NATIONAL QUALITY FORUM
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Meeting Summary

Attribution for Critical Illness and Injury - Web Meeting 6

The National Quality Forum (NQF) convened a web meeting for the Attribution for Critical Illness and Injury Committee on July 28, 2021.

Welcome, Introductions, and Review of Web Meeting Objectives

Dr. Nicolette Mehas, NQF Senior Director, welcomed the participants to the sixth and final web meeting. Dr. Mehas provided a project update, reviewed the meeting agenda, and informed the Committee that the goal of the meeting is to review and discuss the public comments to inform any updates on the final report. Co-chairs Dr. Brendan Carr and Ms. Carol Raphael thanked the Committee members for their work on the project and reassured the Committee members that the final report is not the last step in the journey, as there is still much work to be done on attribution and quality measurement for large-scale emergencies.

Ms. Udara Perera, NQF Senior Manager, introduced the project staff and facilitated roll call of the Committee members and Federal Liaisons, invited the Centers for Medicare & Medicaid Services (CMS) representatives to introduce themselves, and introduced the web meeting objectives:

- Review of Web Meeting 5;
- Review and Discuss Public Comments on the Draft Report; and
- Discuss Updates to the Final Report.

Web Meeting 5 Recap and Project Update

Ms. Teresa Brown, NQF Senior Manager, provided a brief overview of project updates and gave a recap of the previous web meeting. During Web Meeting 5, the Committee members were split into breakout rooms to discuss the use case scenarios. These discussions, along with findings from the key informant interviews, have been updated within the attribution methodology, population and geographic regions, team based and timing of attribution, data availability, aspirational approaches, and unintended consequences sections of the report.

Public Comment Discussion on the Final Report

Dr. Mehas presented the public comments received on the draft final report. During the public commenting period from, June 2 to July 8, NQF received 13 comments from 4 organizations. Comments were elicited through the public commenting tool and additional organizational and external outreach. NQF conducted extensive outreach to experts and other organizations within the field using the networks of the co-chairs, Committee member networks, NQF distribution list, and key informant interviewees. NQF categorized the comments received into six themes:

- Sharing of applicable resources
- Support for the importance of this attribution work

- Concerns of measuring performance in Mass Casualty Incidents (MCIs), Public Health Emergencies (PHEs), or Emergency Care Sensitive Conditions (ECSCs) as part of accountability programs
- Measurement should align with improvement goals of programs and encourage baseline emergency preparedness levels
- Data concerns due to small numbers, rarity of events, and patient privacy
- Support for interoperability across systems.

Comments were shared with the Committee and discussed as organized below by prompt.

General Comments

A commenter agreed with the goal of ensuring that there is a robust system in place for preparedness and response to emergencies. However, the commenter raised concerns about measurement for large-scale emergencies as part of accountability programs. The commenter agreed patients seeking care for such events deserve the highest quality care; however, they suggested that quality measurement and its underlying attribution models may be best suited for improvement and ensuring baseline readiness rather than comparing performance in extenuating circumstances.

Dr. Mehas asked Committee members to provide feedback on how these measures could be used as part of accountability or value-based models. A co-chair stated that most of the previous discussion has been geared towards the future goals of data sources and outcome metrics with less time being spent on the foundational work to get a high-quality result, such as structural and process measures. The Committee agreed that progress within preparedness and emergency response should prioritize the foundational structure and process measures in the near future. Another Committee member acknowledged that COVID-19 impacted staffing and operations, which may influence measurement and results. However, the Committee focused on using process and structure measures to build the foundation of collaborative response in advance of emergencies and help anticipate similar potential issues going forward.

How could a performance measurement attribution model support health equity and avoid worsening health disparities during large-scale and every day, critical emergencies?

A commenter stated that disparate allocation of resources across the system and inaccurate measurement in MCIs, PHEs, or ECSCs could risk penalizing facilities and clinicians serving patients with socioeconomic challenges or patients living in rural or urban areas that may have access challenges. They noted that population-level events call for population-level measurement, not individual provider accountability for aspects of care that may be outside their locus of control. The commenter also noted that there may be some frequency and structural measures that could be collected and reviewed for quality improvement purposes.

A Committee member stated that this comment is consistent with the prior comment and reiterated the important of using process and structure measures related to healthcare system readiness. The Committee member also stated that the report should highlight the importance of aiming to reduce disparities through attribution approaches. Further Committee discussion included agreeing that inequality is a major issue across the country and entities. State trauma committees, burn centers, paramedics, and Emergency Medical Technicians (EMTs) can help to identify resources in different regions, and provide resources and education around certain events for disasters, as well as how to attribute or get resources in the event of rare disaster. Another Committee member stated that the

report should explicitly discuss the differences between incentives versus penalties, as incentives might be helpful when dealing with disparities.

