Measure Applications Partnership

Clinician Workgroup

NATIONAL QUALITY FORUM

December 15-16, 2014

Clinician Workgroup Membership

Workgroup Chair: Mark McClellan, MD, PhD

Organizational Members

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American Association of Nurse Practitioners	Diane Padden, PhD, CRNP, FAANP
American Academy of Pediatrics	Terry Adirim, MD, MPH
American College of Cardiology	Paul Casale, MD, FACC
American College of Emergency Physicians	Jay Schuur, MD, MHS
American College of Radiology	David Seidenwurm, MD
Association of American Medical Colleges	Janis Orlowski, MD
Center for Patient Partnerships	Rachel Grob, PhD
Consumers' CHECKBOOK	Robert Krughoff, JD
Kaiser Permanente	Amy Compton-Phillips, MD
March of Dimes	Cynthia Pellegrini
Minnesota Community Measurement	Beth Averbeck, MD
National Business Coalition on Health	Bruce Sherman, MD, FCCP, FACOEM
National Center for Interprofessional Practice and Education	James Pacala, MD, MS
Pacific Business Group on Health	David Hopkins, PhD
Patient-Centered Primary Care Collaborative	Marci Nielsen, PhD, MPH
Physician Consortium for Performance Improvement	Mark Metersky, MD
The Alliance	Amy Moyer, MS, PMP
WellPoint	

Clinician Workgroup Membership

Subject Matter Experts

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Surgical Care	Eric B. Whitacre, MD, FACS

Federal Government Members

Centers for Disease Control and Prevention (CDC)	Peter Briss, MD, MPH
Centers for Medicare & Medicaid Services (CMS)	Kate Goodrich, MD
Health Resources and Services Administration (HRSA)	Girma Alemu, MD, MPH

Duals Workgroup Liaison

Humana	George Andrews, MD, MBA, CPE, FACP, FACC, FCCP

Meeting Objectives

- Review and provide input on measures under consideration for federal programs applicable to clinicians and other eligible professionals
- Finalize input to the MAP Coordinating Committee on measures for use in federal programs
- Identify gaps in measures for federal clinician quality programs

Follow-up from October web meeting

Draft programmatic deliverable summarizes issues identified by Workgroup

- Include more high-value measures in federal programs
  - Scorecard (next slide)
  - Measures under consideration: 27 of 96 measures for PQRS are composites, outcomes, PROs, appropriate use/efficiency measures
- Alignment across federal programs
  - AMA: “need to synchronize and simplify”
  - Alignment of PQRS-based programs and the EHR Incentive programs
  - Alignment with the Medicare Shared Savings Program
- Participation and incentives
  - 36% participation of EPs in PQRS in 2012
  - PQRS measures for public reporting and payment going forward
  - PQRS non-participation penalties begin in 2015
  - No differential incentives for reporting high-value measures

TABLE 1. PROGRESS to HIGH-VALUE MEASURES

	PQRS 2015							Measures Under Consideration for PQRS						
Condition/topic area	Total measures	Outcomes	PROs	Composites	Intermediate outcomes	Patient Experience	Efficiency/ Appropriate Use	Total measures	Outcomes	PROs	Composites	Intermediate outcomes	Patient Experience	Efficiency/ Appropriate Use
Asthma	3		1					1			1			
CAHPS/ Patient Experience	2		2					0						
Cancer	23							0						
Cardiovascular conditions	15	3		1	1			2			1			
Care Coordination	3	1						4						
CKD/ESRD	9				4			2						
COPD	2							0						
Cognitive Impairment/Dementia	9							2						
Diabetes	11			1	2			1						
Emergency care	2							4						2
Ear, Nose, Throat/Head and Neck	7							0						
Eye care	12	7			1	1		1						
Geriatric care	2							0						
Gastrointestinal	6							2						
Genitourinary	1							11	3					
Hepatitis	7							1						
HIV/AIDS	7				1			0						
Hypertension	2	2						1				1		
Imaging	12						3	6	1					2
Interventional Radiology	0							3	2					
Medication Management	4							6						
Mental Health	10	1						2		1				
Multiple chronic conditions	1							0						
Musculoskeletal	22	5						3						
Neurologic conditions	8							17		1				
Oral Health	2	1						0						
Pain Management	1							0						

Significant issues for PQRS

- Encourage greater participation by including measures that allow more EPs to participate by reporting measures that are meaningful to their practice.
- All PQRS measures will be used for public reporting on Physician Compare and for payment adjustment in the Value-based Payment Modifier.
- The effect of measure turnover in PQRS (20 measures added and 50 measures removed from PQRS for 2015); disruption of participating EPs quality reporting and creating new gaps in measures for EPs.

CMS Presentation: Discussion of eMeasures & Measures of Cost

Minet Javellan, CMS
Camille Chicklis, Acumen
Jennifer Podulka, Acumen

NATIONAL QUALITY FORUM

Developing Electronic Clinical Quality Measures (eCQMs) for use in CMS Programs

Minet Javellana, RN
Eligible Professionals eCQM Project Lead
Center for Clinical Standards and Quality
Centers for Medicare and Medicaid Services
December, 2014

What is an eCQM?

