Value Set Harmonization

Value Set Harmonization Technical Expert Panel Orientation

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***12:30-2:00pm** ET*

NATIONAL QUALITY FORUM

Agenda at a Glance

- Welcome and Introductions

- Background on NQF

- Project Overview

- Role of the Technical Expert Panel

- Summary of the Preliminary Analysis

- Discussion

- Next Steps

Welcome and Introductions

NQF Project Staff

- Jason Goldwater
  - Senior Director
- Sharon Hibay
  - Senior Director
- Kathryn Streeter
  - Senior Project Manager
- Ann Phillips
  - Project Analyst

Technical Expert Panel Member Introductions

Value Set Harmonization Technical Expert Panel

- James Case, DVM, PhD

- Lynn Choromanski, PhD, RN-BC

- Kendra Hanley, MS

- Rachael Howe, BSN, RN

- Catherine H. Ivory, PhD, RN, BC

- Jason Jones, PhD

- Russell Leftwich, MD

- Kathryn Lesh, PhD, MS, EdM, RN-BC, CPHQ

- Caroline Macumber, MS, PMP

- Priscilla Mark-Wilson, MSN, MPH, MBA, PMP

- Nick Mattison, PMP

- Kristen McNiff, MPH

- Deborah Sita, BSN, MHA

- Shelly Spiro, Rph, FASCP

- Allison Weathers, MD, FAAN

Background on NQF

NQF Mission

Board of Directors

Steering Committees

8 Membership Councils

Measures Application
Partnership (MAP)

National Priorities
Partnership (NPP)

CSAC, HITACH

Neutral Convener

Standards Setting
Organization

1 Build
Consensus

2 Endorse National
Consensus Standards

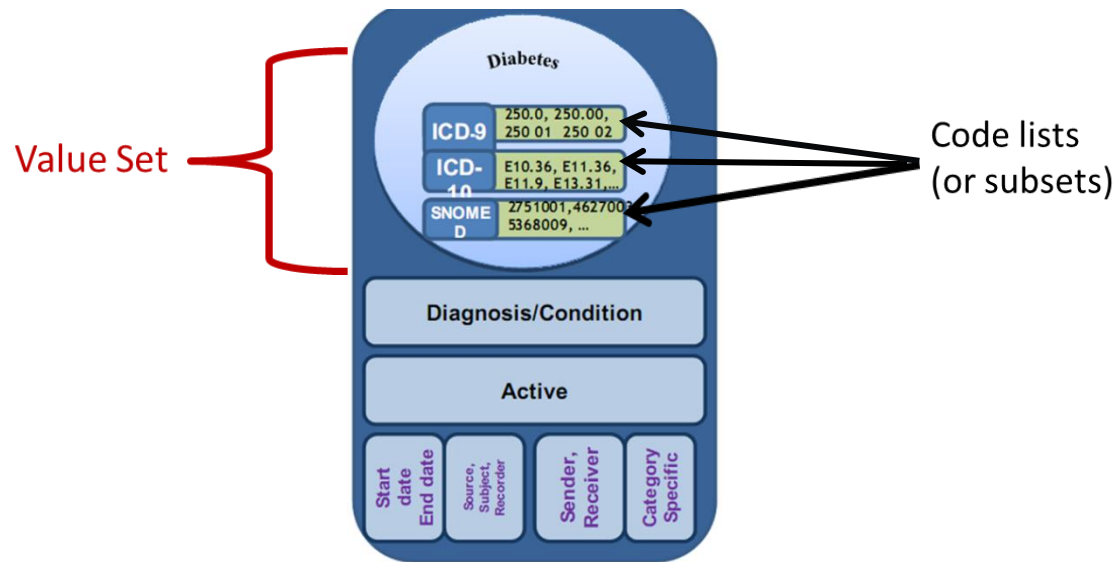3 Education and
Outreach

Project Overview

Background

- In 2012, the National Library of Medicine (NLM), in collaboration with the Office of the National Coordinator for Health Information Technology (ONC) and the Centers for Medicare & Medicaid Services (CMS), launched the Value Set Authority Center (VSAC).

