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Best Practices for Developing and Testing Risk Adjustment Models

Option Period Orientation Web Meeting

October 22, 2021

This project is funded by the Centers for Medicare and Medicaid Services under contract HHSM-500-2017-00060I – 75FCMC20F0001 - Best Practices for Developing and Testing Risk Adjustment Models.

Housekeeping Reminders

- This is a Webex meeting with audio and video capabilities:
 - ▣ **Meeting link:** <https://nqf.webex.com/nqf/j.php?MTID=m5709196f09452078349192d0daf588fe>
 - ▣ **Meeting number:** 2345 765 1659
 - ▣ **Password:** QMEvent
- Optional: 1-844-621-3956
- Please place yourself on mute when you are not speaking
- We encourage you to use the following features
 - ▣ Chat box: to message NQF staff or the group
 - ▣ Raise hand: to be called upon to speak
- We will conduct roll call once the meeting begins
- If you are experiencing technical issues, please contact the NQF project team at raguidance@qualityforum.org

Agenda

- Introductions
- Meeting Objectives
- Project Overview and Timeline
- Overview of Roles and Responsibilities
- NQF Member and Public Comment
- Next Steps

Welcome and Introductions

NQF Project Team

- Tricia Elliott, Senior Managing Director
- Matthew Pickering, PharmD, Senior Director
- Monika Harvey, MBA, PMP, Project Manager
- Hannah Ingber, MPH, Senior Analyst
- Tristan Wind, BS, ACHE-SA, Coordinator
- Taroon Amin, PhD, MPH, Consultant
- Sai Ma, PhD, MPA, Consultant

CMS Staff

- Sophia Chan, PhD, MPH, TO COR, DPMS
- Helen Dollar-Maples, RN, MSN, Acting Director, DPMS
- Nidhi Singh-Shah, MPH, Acting Deputy Director, DPMS
- Gequincia Polk, MPA, IDIQ COR, DPMS
- Marsha Smith, MD, Medical Officer, DPMS

Technical Expert Panel (TEP) Members

- **Philip Alberti, PhD** (Co-Chair)
- **Karen Joynt Maddox, MD, MPH** (Co-Chair)
- Arlene Ash, PhD
- John Martin, PhD, MPH
- Patrick Campbell, PhD, PharmD, RPH
- Shalini Prakash, MS
- Elizabeth Drye, MD, SM
- Sandra Richardson, MS
- Marc Elliott, PhD, MA
- David Shahian, MD
- Rachel Harrington, PhD
- Cristie Upshaw Travis, MSHHA
- Bellinda King-Kallimanis, PhD, MSc
- Janice Tufte
- Vincent Liu, MD, MS
- Katherine Vickery, MD, MSc.
- Danielle Lloyd, MPH

Federal Liaisons

- Andy Frankos-Rey, MA, CMCS/CMS
- Craig Caplan, PhD, HRSA
- David Nyweide, PhD, CMMI/CMS
- Joel Andress, PhD, CCSQ/CMS
- Lok Wong Samson, PhD, ASPE
- Maushami (Mia) DeSoto, PhD, AHRQ
- Rachael Zuckerman, PhD, ASPE
- Sarah Gaillot, PhD, CM/CMS
- Shafa Al-Showk, PhD, CM/CMS

Meeting Objectives

Meeting Objectives

- Introduce technical expert panel (TEP) members and discuss roles, responsibilities, and ground rules
- Review base period accomplishments
- Review and discuss the background, scope, and objectives of the option period
- Obtain TEP-input on the approach to the stakeholder engagement

Project Overview and Timeline

The National Quality Forum: A Unique Role

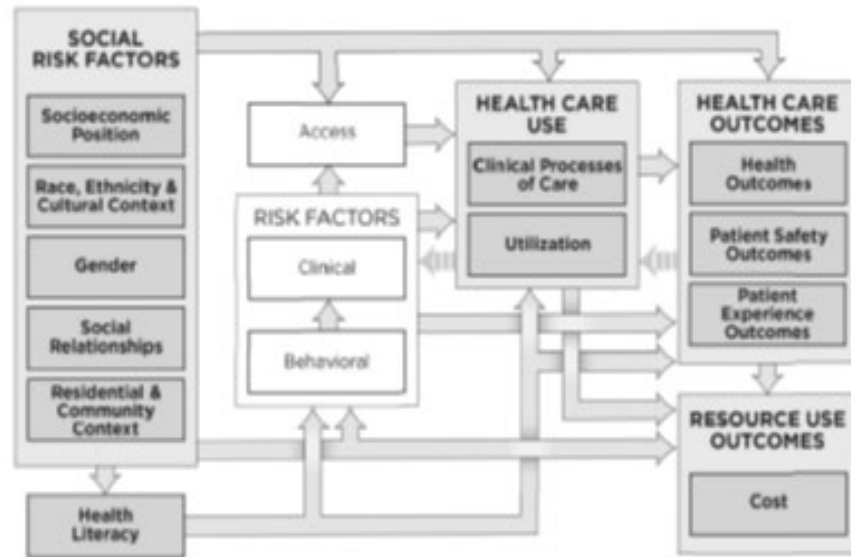
- Established in 1999, NQF is a nonprofit, nonpartisan, membership-based organization.
- NQF is serving as the consensus-based entity (CBE). NQF brings together public and private sector stakeholders to reach consensus on healthcare performance measurement. The goal is to make healthcare in the U.S. better, safer, and more affordable.
- **Mission:** To lead national collaboration to improve health and healthcare quality through measurement