- Electronic clinical quality measures (eCQMs) are standardized performance measures derived solely for use in EHRs. Current CMS policy classifies eCQMs into the National Quality Strategy domains:

  - Clinical Processes / Effectiveness
  - Care Coordination
  - Patient and Family Engagement
  - Population and Public Health
  - Patient Safety
  - Efficient Use of Healthcare Resources

- The Meaningful Use Program provides financial incentives for Eligible Professional (EPs), Eligible Hospitals (EHs), and Critical Access Hospitals (CAHs) to report eCQMs.

  Note: eCQMs are not the only requirement to receive a financial incentive.

eCQMs are also referred to as “eMeasures” or electronic measures

Key Stakeholders and eCQM Tools

- Developing an electronic measure requires the involvement of many stakeholders and use of many measure development tools and resources*

- Stakeholders:
  - Healthcare Providers
  - Centers for Medicare & Medicaid Services (CMS)
  - Electronic Measures Issues Group (eMIG)
  - Federal Regulators
  - HL7
  - Measures Application Partnership (MAP)
  - Measure Developers
  - National Quality Forum (NQF)
  - National Library of Medicine (NLM)
  - Office of the National Coordinator for Health Information Technology (ONC)
  - Patients and the general public
  - Technical Expert Panel (TEP)

- Tools and Resources
  - Cypress Certification Tool
  - eCQM Library
  - CMS Measures Inventory
  - CMS Measures Management System (MMS) Blueprint
  - Health Quality Measures Format (HQMF) Standard
  - Measure Authoring Tool (MAT)
  - NQF Quality Positioning System
  - NQF Quality Data Model (QDM)
  - Quality Reporting Document Architecture (QRDA) Standard
  - Value Set Authority Center (VSAC)
  - Bonnie for test driven development

*Definitions of these tools and resources and stakeholders are provided in the Appendix

Paper-Based vs. eCQM Measure Development

Paper-Based Measure Development

Measure developers…

- Develop measure narrative, numerator/ denominator in line with existing administrative data and/or data typically found in patient medical records (these can be paper or electronic charts).
- Create a list of code sets, data elements and abstraction definitions to represent the concepts within the measure.
- Solicit public comment on the measures.
- Measure developers conduct complete feasibility, reliability and validity testing.

eCQM Measure Development

Measure developers…

- Develop measure narrative, numerator/ denominator, workflow and logic, in line with existing standards (e.g., CMS Measures Management System (MMS) Blueprint
- Create value sets, collaborating with the **Value Set Authority Center** and clinical terminology (e.g. SNOMED-CT, LOINC) stakeholders as needed.
- **Use the Measure Authoring Tool (MAT)**
- Conduct complete feasibility, reliability and validity testing which can include working with EHR vendors to understand data element availability and implementation in the field.
- **Testing, Testing, Testing - for certification, implementation and new standards**
- Utilize **industry standards** – Healthcare Quality Measures Format (HQMF) and Quality Reporting Data Architecture (QRDA) based on the Quality Data Model (QDM)
- Solicit public comment on the measures

Output of the MAT

In order to report eCQMs, electronic specifications must be developed in the Measure Authoring Tool (MAT). Each component helps to accurately capture, calculate and report eCQMs:

XML

Description: A CQM written in Health Quality Measures Format (HQMF) syntax. HQMF is the industry (HL7) standard for representing a CQM as an electronic document.

Likely User: EHR system developers and administrators, analysts.

Use: To enable the automated creation of queries against an EHR or other operational data store for quality reporting.