- The VSAC provides downloadable access to all official versions of vocabulary value sets contained in the Meaningful Use Stage 2 (MU2) eMeasure specifications, also called the 2014 Clinical Quality Measures (eCQMs).
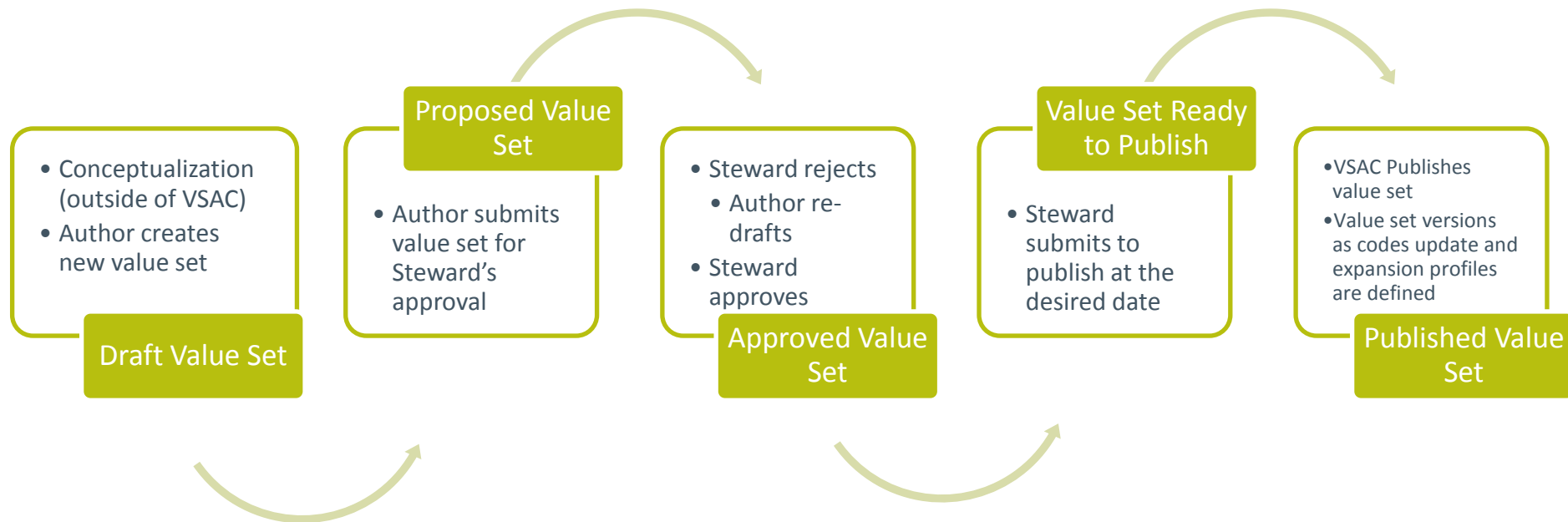
Background

- Through the VSAC, the NLM is charged with value set "curation," which includes ensuring that value set codes are not incorrect or malformed, do not contain code system or code mismatches, and do not contain code and description mismatches

- However, to enable value sets to be used efficiently to build and maintain effective eCQMs, curation alone is not enough. There is also a need to validate the clinical meaning of codes given the intent of the measures and to assess multiple competing value sets addressing the same intended purpose in order to harmonize them.

Background

- The value sets in the VSAC describe the specific populations and clinical actions included and excluded in order to properly calculate each of the 64 eCQMs for eligible professionals (EPs) and the 29 eCQMs for eligible hospitals (EHs) for the 2014 MU2 eCQMs.

Life Cycle of a Value Set

Draft Value Set
- Conceptualization (outside of VSAC)
- Author creates new value set

Proposed Value Set
- Author submits value set for Steward's approval

Approved Value Set
- Steward rejects
  - Author re-drafts
- Steward approves

Value Set Ready to Publish
- Steward submits to publish at the desired date

Published Value Set
- VSAC Publishes value set
- Value set versions as codes update and expansion profiles are defined

Project Scope and Objectives

- NQF defines **value set harmonization** as the process by which unnecessary or unjustifiable variance will be eliminated from common value sets in eCQMs by the reconciliation and integration of competing and/or overlapping value sets.

- Under the guidance of the Value Set Committee, NQF will develop and pilot test a value set harmonization and approval process to promote consistency and accuracy in eCQM value sets.

- In addition, harmonized value sets will provide basis of gap analysis and for examination of face validity of value sets.

