# NATIONAL QUALITY FORUM

**IN-PERSON MEETING FOR THE**
**REGIONALIZED EMERGENCY MEDICAL CARE SERVICES**
**STEERING COMMITTEE**

**May 23-24, 2011**

## DAY 1:

*REMCS Members Present:* Arthur Kellermann, MD (Co-Chair); Andrew Roszak, JD, MPA, EMT-P (Co-Chair); Brendan Carr, MD, MA, MS; Arthur Cooper, MD, MS; *:* John Fildes, MD; Kristi Anne Henderson, DNP, NP-BC; Howard Kirkwood, MS, JD, EMPT-P, EFO; John Kusske, MD; Thomas Loyacono, MPA, NREM T-P, CMO; Ronald Maier, MD; Ricardo Martinez, MD; Allen McCullough Ph.D., MS, MPA, MSN, APRN, ENP/FNP-BC, NREMT-P, CCEMT-P, CEM; Nick Nudell, BS, NREMT-P, CCEMT P; Jesse M. Pines, MD, MBA, MSCE; Kathy Rinnert, MD, MPH; Michael Sayre, MD; Gary Wingrove; Joseph Wright, MD, MPH; Richard Zane, MD

*NQF Staff Present:* Eric Colchamiro, MPA; Lauren Richie, MA; Sally E. Turbyville, MA, MS; Helen Burstin, MPH, MD
*HHS Staff Present*: Tabinda Burney; Andrew Garrett, MD, MPH; Cynthia Hansen, PhD; Gregg Margolis, PhD, NREMT-P; Michael Rapp, MD, JD, FACEP; Tina Turgel, RN*UNC Staff Present*: Charles Cairns, MD; Jeff Williams, MD

## WELCOME, INTRODUCTIONS, AND DISCLOSURE OF INTERESTS

Following a welcome from the co-chairs, Dr. Burstin addressed the Committee. She welcomed the group and introduced the concept and goals of a framework report.

Dr. Burstin noted that the framework is one of the types of efforts that the National Quality Forum (NQF) endorses; it is most often done when NQF embarks on a completely new area of measurement, and tries to identify a range of domains and measurement gaps it can populate with measures. NQF also endorses frameworks that identify measure gaps, which may have principles for addressing quality at different standards of care. Ms. Turbyville then introduced and led the Disclosure of Interests for the Steering Committee members.[1]

## REGIONALIZED EMERGENCY MEDICAL CARE SERVICES (REMCS): PROJECT REVIEW AND EXPECTATIONS FOR THE WORK

[1] Mr. Roszak – no disclosures; Dr. Kellermann – contracts with the Agency for Healthcare Research and Quality (AHRQ) and the Department of Health and Human Services-Assistant Secretary for Preparedness Response (HHS-ASPR), previous work with the Centers for Disease Control (CDC) and the National Institutes of Health (NIH), and co-patent holder for traumatic brain injury device; Dr. Maier – GLU grant looking at the genomic response to injury, and chair of the Trauma Center Association of America. Dr. Wright – serves on American Academy of Pediatrics Board of Emergency Medicine and funding from the National Highway Transportation Safety Administration; Dr. Carr – ran Society for Academic Emergency Medicine conference on Regionalized Emergency Medical Care, funded by AHRQ and other agencies; Dr. Fildes – grants from Department of Defense (DoD); Dr. Cooper – grants from New York State Governors Traffic Association, and work with the American Medical Association (AMA) Committee on Trauma; Mr. Kirkwood – consultant with Fitch and Associates in Kansas City; Mr. Wingrove – no disclosures; Dr. Martinez – President of the east division of the Schumacher Group; Dr. Zane – funding from DoD, AHRQ, and HHS; Ms. Henderson – funding from the U.S. Department of Agriculture (USDA); Ms. Rinnert – works with American College of Surgeons to develop trauma standards; Mr. Nudell – no disclosures; Mr. McCullough – chair of education for the American Heart Association; Dr. Kusske – no disclosures; Mr. Loyacono – Vice Chair of the Board of Directors of the National Registry of Emergency Medical Technicians (EMTs); Dr. Sayre – funding from MedTronic on cardiac arrest; Dr. Cairns – funding from CDC, Medtronic, the National Highway Transportation Safety Administration (NHTSA), and the State of North Carolina; Dr. Williams – no disclosures; Mr. Pines –advisory board member for TheDocClock, which measures ED waiting times

