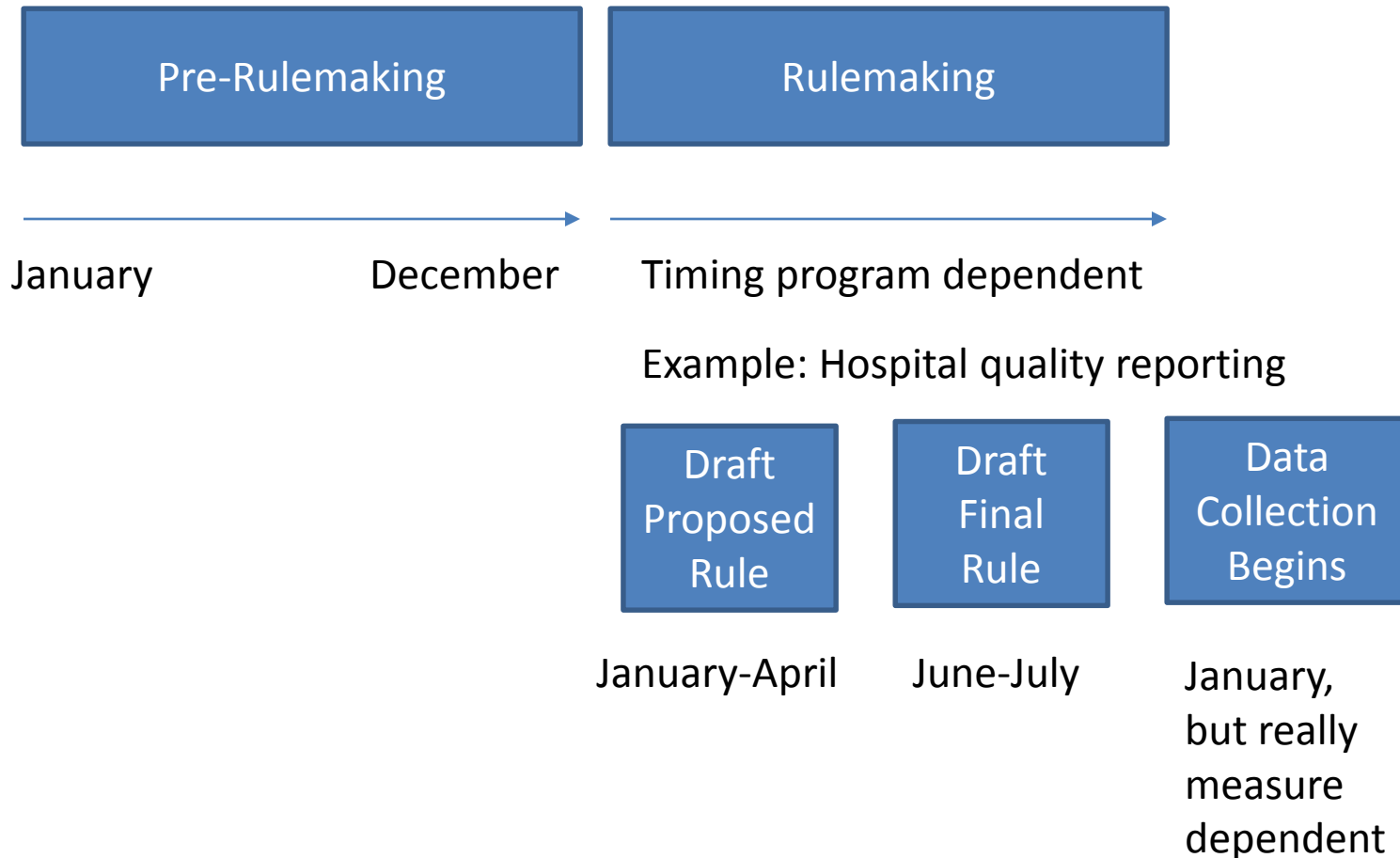
# Measure Lifecycle

## Measure Implementation



# Measure Implementation

## Timelines



# Measure Implementation

## Gap Between Measure Developers and Measure Implementers

- Measure Developers  $\neq$  Measure Implementers
- Measure Developers  $\neq$  Measure Technical Assistance\*
- Measure Developers  $\neq$  Measure Data Receivers
- Measure Developers may not be the Measure Maintenance Contractors



# Measure Implementation

## Small Group Discussion Questions

<b>Groups 1 &amp; 2</b>	<b>Group 3</b>
<b>-How could CMS evaluate the current measure portfolio to decide which new measures should be adopted?</b>	<b>-How could CMS evaluate measures that are currently under development to decide which new measures should be adopted?</b>
<b>-How could CMS optimize its measure portfolio?</b>	<b>-How could CMS improve its list of measures that are currently in use or under development?</b>
<b>- Why do scientifically sound measures not get implemented?</b>	

