NATIONAL QUALITY FORUM

Driving measurable health improvements together

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

Committee Web Meeting 3

December 11, 2019

Agenda

- Welcome and Review of Meeting Objectives
- Overview of Use Case Approach
- Reaction and Discussion of Use Case 1 and 2
- Opportunity for Public Comment
- Timeline and Next Steps

Welcome and Introductions

NQF Project Staff

- Jean-Luc Tilly, MPA, Senior Project Manager
- Carolee Lantigua, MPA, Project Analyst
- Jesse Pines, MD, Consultant

Committee Roster

- David Andrews
- David Newman-Toker, MD, PhD
- 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
- Prashant Mahajan MD, MPH, MBA
- Kathy McDonald, MM, PhD
- Lavinia Middleton, MD
- 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, MD
- Marsha Smith, MD, MPH, FAAP

Overview of Use Case Approach

High-Risk-for-Error Use Cases

- **Use Case 1: Cognitive Error** – atypical clinical presentations of dangerous diseases
- **Use Case 2: Communication Failure** – failure to "close the loop" on diagnostic test results
- **Use Case 3:** – information overload in complex, critically ill patients
- **Use Case 4** – prolonged diagnostic odyssey for chronic symptoms
- **Use Case 5** – delayed screening for early manifestations of disease

Approach

1. **Case Exemplars:** Brainstorming specific clinical case exemplars to thread through the rest of the questions
2. **Diagnostic Challenge/Causal Factors:** Identify at large the clinical context for the specific error occurring, and causal factors that contribute to the error
3. **Solutions:** Identify solutions to prevent and/or limit the incidence of the specific error
4. **Quality Measurement:** Identify opportunities for performance measures

Use Case 1: Cognitive Error

Missed diagnosis when dangerous diseases present with atypical symptoms

Question 1: Case Exemplars

- Identify a handful of specific clinical case exemplars that the group can use to "test run" ideas when working on the subsequent questions.
- Possible ideas:
  - *Acute stroke due to vertebral artery dissection in a young adult presenting vertigo/dizziness, misdiagnosed as peripheral (inner ear) disease*
  - *Early sepsis secondary to cellulitis, presenting with nausea and vomiting in a previously healthy child, misdiagnosed as gastroenteritis*
  - *Aortic dissection presenting in a "walk-in" patient with anterior chest pain but without pulse deficit or widened mediastinum, misdiagnosed as acute coronary syndrome*

Question 2: Diagnostic Challenge/Causal Factors

- How do the specific diagnostic challenges posed by these cases/scenarios inform our understanding of common causes of cognitive error as related to this specific use case?
- How do these different types or causes of cognitive error in diagnosis inform how we would develop countermeasures or solutions?
- Examples:
  - *"Evidence overload" from an exponentially expanding base of medical knowledge makes it impossible to keep up, creating ever widening evidence-practice gaps.*
  - *Patient factors may result in unconscious bias based on race or gender or affective bias based on patient behavior or communication style.*

Question 3: Solutions

- Identify promising solutions to limit the incidence or impact of cognitive error:
  - *What are the most promising general strategies that could help overcome cognitive error?*
  - *What are the most promising specific solutions within those strategies to help overcome cognitive error?*
- Examples:
  - *Increase expertise of current providers*
  - *Support decision making of current providers*
  - *Enhance teamwork with other providers and patients in diagnosis*

Question 4: Quality Measurement

- What kind of diagnostic performance measures might be useful in assessing the incidence of process failures, diagnostic errors, and misdiagnosis-related harms for some of the specific clinical scenarios identified within this use case?
- Are some measures more promising than others to be operationally feasible in current practice for the purposes of ongoing monitoring or to determine the impact of interventions/solutions to help prevent harms from cognitive errors from occurring?

Use Case 2: Communication Failure

Failure to "close the loop" on diagnostic test results for important conditions

Question 1: Case Exemplars

- Identify a handful of specific clinical case exemplars that the group can use to "test run" ideas when working on the subsequent questions.

- Possible ideas:
  - *Overread of an ED "wet read" demonstrates pulmonary nodule, which goes unrecognized, and later develops into lung cancer (delayed diagnosis of cancer)*
  - *Blood test result – positive blood culture(s) are communicated back to the ED on a discharged patient and not communicated to the patient (delayed diagnosis of sepsis)*

Question 2: Diagnostic Challenge/Causal Factors

- How do the specific diagnostic challenges posed by these cases/scenarios inform our understanding of common causes of communication failure as related to this specific use case?
- How do these different types or cause of failed communication inform how we would develop countermeasures or solutions?
- Examples
  - *Incomplete handoffs and information loss during (frequent) transitions of care.*
  - *Incidental findings which are unrelated to presenting problems that represent the focus of care.*
  - *Information that changes or evolves from initial to final interpretation and is not re-checked.*
  - *Diffusion of responsibility and lack of clarity who is responsible for patient or tests.*
  - *Problems of interoperability or information sharing between health systems.*

Question 3: Solutions

- Identify promising solutions to limit the incidence of communication failure:
  - *What are the most promising general strategies that could help overcome communication failure?*
  - *What are the most promising specific solutions within those strategies to help overcome communication failure?*
- Examples:
  - *Enhance diagnostic handoffs and transitions of care*
  - *Create closed-loop communication processes for test results*
  - *Eliminate secondary distractions and competing priorities*

Question 4: Quality Measurement

- What kind of diagnostic performance measures might be useful in assessing the incidence of process failures, diagnostic errors, and misdiagnosis-related harms for some of the specific clinical scenarios identified within this use case?
- Are some measures more promising than others to be operationally feasible in current practice for the purposes of ongoing monitoring or to determine the impact of interventions/solutions to help prevent harms from communication failures from occurring?

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: Continued updates to Use Cases 1 and 2	January 14, 2020*
Web Meeting 5: Identify and obtain input on high priority Use Cases 3 and 4	March 12, 2020
Web Meeting 6: Continued updates to Use Cases #3 and #4	May 19, 2020*
Web Meeting 7: Finalize cross-cutting recommendations for measurement to reduce diagnostic error, improve patient safety	June 30, 2020
Web Meeting 8: Final Review of Report, Public Comments	September 1, 2020
Final Report	October 7, 2020

** Depicts a change in date from originally scheduled web meeting*

Project Contact Information

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Questions

Thank You!