Mr. Colchamiro reviewed the Regionalized Emergency Medical Care Services (REMCS) project (and relevant external documents) with the Committee. The Committee's review and guidance on the framework report. He also discussed the steps of the Consensus Development Process that are applicable to this project; while there will be no measure endorsement in this effort, the goal is for the Committee to review and potentially endorse a measurement framework.

## EXPECTATIONS AND PROCESS FOR THE MEETING

Mr. Roszak reviewed the meeting's agenda, and the audience members introduced themselves.

Following these comments, a committee member asked about the charge for the Committee. Dr. Burstin said that the committee will not be getting to measures, but instead identifying needs at a higher level for future measure development.

## REMCS FRAMEWORK REPORT: ENVIRONMENTAL SCAN AND DRAFT REPORT

Dr. Cairns introduced the environmental scan, and explained the process that UNC followed in completing the scan, which serves as a resource for the Framework report.

The scan included a review of projects and measures and also identified measurement gaps. The scan considers a few key questions:

- What current standards, related to REMCS, exist in the field?
- At what level of development or implementation are these measures?
- What current projects exist in REMCS?
- Where do gaps exist in current measures?

The scan looked at measures that were time-sensitive and of high acuity, which addressed regionalization and a system approach, and life-threatening issues. The definition of REMCS was used to identify measures; this definition focuses on care that does not involve a system of both in and out of hospital components, or is universally available. While the scan did a fairly large review, it did not identify many measures.

The results included 11 domains (trauma, stroke, Acute Myocardial Infarction (AMI), cardiac arrest, critical care medicine, pediatric specialty care (including neonatal care), toxicology, VA networks, psychiatric care, data management, and disaster preparedness) of REMCS, which, after being filtered by the proposed definition of emergency care, were narrowed down to eight applicable domains of REMCS (VA networks, data management, and disaster preparedness were removed).

The Committee discussed the need for measures of care coordination, as it pertains to REMCS. As such, they agreed that the framework could help advance the development of measures to evaluate systems (and units of systems), an area which there are few measures.

The Committee was reminded that the Framework provides a pathway for measure development, but should not limit development efforts. The purpose of the Scan was to catalogue the current state of REMCS measurement; while the Framework is a springboard for the future development of measure concepts and measures.

The draft Framework Report was then introduced to the Committee for their consideration and comment. The Framework aims to identify where performance measures are needed in this evolving area of healthcare (REMCS), and serve as a catalyst for the future development of measures and measure concepts. Draft guiding principles and domains and subdomains for future measurement were introduced.

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The NQF episode of care model was also discussed. A generic episode model has three phases: an individual is at risk; an evaluation is made; and follow-up care is conducted to assess outcomes and the need for further intervention. This patient-centric model was applied, within the Framework, to REMCS. The model is often used to plan the care continuum within REMCS. For example, when a patient has symptoms of AMI, care process measures can be used to contribute to early identification.

The committee discussed that the Episodes of Care model, utilized for the Framework, is based on the patient's experiences as they move through the healthcare system. Some limitations of the episode of care mode include: it does not capture the appropriateness of care; the lack of focus on systems; and in turn, the strong focus on an individual patient.

A Committee member asked about the need for evaluating population-based sensitivities. There is a need for timeliness measures, and the framework report should address this. It was further discussed that the Episodes model is not limited to a particular place where the episode should begin; it can begin wherever the need for a regionalized system is recognized, whether that is in the community, Emergency Department (ED) or elsewhere.

