NATIONAL QUALITY FORUM
Driving measurable health improvements together

Meeting Summary

Improving Diagnostic Quality and Safety/Reducing Diagnostic Error: Measurement Considerations Project: Committee Web Meeting 3

The National Quality Forum (NQF) convened a web meeting for the Improving Diagnostic Quality and Safety/Reducing Diagnostic Error: Measurement Considerations Project on December 11, 2019.

Welcome and Review of Meeting Objectives

Jean-Luc Tilly, NQF Senior Project Manager, opened the call and welcomed participants. NQF staff introduced themselves and reviewed the purpose and objectives for the Committee web meeting. Carolee Lantigua, NQF Project Analyst, called roll to determine which Committee members were present. Jesse Pines, NQF Project Consultant, reviewed the meeting approach, including:

- Identifying use case 1 as "Cognitive Error," atypical clinical presentations of dangerous diseases, and use case 2 as "Communication Failure," failure to close the loop on diagnostic test results
- Describing the steps the Committee would take to deliberate on the parameters of the use cases, including:
    - **Case exemplars:** Brainstorm specific clinical case exemplars to thread through the use cases
    - **Diagnostic challenge/causal factors:** Identify at large the clinical context for the specific error occurring, and causal factors that contribute to the error
    - **Solutions:** Identify solutions to prevent and/or limit the incidence of the specific error
    - **Quality measurement:** Identify opportunities for performance measures

Committee Discussion

The Committee proceeded with a discussion of the Cognitive Error use case.

The cases presented included several acute care cases where patients present with atypical presentations of severe diseases. The Committee thought these cases were important but wanted to expand the scope beyond emergency medicine to include other settings. Several additional case exemplars were suggested, including indolent presentations in primary care or other clinic settings. Other examples included lung or pancreatic cancer (e.g., nonspecific abdominal pain or shortness of breath), as well as postpartum pregnancy-associated breast cancer, where a "distracting alternative diagnosis" would be postpartum cellulitis. Another example was the misdiagnosis of rheumatoid arthritis compared to osteoarthritis.

In terms of diagnostic challenges, the Committee identified broad categories: (1) diagnostic challenges where the clinician was not aware of the diagnosis, and (2) specific symptom patterns that lead to a known diagnosis. These were described as relatively easier to solve than diagnostic challenges where the clinician was aware of the possible diagnosis and the fact patterns to support it, where cognitive bias led them to an incorrect conclusion (i.e., confirmation bias or anchoring). In addition, errors may occur where the information is present, but clinicians may not have detected it because they did not perform a complete examination or review medical records completely.

Several solutions were proposed to the Committee including diagnostic decision support, feedback systems, symptom-based checklists, developing metacognition skills and simulation training. In addition, expanding access to consultant expertise in real time was also seen as potentially beneficial. The Committee felt that all of these were potentially useful solutions. In addition, several other solutions were identified as possibilities. In particular, the Committee emphasized the integration of the patient's voice into the diagnostic process, including formally documenting both the patient's words and perspectives in the medical record (i.e., co-creation). The Committee also indicated that improving access to and accessibility of medical records to patients was paramount in ensuring record accuracy to reduce the risk of incorrect diagnoses being propagated and leading to downstream errors.

The Committee also identified opportunities for quality measures to help reduce the incidence of diagnostic errors and improve patient safety. The Committee noted that new measures of outcomes would capture the results of quality improvements in late and missed diagnoses. For example, measuring the rate of diagnosis of severe conditions (e.g., stroke) and looking back to assess whether there were visits for nonspecific symptoms (e.g., dizziness), which may represent a missed diagnosis. However, concerns were raised with respect to incentivizing high rates of utilization of radiology which may lead to overuse. The Committee noted the importance of counterbalancing measures of overuse, such as radiology utilization rates, for particular conditions.

The Committee next discussed the Communication Failure use case.

Some possible case exemplars were suggested, including delayed diagnoses of sepsis and cancer. Diagnostic challenges underpinning these case exemplars included poor documentation, inclusive of both incomplete or missing information; overdocumentation, including possible incidental findings; the communication of uncertainties, including both information that is not yet definitive and is expected to evolve over time; and problems of interoperability between systems that may lead to missing information.

The Committee also discussed solutions to mitigate communication failures and reduce their incidence. Broadly, the Committee agreed that in order to reduce the risk of these errors, appropriate and usable systems need to be put in place to identify and remediate errors. However, concerns were raised over whether systems put undue burdens on clinicians and lead to alarm fatigue. In addition, resonating with the earlier discussion from the Cognitive Error use case, the Committee noted the importance of involving patients in information handoffs, and in their care more broadly. The Committee also highlighted the importance of improving the processes around diagnostic handoffs and transitions of care between settings, and the role of interoperable medical records to ensure a complete medical record follows the patient and is available to clinicians.

Finally, the Committee discussed options for introducing new quality measures to address communication failure. In some cases, these measures closely resembled quality measures suggested in use case 1, such as outcome measures capturing the proportion of late-stage diagnoses, suggesting a possible cross-cutting theme. The quality measure suggestions were novel—for instance, the time to the next medical order after the delivery of an abnormal result.

Towards the end of the web meeting, multiple Committee members expressed gratitude and excitement about the project and discussion, pointing out that the exemplars and solutions would help guide the field in a better direction. The co-chairs also indicated their satisfaction on the strategic direction of the project.

Next Steps

Carolee Lantigua presented next steps. NQF will host the fourth web meeting on January 14, 2019. The fourth web meeting will involve review and evaluation of the first two use cases.