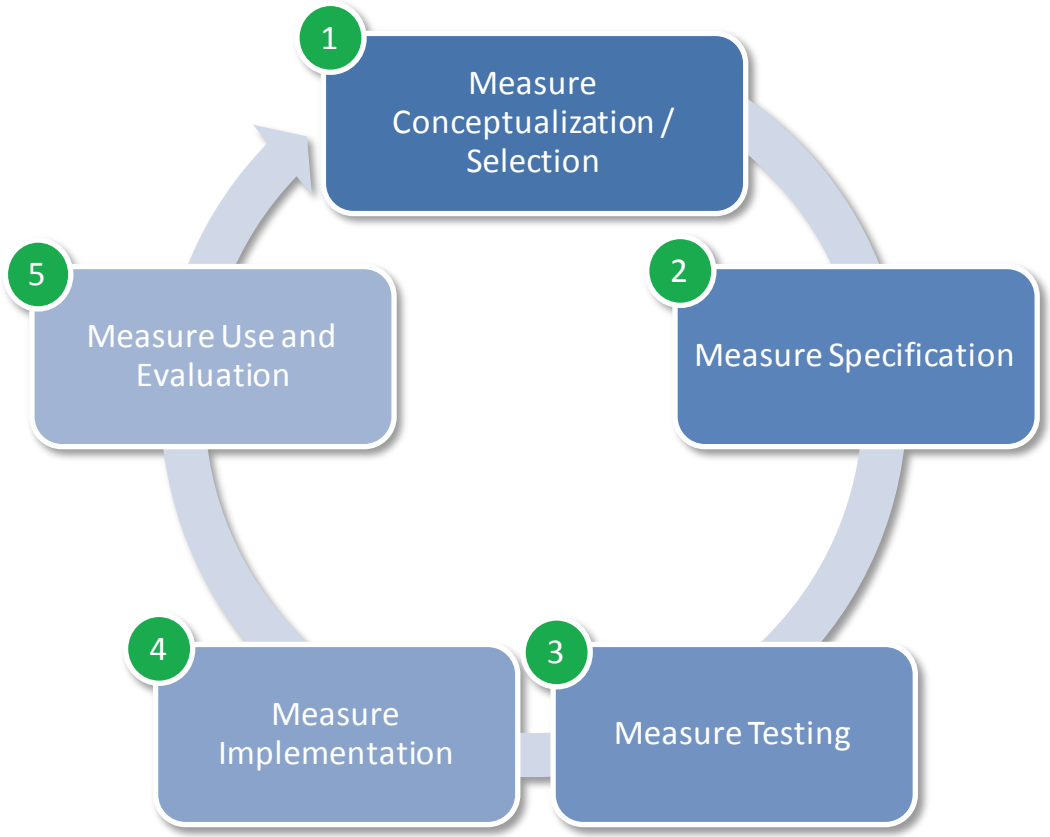
Human-Readable

Description: The human-readable HTML equivalent of the XML file content.

Likely User: EHR users [suggest saying EPs, EHs)]

Use: To identify the details of the CQM in a human-readable format, so that the user can understand both how the elements are defined and the underlying logic of the measure calculation.

eCQM Development Lifecycle



eCQM Components: Visual Basics

eMeasure Title	Cervical Cancer Screening		
eMeasure Identifier (Measure Authoring Tool)	124	eMeasure Version number	2
NQF Number	0032	GUID	42e7e489-790f-427a-a1a6-d6e807f65a6d
Measurement Period	January 1, 20xx through December 31, 20xx		
Measure Steward	National Committee for Quality Assurance		
Measure Developer	National Committee for Quality Assurance		
Endorsed By	National Quality Forum		
Description	Percentage of women 21-64 years of age, who received one or more Pap tests to screen for cervical cancer.		
Copyright	Physician Performance Measur for Quality Assurance (NCQA). The Measures are copyrighted (e.g., use by healthcare provic or distribution of the Measures sold, licensed or distributed fc		

Header *(partial)*

Body *(partial)*

[Population criteria]

- **Initial Patient Population** =
  - AND: "Patient Characteristic Birthdate: birth date" >= 23 year(s) starts before start of "Measurement Period"
  - AND: "Patient Characteristic Birthdate: birth date" < 64 year(s) starts before start of "Measurement Period"
  - AND: "Patient Characteristic Sex: Female"
  - AND:
    - OR: "Encounter, Performed: Office Visit"
    - OR: "Encounter, Performed: Face-to-Face Interaction"
    - OR: "Encounter, Performed: Preventive Care Services - Established Office Visit, 18 and Up"
    - OR: "Encounter, Performed: Preventive Care Services-Initial Office Visit, 18 and Up"
    - OR: "Encounter, Performed: Home Healthcare Services"
    - during "Measurement Period"
- **Denominator** =
  - AND: "Initial Patient Population"
- **Denominator Exclusions** =
  - AND: "Procedure, Performed: Hysterectomy with No Residual Cervix" ends before or during "Measurement Period"
- **Numerator** =
  - AND: "Laboratory Test, Result: Pap Test (result)" <= 2 year(s) ends before or during "Measurement Period"
- **Denominator Exceptions** =
  - None

Points to data criterion

[Data criteria (QDM Data Elements)]

- "Encounter, Performed: Face-to-Face Interaction" using "Face-to-Face Interaction Grouping Value Set (2.16.840.1.113883.3.464.1003.101.12.1048)"
- "Encounter, Performed: Home Healthcare Services" using "Home Healthcare Services Grouping Value Set (2.16.840.1.113883.3.464.1003.101.12.1016)"
- "Encounter, Performed: Office Visit" using "Office Visit Grouping Value Set (2.16.840.1.113883.3.464.1003.101.12.1001)"
- "Encounter, Performed: Preventive Care Services - Established Office Visit, 18 and Up" using "Preventive Care Services - Established Office Visit, 18 and Up Grouping Value Set (2.16.840.1.113883.3.464.1003.101.12.1025)"
- "Encounter, Performed: Preventive Care Services-Initial Office Visit, 18 and Up" using "Preventive Care Services-Initial Office Visit, 18 and Up Grouping Value Set (2.16.840.1.113883.3.464.1003.101.12.1023)"
- "Laboratory Test, Result: Pap Test" using "Pap Test Grouping Value Set (2.16.840.1.113883.3.464.1003.108.12.1017)"
- "Patient Characteristic Birthdate: birth date" using "birth date LOINC Value Set (2.16.840.1.113883.3.560.100.4)"
- "Patient Characteristic Sex: Female" using "Female Administrative Sex Value Set (2.16.840.1.113883.3.560.100.2)"
- "Procedure, Performed: Hysterectomy with No Residual Cervix" using "Hysterectomy with No Residual Cervix Grouping Value Set (2.16.840.1.113883.3.464.1003.198.12.1014)"