- The project will also offer guidance on how approved value set status should be integrated into the eCQM endorsement process

Project Scope and Objectives

The project will address the following issues:

- What are the harmonization criteria for value sets used in eCQM development, and when is value set harmonization applicable?

- Will measure developers be mandated to demonstrate they have actively utilized VSAC harmonized value sets in eCQM development?

- What components of the harmonization process apply to the review and approval of newly submitted value sets, and how should that process be structured?

Project Scope and Objectives

The project will address the following issues, cont.:

- What is the role of value set authors and stewards in responding to recommendations for changes or additions to value sets? Will value set harmonization be mandated if the author or steward is unable or unwilling to make suggested changes?

- How are recommendations for additions or changes in value set content integrated into the existing VSAC catalog?

- How does value set harmonization and approval integrate with or impact the measure endorsement process?

- How should developers anticipate the impact on measure development if value set approval and harmonization is an expected pre-condition for eCQM endorsement?

Project Timeline

Deliverable: Draft Processes

- Harmonization processes for resolving missing, duplicate, competing, or otherwise problematic value sets
- Ground rules for measure developers on use of approved, harmonized value sets to build measures
- Policies and procedures for coordinating value set harmonization work with the NLM's VSAC

Deliverable: Evaluation of Value Set Harmonization Testing

- Measure #1 Evaluation (May 31, 2015)
- Measure #2 Evaluation (June 30, 2015)
- Measure #3 Evaluation (July 31, 2015)
- Measure #4 and #5 Evaluation (October 31, 2015)

Project Timeline

Deliverable: Final Processes (September 30, 2015)

- Harmonization processes for resolving missing, duplicate, competing, or otherwise problematic value sets
- Ground rules for measure developers on use of endorsed, harmonized value sets to build measures
- Policies and procedures for coordinating value set harmonization work with the NLM's VSAC

Deliverable: Project Report

- Draft Project Report (November 30, 2015)
- Public Comment on Draft Project Report (December 1, 2015- January 8, 2016)
- Final Project Report (March 31, 2016)

Role of the Technical Expert Panel

Role of the Technical Expert Panel

The Technical Expert Panel will perform analysis, suggest resolutions and provide feedback on a process that includes:

- Resolving definitional issues around the "meaning" of value sets and the codes required to articulate that meaning

- Adjudicating the most complicated and judgment-dependent variances

- Assisting NQF in the development of an iterative process

Unit of Analysis – Pre-work

- **Winnenburg/Bodenreider Analysis**
    - Assessment for completeness and correctness in value sets
    - Opportunities for harmonization by eliminating redundancies in groups of like value sets

- **Measures Reporting**
    - Review codes in sub value sets in same topic measures that are frequently reported to CMS

- **Manual Comparison**
    - Compare codes and content in same topic measures

- **Jaccard Index**
    - Statistical analysis for comparing the similarity and diversity of two sub value sets

Summary of the Preliminary Analysis

Summary of Findings: Eligible Professional measures utilizing the Jaccard Index

Jaccard Score	Value Set 1	Measures	Value Set 2	Measures
0.49	Depression diagnosis	CMS2v4	Major Depression Including Remission	CMS159v3 CMS160v3
0.53	Depression Screening Denominator Encounter Codes New	CMS2v4	Medications Encounter Code Set	CMS68v4
0.56	Depression diagnosis	CMS2v4	BH Condition Involving Unipolar Depression	CMS169v3
0.58	Depression diagnosis	CMS2v4	Major Depressive Disorder-Active	CMS161v3 CMS177v3
0.58	Depression Screening Denominator Encounter Codes New	CMS2v4	BMI Encounter Code Set	CMS69v3
0.69	Depression Screening Denominator Encounter Codes New	CMS2v4	BMI Encounter Code Set	CMS69v3
0.74	Major Depression Including Remission	CMS159v3 CMS160v3	BH Condition Involving Unipolar Depression	CMS169v3
0.78	Bipolar Diagnosis	CMS2v4	BH Condition Involving Bipolar Disorder	CMS169v3
0.78	Major Depressive Disorder-Active	CMS161v3 CMS177v3	Major Depression Including Remission	CMS159v3 CMS160v3
0.78	Major Depressive Disorder-Active	CMS161v3 CMS177v3	BH Condition Involving Unipolar Depression	CMS169v3
0.79	Bipolar Disorder	CMS160v3 CMS159v3	BH Condition Involving Bipolar Disorder	CMS169v3
0.95	Bipolar Disorder	CMS160v3 CMS159v3	Bipolar Diagnosis	CMS2v4