Multiple committee members mentioned concerns about the Episodes model, with regard to pre-hospital care. These comments included:

- disproportionately prioritizing larger, regionalized centers of care;
- having cost in the measure framework;
- including decision-making standards about where a patient is taken;
- adding issues of access, and the impact of disasters on access;
- and incorporating tele-health, and systems that get information to the bedside of hospitals;

In response, it was noted that the infrastructure is addressed within the Framework, but access is an area that the Framework can highlight. As a whole, Dr. Cairns added, the Framework seeks to identify unifying themes for REMCS; and it may be difficult to identify measures of access, process, and structure. He referred to the last few pages of the Framework report, and NQF's criteria for evaluating measures.

Other Committee members then noted other important areas where there are measure gaps including:

- the Emergency Medical Treatment and Active Labor Act (EMTALA) laws;
- political and socio-economic barriers to implementation;
- the availability and fragmentation of data systems;
- patient transport;
- patient satisfaction surveys;

NQF staff agreed that while the barriers the Committee members identified may hinder short-term development, it is critical to include these barriers in the Framework and include discussions about measurement type or areas that, once barriers are overcome, could be effectively developed in the future.

The committee discussed the environmental scan approach and identified some missing measurement areas, including OPAL and the CDC Cares Registry. Some committee members also commented that there were more trauma measures out in the filed than identified, and wondered whether these measures were decades old and perhaps not been computerized. Based on the Scan's shortcomings, it was acknowledged that some critical areas may have been overlooked in the scan that should be discussed in

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the framework report itself. It was reiterated that the Scan is not meant to limit the framework and thus the input and request to expand the framework is timely.

A discussion about other missing concepts or domains in the framework commenced. Specifically, whether the designation of a hospital's capabilities, a facility's availability, the amount of diversions, and basic performance measures such as 911 time-to-intervention and living and dying could be incorporated, if not already potentially included. In addition, it was noted that systems have or should have these measurements of capability, capacity, and diversion. It was discussed that the episodes of care framework can encompass these issues, along with metrics of structure/process/outcomes/cost. The Committee agreed, and suggested that the framework consider measurement from a disease-specific perspective, to optimize care and outcomes.

The committee also spoke on the lack of measures identified in toxicology and behavioral health. Dr. Cairns acknowledged that, based on the scan, few measures have been developed in this area; important components include matching patients with need, addressing acuity, and developing important interventions.

NQF staff noted that is important for the committee to consider which measures could be cross-cutting (across the episode of care and domains), and which need to be in disease-specific areas; NQF often prioritizes cross-cutting measures, as it is not optimal to have measures that can only be applied to one particular area.

## REMCS DEFINITIONS AND DOMAINS

Mr. Roszak chaired this afternoon session, and Dr. Cairns, led the Committee through a review of relevant definitions:

| **Term** | **UNC Definition** | **Committee Comments** |
|---|---|---|
| Emergency Care | Healthcare that is provided in an emergency department, emergency medical services system, or acute care area of a hospital; refers to the treatment of life-threatening or high acuity conditions in an expedited fashion | Should incorporate the following:<br>**--** incorporate pre-hospital components and the bystander;<br>**--**mention of episodic nature of care;<br>**--**the notion of timeliness, and it how it applies to the patient perspective;<br>**--**a definition for acute care – a smaller percentage to be regionalized;<br>**--**resource consumption;<br>--a definition for emergency medical care services; and<br>**--** access and other areas can be incorporated into domains |
| Regionalization | An established network of resources that delivers specific care that is not universally available in the out-of-hospital setting; regionalized does not equal centralized care | The Committee did not provide any comments about this section |
| System | Coordinated chain of healthcare providers, including in hospital and out-of-hospital components, that delivers care to patient with specific, urgent medical or surgical needs. May serve a particular geographical area, patient population, or disease | --broaden beyond the provider and the population<br>--embed the concept of a population at risk<br>--the Committee is comfortable with regionalized and systems of care, but not regionalized systems of care – a term that may be overlapping in different ways. |