Another commenter stated that for large scale emergencies reducing disparities may be supported by regional preparedness plans for the designated geographic unit, including transfer agreements and protocols when one hospital gets overwhelmed (e.g., smaller hospitals or those with less resources). The commenter shared references relating to the varying COVID-19 response in different hospitals and regions, as well as the importance and challenges related to defining a geographic region within population health. Dr. Mehas shared that the NQF team will reference the articles that the commenter suggested in the sections of the report where they are most relevant.

What data are needed to support the development of quality measure attribution models for MCIs, PHEs, or ECSCs? What are the sources for this data?

Two commenters shared helpful resources for defining regions and geographic boundaries. CMS staff stated that they are interested in better understanding the Committee's feedback on the upstream determinants crucial to quality during disasters. CMS is interested in knowing what data is currently available and how to link these data sources together. This information will aid in assisting care delivery for patients of all ages and insurance types.

What is the best way to define a geographic region for an attribution model for critical illness and injury?

A commenter stated that emergencies know no boundaries and geographies may need to be based on the context of the event. The commenter suggested using methods such as hospital referral regions that consider where individuals tend to seek care and noted challenges if an entire town, for example, was be shut down during an emergency. Another commenter stated that as it relates to geographic regions, the region should be empirically derived based on patterns of hospital utilization for trauma and critical illness.

Dr. Mehas stated that NQF and the Committee agreed that in the report, geographies should be data driven and should consider patterns of healthcare use, how systems function together, and the makeup of entities or providers in a specific region. A Committee member suggested that geographies in the report should consider federal definitions related to commuting areas, especially as it would apply to rural and remote areas.

Are there additional considerations for the goal of the attribution methodology beyond those outlined that should be considered?

A commenter agreed that the attribution model should align with improvement goals and the goals of performance measurement or the accountability program in which the measures would be used. They emphasized that a lesson learned from early models was the need to prospectively know for which individuals the entity would be responsible. However, due to the variable manifestations of emergencies, they suggested it would be very challenging to forecast which individuals would seek care at a certain hospital and for what services. The commenter suggested that small numbers and rarity of events are likely to impact the accuracy of performance measures.

Dr. Mehas stated that the Committee members addressed this during previous meetings and agreed that using process and structure types of measures at the geographic level is appropriate, rather than outcome measures due to potential measurement issues. A Committee member stated that their

interpretation of the comment was a question of timing. The Committee member further stated that the commenter may not be ready to sign on to a specific attribution model without further research or data.

What are the additional factors related to the timing of attribution when considering an MCI, PHE, or ECSC?

A commenter agreed with the importance of using prospective attribution approaches and the importance of clinicians understanding for which patients they are responsible. However, they did note some concerns about the lack of clarity on who would have access to patients' data if outcomes after emergencies are tracked. The commenter also inquired how the data would be tracked and what protocols exist around data sensitivity and emphasized the need to protect personal health information that could be identifiable.

Dr. Mehas shared that the report includes a section about the need for maintaining patient privacy in any models that are used or as data is shared across entities. Committee members stated that health information should be kept private when dealing with mass casualty events such as COVID-19. A co-chair suggested adding more examples and clarifying language in the report to further support the findings.

Are there additional measures or measure concepts that should be used for accountability for MCIs, PHEs, or ECSCs (either in general or applicable to one or more of the use cases)?

A commenter stated that these circumstances are rapidly changing, emerging threats and there is not time to develop complex outcome measures as this would require testing and validation. However, there are structural measures that could be used to provide closer to real time information to help inform care. The Committee noted that this is an emerging theme from the comments and aligned with their discussion.

Which entity/entities are best suited to develop or manage an interoperable infrastructure for MCI, PHE, and ECSC data?

A commenter emphasized the importance of interoperability and developing the technical standards required for interoperability as well as the infrastructure for data sharing. This connection must exist across the healthcare industry and public health system and not just between specific parties. The commenter did caution that the infrastructure should protect patient privacy as well as minimize additional administrative costs. A Committee member agreed that electronic medical records should have more interface and should be able to pass on the information.

Final Discussion of Report Content

Ms. Perera presented this portion of the meeting. The discussion questions focused on several sections of the report in which NQF was interested in additional feedback from the Committee. The project team will use this feedback to further refine the sections of the report as needed.

Entities, Responsibilities, Measures

Ms. Perera presented a table (below) that is within the attribution methodology goal section of the report. The table outlines the different entities that are involved in a large-scale emergency as well as their responsibilities and the potential quality measures for each applicable entity. Ms. Perera posed the following question: should examples of structural measures be added to the table (e.g., trainings, exercises)? If so, which ones?