Points to associated value set and OID

Value Sets: What You See

Unique identifier

Value Set Authority Center
NLM U.S. National Library of Medicine

Value Set Name	Hysterectomy with No Residual Cervix
OID	2.16.840.1.113883.3.464.1003.198.12.1014
Type	Grouping
Definition ID (release/update date)	20130614
Developer	National Committee for Quality Assurance
Note	
Expansion ID	20121025

Code	Description	Code System	Version	Code System OID
116140006	Total hysterectomy (procedure)	SNOMEDCT	2013-01	2.16.840.1.113883.6.96
116142003	Radical hysterectomy (procedure)	SNOMEDCT	2013-01	2.16.840.1.113883.6.96
116143008	Total abdominal hysterectomy (procedure)	SNOMEDCT	2013-01	2.16.840.1.113883.6.96
236888001	Total laparoscopic hysterectomy (procedure)	SNOMEDCT	2013-01	2.16.840.1.113883.6.96
58956	Bilateral salpingo-oophorectomy with total omentectomy, total abdominal hysterectomy for	CPT	2013	2.16.840.1.113883.6.12
59135	Surgical treatment of ectopic pregnancy; interstitial, uterine pregnancy requiring total	CPT	2013	2.16.840.1.113883.6.12
86477000	Total hysterectomy with removal of both tubes and ovaries (procedure)	SNOMEDCT	2013-01	2.16.840.1.113883.6.96

Values included in the value set (codes, descriptors, code system, version of the code system and code system unique identifier)

Based on a partial export of a value set for CMS 124v2.

Vocabularies Used in Building Value Sets

- There are specific vocabularies or terminologies that are used to identify clinical concepts identified by the data elements within an eCQM. These vocabulary requirements are based on the ONC Health Information Technology Standards Committee (HITSC) recommendations for standard and transition vocabularies.

- eCQMs include both standard and transition vocabularies to convey the intended clinical intent:
  - Standard- are primarily clinical vocabularies (as opposed to billing) and can serve more needs and for a longer period of time; however are not widely used.
  - Transition- allow for immediate use and least burdensome for eCQM reporting purposes while standard vocabulary use is not yet widespread.

Standard	Transition
•SNOMED CT •LOINC •RxNorm •ICF •CVX •PHIN/VADS	•ICD-9-CM •ICD-10-CM •ICD-10-PCS •CPT •HCPCS

(refer to appendices for details on each specific code set)

Vocabularies in Relation to Data Elements

- Each data element type has a required vocabulary from either the standard or transitional and in many instances both.
- Measure specifications MUST use all that apply from the standard and transitional vocabularies.

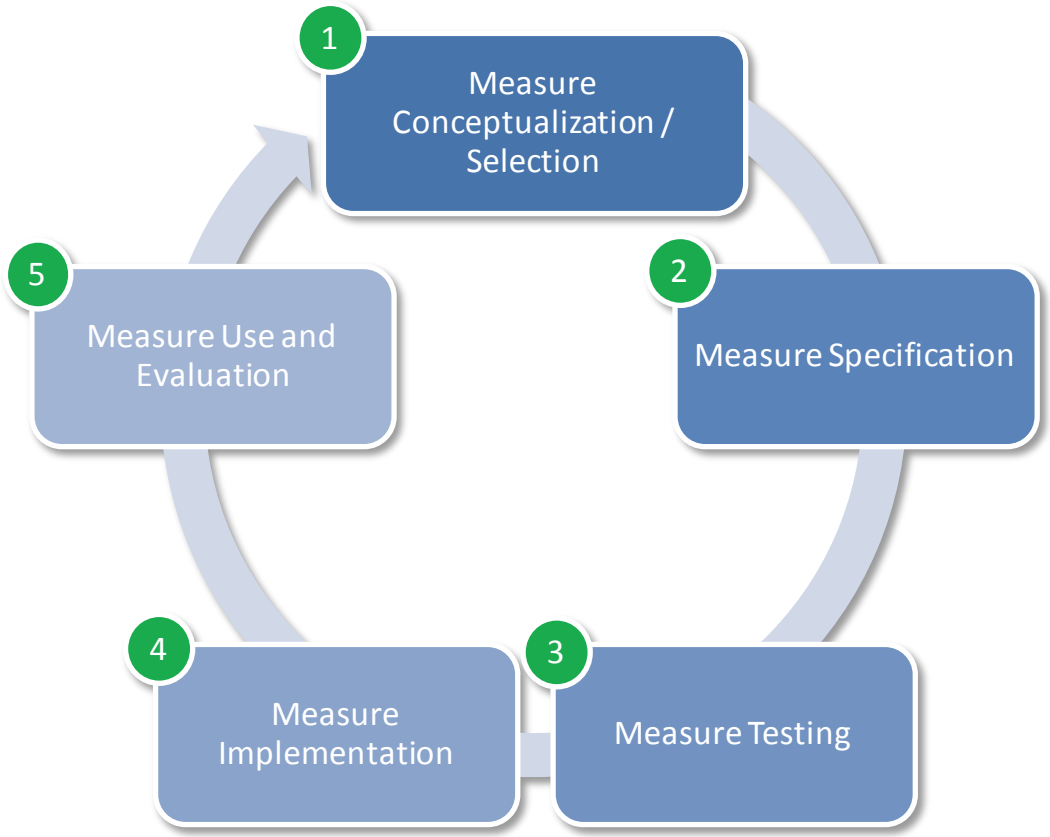
Quality Data Model Category	Quality Data Model Data type	Quality Data Model Attribute	Clinical Vocabulary Standards	Transition Vocabulary
Condition/ Diagnosis/ Problem	Condition/ Diagnosis/ Problem	N/A	SNOMED CT	ICD-9-CM, ICD-10-CM
Encounter (any provider interaction)	Encounter	N/A	SNOMED CT	CPT, HCPCS, ICD-9-CM Procedures, ICD-10-PCS
Laboratory test (names)	Laboratory Test	N/A	LOINC	N/A
Laboratory test (results)	Laboratory Test	Result	SNOMED CT	N/A
Diagnostic study test names	Diagnostic Study	N/A	LOINC	HCPCS
Diagnostic study test results	Diagnostic Study	Result	SNOMED CT	N/A
Procedure	Procedure	N/A	SNOMED CT	CPT, HCPCS, ICD-9-CM Procedures, ICD-10-PCS