# Measure Implementation

## Small Group Discussion Questions (2)

Groups 1 & 2	Group 3
<ul style="list-style-type: none"><li>-How do we define “measurement burden”?</li><li>-How can we determine whether the patient benefit outweighs provider burden??</li></ul>	<ul style="list-style-type: none"><li>-The concept of “measurement burden” can be defined in different ways. For example, we could define “burden” as the time that it takes patients to complete a questionnaire --- or we could think about “burden” in terms of the amount of time required for health care providers to enter data into a reporting database. How can we determine whether the benefit to patients associated with collecting a particular quality measure outweighs the measurement burden?</li></ul>
<ul style="list-style-type: none"><li>-How should measure developers assess burden?</li><li>-How should health care providers report on measurement burden?</li></ul>	<ul style="list-style-type: none"><li>-How should measure developers assess burden?</li><li>-How should health care providers report on measurement burden?</li></ul>

# Measure Implementation

## Small Group Discussion Questions (3)

Groups 1 & 2	Group 3
<p>NQF's December 2016 report on variation in measure specifications identified reasons for variation in measure specifications and the impact of such variation. It also as provided guidance on ways to mitigate or prevent variation. What were your reactions to the report? Was the guidance on mitigation and prevention strategies realistic and/or useful?</p>	<p>NQF's December 2016 report on variation in measure specifications identified reasons for variation in measure specifications and the impact of such variation. It also as provided guidance on ways to mitigate or prevent variation. What were your reactions to the report? Was the guidance on mitigation and prevention strategies realistic and/or useful?</p>
	<ul style="list-style-type: none"><li>- What would be the best way to describe quality measures in ways that resonate with consumers?</li><li>- During the October TEP meeting, the point was made that “functional status” is one of the things that matters most to patients. How might developers describe quality measures (i.e., measures designed to answer the questions “did this patient receive the right care?” or “what percent of the time did patients of this type receive the right care?”) to assess patients’ functional status appropriately?</li></ul>

# Measure Implementation

## Small Group Report Out on Proposed Recommendations

- Group 1
- Group 2
- Group 3

# Quality Measure Development TEP

## Conclusion/Wrap Up and Next Steps

- Draft TEP summary report will be compiled and circulated to the group via email
  - Final, CMS-approved version will be posted to CMS MMS website
- TEP members will be polled regarding their availability for the next TEP meeting to take place in mid/late May 2018
- Expense Reports and scanned copies of all receipts are due to Martin Alvarado (alvarado@battelle.org) no later than Friday, February 2.
  - Questions may be directed to Mr. Alvarado by email or phone (614-424-4390).

## Appendix C – Discussion Questions

## **Small Group Discussion Questions: Measure Testing and Measure Implementation January 18, 2018**

### **Discussion Questions for Groups 1 & 2**

#### **Measure Testing**

1. What are resources that CMS might encourage/support that would enable integrated measure testing (e.g. a database of available data elements)?
2. How might the measure development system be re-organized better to enable integrated measure testing?
3. Should CMS encourage /support the development and use of synthetic data for measure testing? Why or why not? What would the attributes of such data be? What would a governance structure be?
4. How can measure developers ensure patient engagement during measure testing regardless of the data source(s) utilized? Would it help to express measures in terms of impact on outcomes meaningful to consumers?

#### **Measure Implementation**

1. How could CMS evaluate the current measure portfolio to decide which new measures should be adopted?
2. How could CMS optimize its measure portfolio?
3. Why do scientifically sound measures not get implemented?
4. How do we define “measurement burden”?
5. How can we determine whether the patient benefit outweighs provider burden?
6. How should measure developers assess burden? How should health care providers report on measurement burden?
7. NQF’s December 2016 report on variation in measure specifications identified reasons for variation in measure specifications and the impact of such variation. It also as provided guidance on ways to mitigate or prevent variation. What were your reactions to the report? Was the guidance on mitigation and prevention strategies realistic and/or useful?

## Discussion Questions for Group 3

### Measure Testing

1. What measure testing criteria would be most meaningful to consumers?
2. What type of testing data would be the most relevant to consumers?
3. How can measure developers ensure that patients are adequately engaged during the measure testing process?
4. How might consumers participate in user acceptance testing in an integrated measure testing framework?
5. Should CMS encourage/support the development and use of synthetic data for measure testing? Why or why not?

### Measure Implementation

1. What would be the best way to describe quality measures in ways that resonate with consumers?
2. During the October TEP meeting, the point was made that “functional status” is one of the things that matters most to patients. How might developers describe quality measures (i.e., measures designed to answer the questions “did this patient receive the right care?” or “what percent of the time did patients of this type receive the right care?”) to assess patients’ functional status appropriately?
3. How could CMS evaluate measures that are currently under development to decide which new measures should be adopted?
4. How could CMS improve its list of measures that are currently in use or under development?
5. The concept of “measurement burden” can be defined in different ways. For example, we could define “burden” as the time that it takes patients to complete a questionnaire --- or we could think about “burden” in terms of the amount of time required for health care providers to enter data into a reporting database. How can we determine whether the benefit to patients associated with collecting a particular quality measure outweighs the measurement burden?
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7. NQF’s December 2016 report on variation in measure specifications identified reasons for variation in measure specifications and the impact of such variation. It also as provided guidance on ways to mitigate or prevent variation. What were your reactions to the report? Was the guidance on mitigation and prevention strategies realistic and/or useful?