Summary of Findings: Eligible Professional measures utilizing the Jaccard Index

SNOMED-CT Code	Subvalue Set 1	SNOMED-CT Code	Subvalue Set 2
191616006	Recurrent Depression (disorder)	66344007	Recurrent Major Depression (disorder)
192080009	Chronic depression (disorder)	2618002	Chronic recurrent major depressive disorder (disorder)
320751009	Major depression, melancholic type (disorder)	319768000	Recurrent major depressive disorder with melancholic features (disorder)
30605009	Major depression in partial remission (disorder)	33135002	Recurrent major depression in partial remission (disorder)
191610000	Recurrent major depressive episodes, mild (disorder)	87512008	Mild major depression (disorder)
18818009	Recurrent major depressive episodes, moderate (disorder)	832007	Moderate major depression (disorder)
8411005	Interactive individual medical psychotherapy (regime/therapy)	18512000	Individual psychotherapy (regime/therapy)
46662001	Examination of breast (procedure)	13607009	Manual examination of breast (procedure)
91573000	Tympanometry testing (procedure)	277404009	High frequency tympanometry (procedure)
370143000	Major depressive disorder (disorder)	663344007	Recurrent major depression (disorder)
31976800	Recurrent major depressive disorder with melancholic features (disorder)	320751009	Major depression, melancholic type
79298009	Mild major depression, single episode (disorder)	87512008	Mild major depression (disorder)

Summary of Findings:
Manual comparison of Eligible Hospital measures

CMS #	Measure Title
CMS71v4	Stroke-3 Ischemic stroke – Anticoagulation Therapy for Atrial Fibrillation/Flutter
CMS72v3	Stroke-5 Ischemic stroke – Antithrombotic therapy by end of hospital day two
CMS91v4	Stroke-4 Ischemic stroke – Thrombolytic Therapy
CMS102v3	Stroke-10 Ischemic or hemorrhagic stroke – Assessed for Rehabilitation
CMS104v3	Stroke-2 Ischemic stroke – Discharged on anti- thrombotic therapy
CMS105v3	Stroke-6 Ischemic stroke – Discharged on Statin Medication
CMS107v3	Stoke-8 Ischemic or hemorrhagic stroke – Stroke education
CMS73v3	VTE-3 VTE Patients with Anticoagulation Overlap Therapy
CMS108v3	Venous Thromboembolism (VTE)-1 VTE prophylaxis
CMS109v3	VTE-4 VTE Patients Receiving Unfractionated Heparin (UFH) with Dosages/Platelet Count Monitoring by Protocol (or Nomogram)
CMS110v3	VTE-5 VTE discharge instructions
CMS114v3	VTE-6 Incidence of potentially preventable VTE
CMS190v3	VTE-2 Intensive Care Unit (ICU) VTE prophylaxis

Summary of Findings:
Manual comparison of Eligible Hospital measures

The project team examined all the value sets associated with these measures

OID 1: 105v3, 91v4, 71v4, 104v3, 72v3, 190v3, 73v3, 108v3
OID2: 114v3

	Member OID – Value Set Name	Steward
1	2.16.840.1.113883.3.117.1.7.1.473 Medical Reason	The Joint Commission
2	2.16.840.1.113883.3.117.1.7.1.412 Medical Contraindication	The Joint Commission

These value sets are entirely identical – no unique codes.

Summary of Findings:
Manual comparison of Eligible Hospital measures

OID1: CMS71v4

OID2: CMS104v3, CMS72v3

OID3: CMS73v3

OID4: CMS100v3 (AMI Measure)

OID5: CMS190v3, CMS108v3, CMS114v3

	Member OID – Value Set Name	Steward
1	2.16.840.1.113883.3.117.1.7.1.200 anticoagulant therapy extensional	The Joint Commission
2	2.16.840.1.113883.3.117.1.7.1.201 antithrombitic therapy extensional	The Joint Commission
3	2.16.840.1.113883.3.117.1.7.1.266 Parenteral Anticoagulant extensional	The Joint Commission
4	2.16.840.1.113883.3.666.5.626 Aspirin extensional	Lantana
5	2.16.840.1.113883.3.117.1.7.1.211 Injectable Factor Xa Inhibitor for VTE Prophylaxis extensional	The Joint Commission

Is "anticoagulant therapy" complete and can it be harmonized with "Parenteral Anticoagulant?"