Updates to Vocabularies and Standards

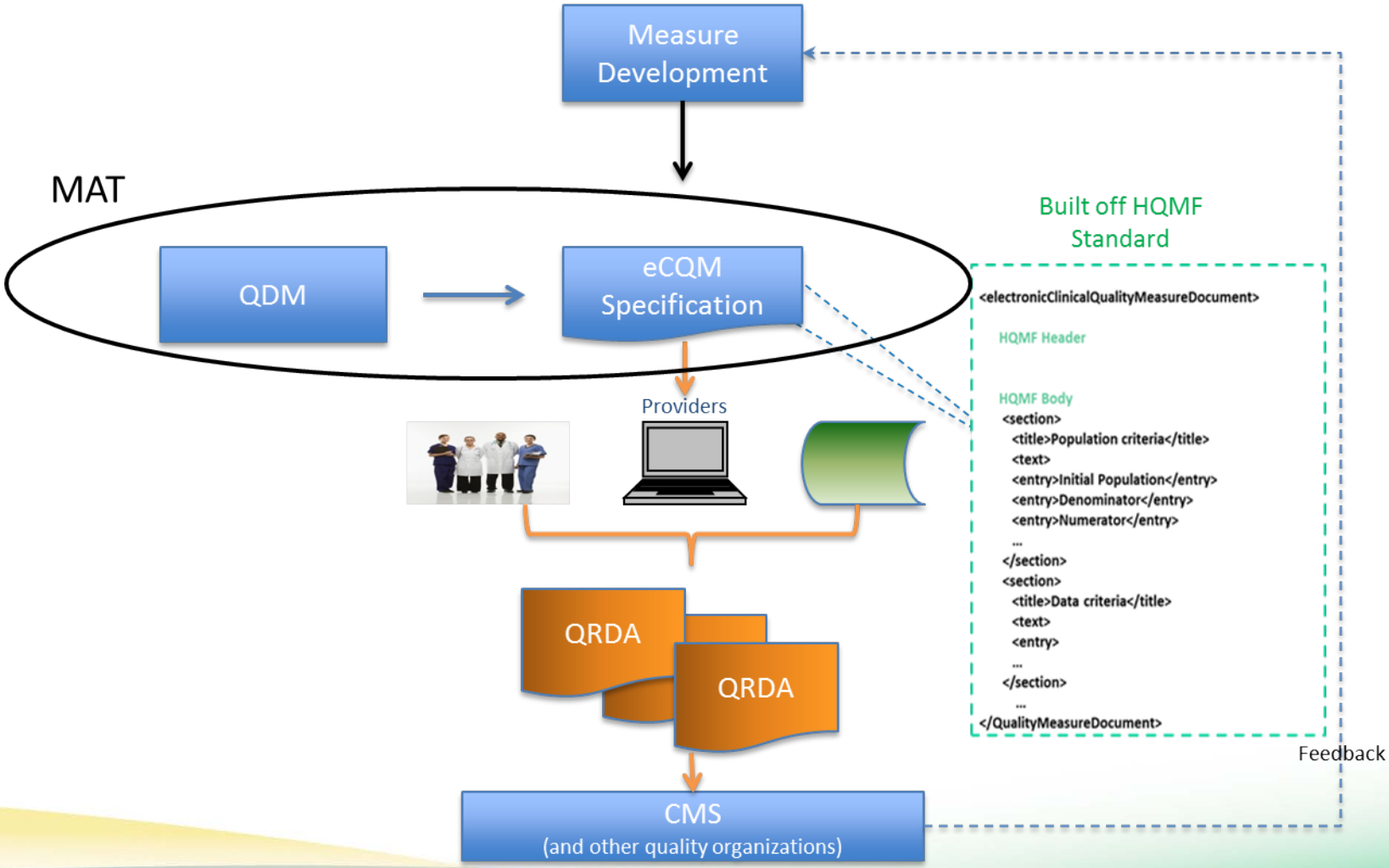
- Vocabularies and Standards are updated by the healthcare industry CMS updates and utilizes vocabularies and standards for eCQM based on the industry
- Vocabularies are updated:
  - Annually – SnoMed, Loinc, CPT
  - Monthly – RX Norm
- Standard HQMF – International standards for developing quality measures
  - Stage 2 eCQM– HQMF R1
  - Future eCQM – HQMF R2.1
    - Updating has to go through balloting and voting by HL7, the standard development organization

