NATIONAL QUALITY FORUM

Improving Diagnostic Quality & Safety/Reducing Diagnostic Error: Measurement Considerations

Committee Web Meeting 2

October 9, 2019

Agenda

- Welcome and Review of Meeting Objectives
- Finalize Environmental Scan / Updates to Measurement Framework
- Brainstorm Possible Use Cases
- Review Proposed Outline of Use Cases
- Opportunity for Public Comment
- Next Steps

Welcome and Introductions

NQF Project Staff

- Andrew Lyzenga, MPP, Senior Director
- Jean-Luc Tilly, MPA, Senior Project Manager
- Desmirra Quinnonez, Project Analyst
- Jesse Pines, MD, Consultant

Committee Roster

- David Andrews
- Flavio Casoy, MD, FAPA
- Karen Cosby, MD
- Sonali Desai, MD
- Jane Dickerson, PhD
- Andreea Dohatcu, PhD, DABR, MRSC, CMQ
- Mark Graber, MD
- Helen Haskell, MA
- Cindy Hou, DO
- John James, PhD
- Joseph Kunisch, PhD Health Informatics
- Prashant Mahajan MD, MPH, MBA
- Kathy McDonald, MM, PhD
- Lavinia Middleton, MD
- David Newman-Toker, MD, PhD
- Craig Norquist, MD
- Shyam Prabhakaran, MD
- Ricardo Quinonez, MD, FAAP
- Roberta Reed
- Hardeep Singh, MD, MPH
- Colleen Skau, PhD
- Michael Woodruff, MD
- Ronald Wyatt, MD

Federal Liaisons (Non-voting Committee Representatives)

- Andrea Benin, MD
- David Hunt, PhD
- Marsha Smith, MD, MPH, FAAP

Screen Share Environmental Scan

Environmental Scan

Review and Discussion of Diagnostic Process and Outcomes Domain

Diagnostic Process and Outcomes Domain

The Diagnostic Process domain addresses the actions and processes that are carried out by the healthcare providers and/or teams to develop, refine, and confirm a diagnosis, or to explain the patient's health problem.

- Subdomains:
  - Information Gathering and Documentation: Includes the collection and documentation of diagnostic-related information
  - Information Integration: Includes the use of consultants, hand-offs, and care transitions between providers (e.g., provider-provider, provider-system communication)
  - Information Interpretation: Includes the use of decision support and best practices, cognitive processing, and machine computation
  - Diagnostic Efficiency: Includes timeliness, efficiency, and appropriate use of diagnostic resources and tests
  - Diagnostic Accuracy: Includes diagnostic errors, delay in diagnoses, and missed diagnoses
  - Follow-up: Includes appropriate and timely follow-up of labs, radiology, consultation notes, and other diagnostic findings

Use Cases –
Diagnostic Errors Brainstorm

Selection Criteria for Use Cases

- High-impact or prevalent
- Attributable to a known entity
- Acknowledged performance gap with possible remediation

Proposal for an Overall Goal and Approach

- In four use cases, try to get as much "court coverage" as possible
- Seek broad representation along multiple dimensions…
  - **Patient Demographics** (age, sex, race)
  - **Disease Groups** (vascular events, infections, cancers, other)
  - **Clinical Settings** (inpatient, ED, primary care [adult, pediatrics], specialty care)
  - **Encounter Types** (critical illness, symptoms, visual dx, complex "odyssey")
  - **Adverse Events** (prolonged suffering vs. disability vs. death)
  - **Error Contributors** (clinical factors, cognitive factors, systems factors)
  - **Possible Solutions** (patients & teams, training, health IT/EHR, feedback)
- Pick scenarios that are clinically sensible, relevant to public health, and have at least some evidence to support measures and solutions

‘Big 3’
~75% of Serious Harms

‘Top 15’
~50% of Serious Harms

~50% Disability & ~50% Death

ISCHEMIC STROKE

VASCULAR
Stroke
Venous Thromboembolism
Arterial Thromboembolism
Myocardial Infarction
Aortic Aneurysm & Dissection

BACTERIAL SEPSIS

INFECTION
Sepsis
Pneumonia
Meningitis & Encephalitis
Endocarditis
Spinal Abscess

LUNG CANCER

CANCER
Lung Cancer
Colorectal Cancer
Breast Cancer
Melanoma
Prostate Cancer

Newman-Toker, et al. *Diagnosis (Berl.)* 2019

One Possible Starting Point to Develop Cases

- #1 – inpatient, infection, critical illness
  - Draw out issues related to cognitive overload, teamwork, data visualization tools integrated into EHR, and 'big data' / machine learning algorithms for earlier diagnosis
- #2 – ED, vascular event, monosymptomatic
  - Draw out issues related to case atypia, cognitive bias, bedside diagnostic expertise, training, symptom-based checklists/protocols, and symptom-oriented diagnostic decision support
- #3 – primary care, cancer, polysymptomatic
  - Draw out issues related to visual diagnosis, incidental findings, communication of test results, closing the loop, and EHR trigger tool surveillance of lab/radiographic findings
- #4 – (primary &) specialty care, rare disease, diagnostic "odyssey"
  - Draw out issues related to listening to patients (demographic biases – e.g., women dismissed as "hysterical"), shared decisions, uncertainty, specialty referral processes/2nd opinions

A Suggested Process

- NQF staff provide “template” for case construction
- One leader assigned to work offline via email/phone with a group of 2-4 other individuals interested in a particular case development
- Leaders (or designees) present findings at subsequent meetings for group discussion and integration of messaging/concepts across cases

[Screenshare Preliminary List of Diagnostic Errors]

[Screenshare Signups for Groups]

Use Cases – Outline and Content

Proposed Outline of Use Cases

- Identification of principal causes and consequences
  - *Categorized according to Process and Outcomes domain*
  - *Includes narrative or real-world examples*
- Proposed pathways to resolve the error
  - *Specific policy changes, updates to practice*
  - *Includes narrative or real-world examples of the application*
- Estimate of impact on other aspects of patient safety, possible unintended consequences
- Setting, system, and population-specific considerations
- At least one specifically concerned with Diagnostic Accuracy Subdomain — all derived from Process and Outcomes Domain

Next Steps

Next Steps for Reducing Diagnostic Error

Meeting	Date
Web Meeting 3: Identify and Obtain Input on High Priority Use Cases 1&2	December 11, 2019
Web Meeting 4: Prioritize Measure and Identification of Measure Gaps	January 15, 2020
Web Meeting 5: Finalize Measure Recommendations and Gaps	March 12, 2020
Web Meeting 6: Review and update Use Cases (Use Cases 3&4)	May 13, 2020
Web Meeting 7: Continue Updates to Use Cases	June 30, 2020
Web Meeting 8: Final Review of Report, Public Comments	September 1, 2020
Final Report	October 7, 2020

Project Contact Information

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- Project page: http://www.qualityforum.org/
- SharePoint: http://share.qualityforum.org/Projects/

Questions?

Thank you.