Entity	Goals of Response	Examples of Process Measures	Examples of Outcome Measures
EMS Agencies	First response - timing, safety, access to patients, and deploying correct equipment at scene	Triage to appropriate centers (burn, trauma, hyperbaric oxygen [HBO]), timely transfer	Mortality (risk-adjusted), patient experience, and functional outcomes
Municipal Police & Fire	First response - timing, safety, access to patients, and deploying correct equipment at scene	Triage to appropriate centers (burn, trauma, HBO), and timely transfer	Mortality (risk-adjusted), patient experience, and functional outcomes
Hospitals	Initial resuscitation, scaling up to treat lower acuity, long-term management (lower acuity), and appropriate triage to specialized center, comprehensive surge management	Quality of resuscitation, process metrics of ED / hospital flow, quality of long-term management, and smooth transitions to local clinics, appropriate transfer to specialized facilities, and coordination with other entities	Mortality (risk-adjusted), patient experience, and functional outcomes
Specialized Facilities	Initial resuscitation, scaling up to treat lower acuity, long-term management of critically ill, and less critically ill referrals	Quality of resuscitation, process metrics of ED / hospital flow, quality of long-term management, and smooth transitions to local clinics and acceptance of transfers	Mortality (risk-adjusted), patient experience, and functional outcomes
Local Clinics	Deliver longitudinal subacute / chronic care during emergencies and long-term	Quality of long-term management and transitions in care, facilitate communications across entities, and community response (testing and vaccine outreach)	Patient experience, outcomes proximal to clinic care
Government Response	Coordinated response and outside of response (preparedness, mitigation, and recovery)	Information sharing, quality of communication, quality metrics aimed at preparedness, mitigation, and recovery	Mortality (risk-adjusted), patient experience, and functional outcomes

A Committee member stated that structure measures should be added. The Committee member also pointed out that structural measures are essential when dealing with preparedness and/or a mass casualty event. Another Committee member stated that a few of the process measure examples resemble structural issues. Further Committee discussion included stating that structural measures are outcomes of processes to a certain extent.

Dr. Mehas asked the following question: Should military specifically be called out as an entity outside of government? Committee members stated that the military should be included as a separate entity based on the way they respond to emergencies.

Health Disparities and Equity

The report currently includes several points about disparities, including the importance of tracking and analyzing differences in outcomes to identify opportunities to improve care and address disparities. The report also includes that an attribution model may incentivize entities to devote resources and attention to certain care processes and patient populations at the expense of others; unintended consequences should be considered at the start of attribution model development. Ms. Perera asked the Committee to provide guidance on how attribution models for MCIs and PHEs should consider health disparities and promote equity? Committee members suggested explicitly incentivizing hospitals that decrease disparities between different populations. This approach would provide data on marginalized populations within a specific geographic region and help identify whether they are being affected differently. Committee members also stated that structural incentives should include data collection that is necessary to identify disparities so that they can be rectified.

Timing and Data Capture

Dr. Mehas informed the Committee of NQF's intent to make a stronger linkage between the timing and the data sections of the report. Potential data and timing considerations include 1. Retrospective Data to Support Attribution, 2. Data to Inform Real-Time Care, 3. Prospective Approaches, and 4. Hybrid Approaches. Dr. Mehas posed the following questions for Committee feedback:

- Who should be responsible for funding and developing the data infrastructure? Should there be a minimum requirement for collecting data without requesting providers to share cost/payment data?
    - Leadership for coordinating and developing such data systems should be public health and federal regulatory agencies with support from private sector payers and medical specialty societies.
- If data collection is interrupted (e.g., electricity or internet outage), how should data be collected and transferred to a central system to generate quality metrics?
    - Committee members did not have a specific recommendation for how data should be collected during a system interruption but recognized this may occur during disasters and may need to be accounted for.
- How can data systems parse data in ways not connected to direct payment (e.g., advanced practice providers may be the provider of care to order tests and direct care activities, yet currently most systems require a physician to be "attributed".)
    - No committee feedback was provided.
- When and where does the timing of attribution start and stop? (e.g., does it start at the 911 call and end at hospital discharge once or at the last phase in the continuum of care such as home health or rehab?

- Committee members suggested that attribution may begin prior to the 9-1-1 call and ends once a patient has completed rehabilitation. Considering the entire continuum of care is important and may allow for the assessment of preparedness to further develop.

The questions above are key in the future work of Attribution for Critical Illness and Injury. Due to the novel nature of this topic area, the questions are complex and difficult to answer but need to be further researched and explored.

Future Opportunities Discussion

NQF staff prompted discussion on how the attribution approach findings and measures and measure concepts recommended from the Final Report can advance and be used in the field. The Committee discussed the need for further research and investments that allow structural and process measures to be implemented and assessed prior to mass casualty events.

Public Comment

Dr. Mehas opened the web meeting to allow for public, NQF Member, and Federal Liaison comment. No comments were offered.

Next Steps

Ms. Perera shared that NQF staff will incorporate comments into the Final Report and make revisions per Committee discussion. NQF will share and request Committee feedback on graphics for the Final Report. The Final Report will be published on September 1, 2021.

Adjourn

Dr. Mehas concluded the meeting by thanking the Committee members, Federal Liaisons, CMS partners, and NQF staff.