"Antithrombitic therapy" is missing many aspirin products found in "Aspirin"

"Injectable Factor Xa Inhibitor for VTE Prophylaxis" is missing some same type drugs found in "Parenteral Anticoagulant"

Summary of Findings:
Manual comparison of Eligible Hospital measures

Code	2.16.840.1.113883.3.117.1.7.1.201 Antithrombitic Therapy	2.16.840.1.113883.3.666.5.626 Aspirin
103863		Aspirin 150 MG Rectal Suppository
197429		Tablet
197447		Oral Tablet
197930		Oral Tablet
197945		Oral Tablet
198461		Aspirin 120 MG Rectal Suppository
198463		Aspirin 200 MG Rectal Suppository
198464		Aspirin 300 MG Rectal Suppository
198466	Aspirin 325 MG Oral Capsule	Aspirin 325 MG Oral Capsule
198467	Aspirin 325 MG Enteric Coated Tablet	Aspirin 325 MG Enteric Coated Tablet
198471	Aspirin 500 MG Oral Tablet	Aspirin 500 MG Oral Tablet
198473		Aspirin 600 MG Rectal Suppository
198475	Aspirin 650 MG Oral Tablet	Aspirin 650 MG Oral Tablet
198477	Aspirin 162 MG Enteric Coated Tablet	Aspirin 162 MG Enteric Coated Tablet
198479	Aspirin 400 MG / Caffeine 32 MG Oral	Tablet
198480	Aspirin 500 MG / Caffeine 32 MG Oral	Tablet
199274	Aspirin 300 MG Oral Capsule	Aspirin 300 MG Oral Capsule
200322	lepirudin 50 MG/ML Injectable Solution	
204711		0.0338 MG/ML / Dextromethorphan 0.169
204724	Aspirin 5.5 MG/ML / Chlorpheniramine	Aspirin 5.5 MG/ML / Chlorpheniramine
204750		Acetaminophen 162 MG / Aspirin 162 MG
205185		Aspirin 5.5 MG/ML / Chlorpheniramine
205251	Acetaminophen 160 MG / Aspirin 230	/ Caffeine 33 MG Oral Tablet

Summary of Findings:
Manual comparison of Eligible Hospital Measures

OID1: CMS30v4 (AMI), CMS105v3   OID4: CMS190v3, CMS108v3

OID2: CMS72v3, CMS104v3   OID5: CMS108v3, CMS190v3

OID3: CMS71v4

	Member OID – Value Set Name	Steward
1	2.16.840.1.113762.1.4.1021.7 statin specific	The Joint Commission
2	2.16.840.1.113762.1.4.1021.8 antithrombitic specific	The Joint Commission
3	2.16.840.1.113762.1.4.1021.9 anticoagulant specific	The Joint Commission
4	2.16.840.1.113762.1.4.1021.10 warfarin only	The Joint Commission
5	2.16.840.1.113762.1.4.1021.12 Low Molecular Weight Heparin for VTE prophylaxis ingredient specific	The Joint Commission

"Statin specific" lists medication names, but no dosages.

"Antithrombitic specific" is duplicative with "Antithrombitic therapy" but dosage information is not included in "Antithrombitic specific"

"Antithrombitic specific" and "Anticoagulant specific" are almost entirely duplicative

"Warfarin only" includes no dosage information

"Low Molecular Weight Heparin for VTE prophylaxis ingredient specific" is missing same ingredient drugs

Technical Expert Panel Discussion

Next Steps

NQF SharePoint Site

- SharePoint will be the primary method of document sharing and collaboration for NQF Staff, the Committee and the Technical Expert Panel

- Documents
  - Project Documents
  - Roster and Bios

- Meeting, Calendar and Call Documents
  - Agenda, Call information, and meeting materials for each conference call and the in-person meetings

- http://share.qualityforum.org/Projects/Value%20Set%20Harmonization/SitePages/Home.aspx

- Support - web-help@qualityforum.org

Next Steps

- Value Set Harmonization Evaluation Webinars
  - May 21, 2015
  - June 17, 2015
  - July 20, 2015
  - October 6, 2015

Project Contact Info

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THANK YOU!