| | component | |
|---|---|---|
| **DOMAINS AND PHASE DISCUSSION** | | |
| Detection and Identification | Recognizing an event as it begins | --incorporate systems and readiness before this domain; i.e. capacity, capabilities, and access<br>-- incorporate time-sensitive conditions and people not arriving in an ambulance ("walk-ins") |
| Resource Utilization | Matching resources to patients, and evaluating usage | --Training of providers – workforce?<br>**--**need for real-time, ongoing monitoring of capacity<br>--regulatory issues and governing |
| Medical Care | Evaluating the medical care to a patient within an episode – was it timely and within accepted standards | -- incorporate prevention and readmissions |
| Coordination of Care | The connection between units of service | -- differentiate standards by zones of care |
| Outcomes | How to evaluate effectiveness of a system | -- need to measure an entire system – input/throughput/output – as outcomes are impacted by the entire spectrum of care; |

## GUIDING PRINCIPLES

(**Bold font** = UNC proposed principles; Normal font = Committee comments)

1. **Regionalization of emergency care is a method of matching resources to needs in a timely fashion with the goal of improving patient-oriented care outcomes. Regionalization does not equal "centralization" of care.**

- A Committee member noted the value of defining centralization, and incorporating disease-specific areas into this principle.

2. **The effective utilization of regionalization concepts cannot occur without addressing potential structural deficiencies in the emergency health care system, such as boarding and crowding in emergency departments, and ambulance diversion.**

- A Committee member suggested including the word monitoring and on-call (or access to appropriate consultation) into this principle. Other committee members encouraged the inclusion of Emergency Medical Services (EMS) staffing and workforce shortages, and that it could do more to include structural issues, such as boarding. Overall, it was suggested that the Framework incorporate many of these issues into a glossary of technical terms.

3. **Identifying and evaluating measures of whole systems of emergency care is difficult, due to the immature development of these systems. Future measurement of regionalized emergency medical care services should strive to effectively measure system components as well as the system as a whole.**

- A Committee member suggested replacing "immature", and referencing the complexity of systems. Another Committee member said that accountability and governance could be logically incorporated into this or the second definition. Other Committee members asked whether "population-based outcomes" could be in this (or in the first) principle.

4. **Measures used to judge the effectiveness of a system should include patient-oriented outcomes**

- A Committee member said that "process of care" could be included into the end of the definition. Another Committee member echoed this and said that evidenced-based conditions and accountability should be factored in.

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5. **System evaluation should promote shared accountability for the system's successes and failures across units of service within the system.**

- A committee member said that "units of service" should be in the glossary. Staff responded that this term was included to emphasize shared accountability, and that they would explain examples of this further.

6. **The development of regionalized emergency medical care services is an ongoing process, with continually changing structure and process elements. Valid system-level measures should detect and recognize improvement (or lack thereof) due to changes to a system's component parts and the communication and coordination between them.**

- A committee member said that they were challenged by the term "continually changing" – which they felt sounded too amorphous. Another committee member suggested changing the term "system," which limits the measures considered.

OTHER METRICS – CURRENTLY NOT INCLUDED

Committee members suggested addressing other issues in the principles such as:

- aspects taken from the Institute of Medicine (IOM) work such as "evidenced-based" and "timeliness";
- inclusion of references to geo-political and socio-economic boundaries; and
- systems that enable legislation that monitors and makes systems accountable – the need for leadership

## NQF MEMBER AND PUBLIC COMMENT – AND DAY 1 CONCLUSION

The meeting was opened for member and public comment, at the close of Day 1. No comments were received.

At the close of Day 1, NQF staff reminded the Committee members about the Day 2 Working Groups, and asked members to consider areas that have worked in REMCS measurement, and what could be improved. Further, they requested the committee consider why there are current measurement gaps, what needs to happen to fill these measurement gaps or improve the system of care; and what measures are in place now that are ready for prime-time or that should be recommended for adjustments to align with the framework principles and domains.

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