The eCQM Development Lifecycle

eCQM Development Lifecycle



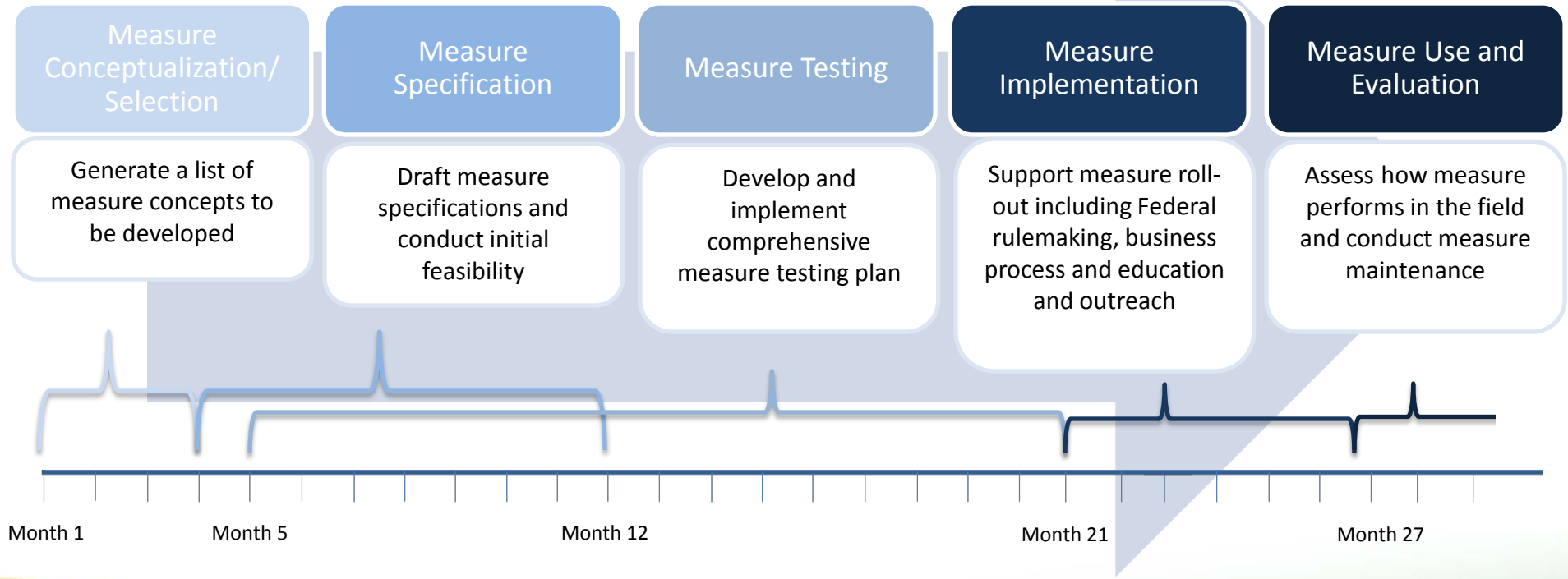
Intersection of QDM, HQMF and QRDA



To view eCQM packages:
http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/eCQM_Library.html

eCQM Development Lifecycle*

* Timelines are notional, not actual, and intended for the purposes of discussion. Measure development timelines vary based on the measure.



Clinical Episode-Based Payment Measures

MAP Clinician Workgroup

December 2014

CMS's Clinical Episode-Based Payment Measures Introduction

- CMS's physician-based episode measures assess the efficiency of clinically-related services provided for the treatment for an episode of care.
- The measures are payment standardized to allow comparison of Medicare payment for clinically cohesive episodes related to a given condition, across the nation. They are risk adjusted for beneficiary clinical presentation and their construction generally parallels that of the NQF-endorsed Medicare spending per beneficiary measure.
- Developed for use in conjunction with measures of quality in value-based purchasing programs, the measures enable assessment of efficiency as the relative cost of clinical resources used to achieve a measured level of quality
- The six clinical episode-based payment measures include:
  1. Lumbar spine fusion/refusion
  2. Kidney/urinary tract infection (UTI)
  3. Cellulitis
  4. Gastrointestinal (GI) hemorrhage
  5. Hip replacement/revision
  6. Knee replacement/revision

Episodes of Care

- An *episode of care* (or "episode") includes the set of discrete medical services typically involved in managing a particular health event or condition
- Episodes allow related medical services delivered for management, treatment, and follow-up of a health event or condition and its complications to be assessed and valued using a single unit that informs all managing providers about the efficiency of their practice patterns

Goals of Episode Cost Reporting

- The principal goal of episode-based payment measures is to encourage efficient patterns of care
- Inclusion of only services that are clinically related to the episode trigger responds to stakeholder request for clinically cohesive measures
- Reporting episode-based payment measures provides actionable, transparent information to support medical group practices' efforts to gauge and improve the efficiency of care provided to patients with certain medical conditions
- Finally, reporting of episode-based measures can assist medical group practices in identifying opportunities for improvements in care coordination

Basic Model of an Episode

1. An episode begins with a clinical “trigger” event, such as:
   - An inpatient hospital admission
   - A claim with diagnosis/procedure information indicating the presence of the index condition/procedure
2. During the episode, services and procedures are grouped that:
   - Are clinically relevant
   - Occur during the episode time period
   - May occur a few days prior to the trigger event, for some episodes
3. An episode ends:
   - When there is a break in service, or
   - At a fixed time period after the trigger event

Purpose of the Measures

- The clinical episode-based measures fulfill, in part, CMS's quality strategy to improve beneficiary health and quality of care while lowering medical costs
- The measures were constructed as part of CMS' response to the mandate in Section 3003 of the Affordable Care Act (ACA) of 2010 that the Secretary of the Department of Health and Human Services (HHS) develop an episode grouper to improve care efficiency and quality
- The measures are designed to encourage care coordination between multiple physicians caring for a patient within an episode
- The six conditions chosen:
  - can be linked to near-term outcomes;
  - have high variation in post-treatment expenditures;
  - account for a large share of total Medicare spending; and
  - have a large share of expenditures attributable to post-acute care

Measure Vetting History

- All six clinical episode-based measures were reported in the 2012 Supplemental Quality and Resource Use Reports (QRURs)
  - The 2012 Supplemental QRURs are confidential feedback reports provided to medical group practices with 100 or more eligible professionals (EPs) with information on the management of their Medicare fee-for-service (FFS) patients
  - The 2012 Supplemental QRURs are for informational purposes only and complement the per capita cost and quality information provided in the 2012 QRURs
- CMS sought public comment on the measures in both the FY 2015 Physician Fee Schedule (PFS) Proposed Rule and in the FY 2015 Inpatient Prospective Payment System (IPPS)/Long-Term Care Hospital (LTCH) Proposed Rule

Measures Under Consideration (MUCs)

- CMS's "Open Call for Measures"
- Final MUC list:
  - 96 measures – same measures for PQRS, Physician Compare, Physician Feedback/Quality and Resource Utilization Reports; Physician Value-based Payment Modifier
    - 43 are fully developed, tested and ready for implementation
    - 53 are still in development
    - 7 measures are NQF-endorsed; most MUCs have not been submitted to NQF
  - 32 eMeasures for the EHR Incentive Programs
    - All are in development
  - 6 episode based payment measures for the VBPM
  - 107 measures for the Medicare Shared Savings Program
    - 75 also under consideration for PQRS

Approach to Pre-Rulemaking decision-making – Supporting deliberations with preliminary analysis

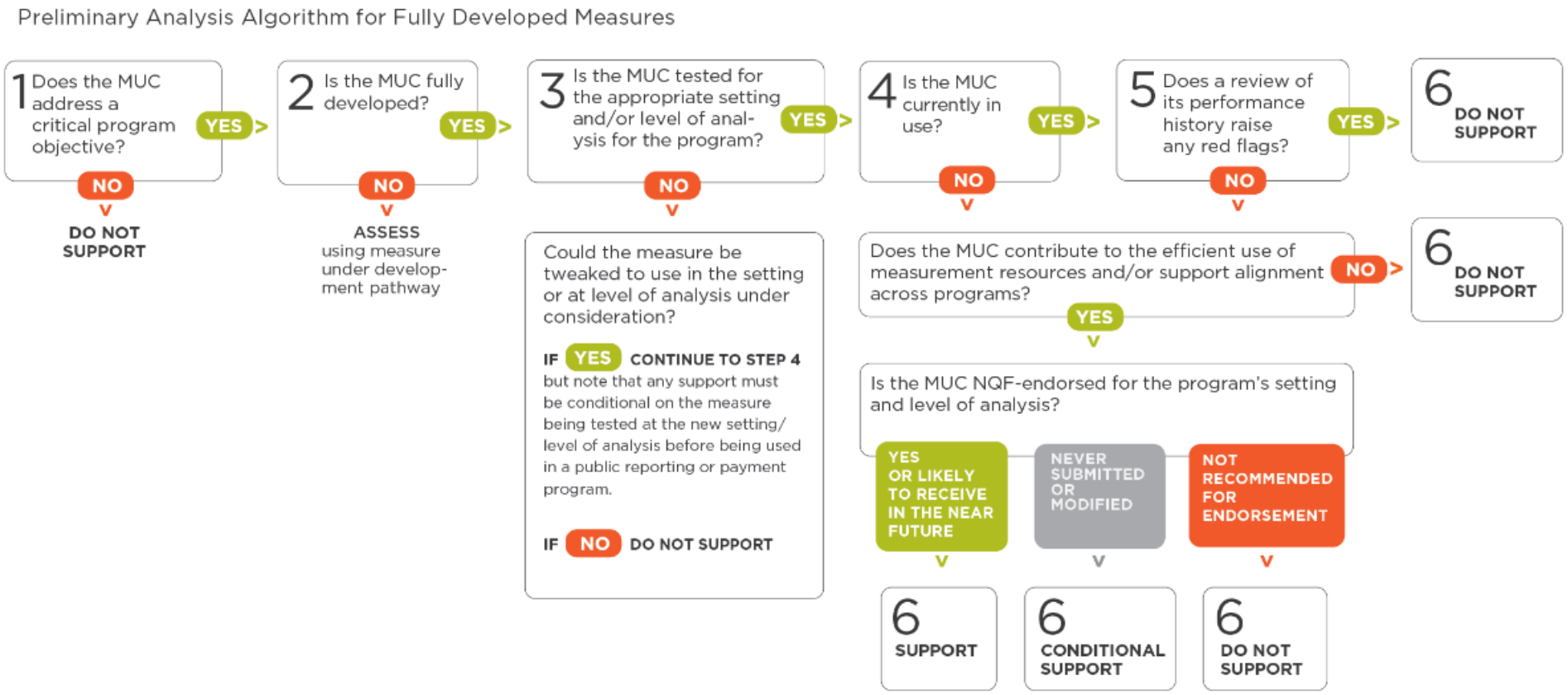
Standardized approach across all workgroups:

- The measures under consideration were divided into related groups for the purposes of discussion and voting
- A preliminary analysis by staff based on a standard decision algorithm applying the MAP measure selection criteria was performed for each measure under consideration
- Discussion guide notes the result of the preliminary analysis and provide rationale to support how that conclusion was reached

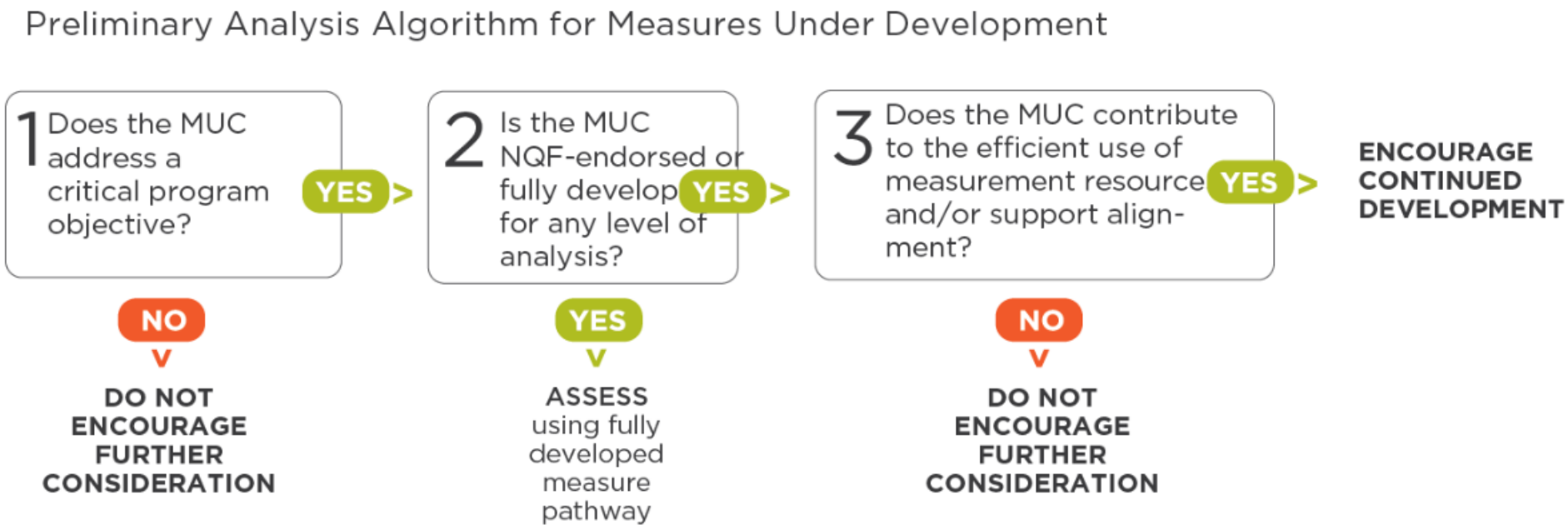
MAP Measure Selection Criteria

1. NQF-endorsed measures are required for program measure sets, unless no relevant endorsed measures are available to achieve a critical program objective
2. Program measure set adequately addresses each of the National Quality Strategy's three aims
3. Program measure set is responsive to specific program goals and requirements
4. Program measure set includes an appropriate mix of measure types
5. Program measure set enables measurement of person- and family-centered care and services
6. Program measure set includes considerations for healthcare disparities and cultural competency

Preliminary analysis of measures with MAP measure selection criteria



Preliminary analysis of measures under development



MAP Process Improvements

- Preliminary Analysis
  - Results are a “strawman” to facilitate review of many MUCs
  - Focus discussion on areas of major issues or disagreement
- Discussion Guide
  - Easily navigated electronic document with more detail on measures
- Grouping of measures by “consent calendars”
  - Voting on individual MUCs pulled out for a different recommendation than the preliminary analysis result
  - *En bloc* voting on measures in a group when WG agrees with preliminary analysis result
  - At least 60% approval to finalize a WG recommendation
- Pre-meeting public comments