NQF Activities in Multiple Measurement Areas

- **Performance Measure Endorsement**
 - ▣ 600+ NQF-endorsed measures across multiple clinical areas
 - ▣ 15 empaneled standing expert committees
- **Measure Applications Partnership (MAP)**
 - ▣ Advises HHS on selecting measures for 20+ federal programs
- **Measurement Science**
 - ▣ Convenes private and public sector leaders to reach consensus on complex issues in healthcare performance measurement

The importance and challenges of adjusting for social and functional risk factors

Figure 1. Health Care Access Conceptual Model



National Academies of Sciences, Engineering and Medicine 2016 report

- Fair and meaningful quality and resource measures are foundation for value-based care
- Social and functional risk factors can directly and indirectly affect outcomes
- However, *when and how* to adjust for social and functional factors in quality measurement remains inconsistent with limited consensus

Base Period Accomplishments

- Convened a multistakeholder TEP to provide expertise and guidance towards major project components.
- Conducted an [environmental scan](#) of data sources used for risk adjustment, functional or social risk factors available for testing, and approaches to conceptual and statistical methods for risk adjustment. The environmental scan informed aspects of the Technical Guidance.
- Developed [Technical Guidance](#) for measure developers that includes emerging best practices on when and how to adjust for functional and social risk factors in measure development.
 - The intent of this guidance is to further support NQF-endorsement considerations, in which there has been a perceived need for clarity in the evaluation of these risk models.
 - Furthermore, this work may have implications for the review and consideration of measures for use within public reporting and accountability applications.

Technical Guidance Overview

- Introduction
 - Background and Purpose
 - Core Principles
- Technical Guidance
 - Conceptualizing the Model
 - Identifying and Selecting Potential Data Sources and Variables
 - Empirically Testing Risk Factors
 - Empirically Testing the Adequacy of the Risk Model
 - Considerations for Determining the Final Risk Adjustment Model
- Conclusion
 - A Path Forward
- Appendices

Developing and Testing Risk Adjustment Models for Social and Functional Status-Related Risk Within Healthcare Performance Measurement

DRAFT TECHNICAL GUIDANCE – VERSION 4
August 30, 2021

This Technical Guidance document is funded by the
Centers for Medicare & Medicaid Services under
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- Conceptualizing the Model
- Identifying and Selecting Potential Data Sources and Variables
- Empirically Testing Risk Factors
- Empirically Testing the Adequacy of the Risk Model
- Considerations for Determining the Final Risk Adjustment Model

NQF Minimum Standards for Social and/or Functional Risk Adjustment

- 1** A conceptual model is required and should illustrate the pathway between the social and/or functional status-related risk factors, patient clinical factors, quality of care, and the measured healthcare outcome.
- 2** Developers should consider age, gender, race/ethnicity, urbanicity/rurality, Medicare and Medicaid dual-eligibility, indices of social vulnerability (such as the Area Deprivation Index, AHRQ SES Index score for the analysis) and markers of functional risk (such as frailty, ADLs, IADLs) in the conceptual model.
- 3** If social and/or functional status risk factors are not available, but included in the conceptual model, the developer should describe the potential bias that may exist and the direction and magnitude of that bias as a result of not including the risk factor(s) in the model. The developer should also provide a justification of why the measure still has validity even in this circumstance.
- 4** Document and fully disclose data sources, including the dates of data collection, any data cleaning and manipulation, and the data's assumed quality (Table 1). Developers can cite other research to show data quality of those variables. Developers should also provide a description of the populations covered within that dataset.
- 5** Developers should provide descriptive statistics on how the risk variables identified from the conceptual model are distributed across the measured entities.
- 6** Calibration should be conducted not just with the overall population, but also with the subpopulations. All risk models should be tested and vetted to examine to what extent do they under or over-predict in a substantial way for important subgroups with social or functional risk. If a risk factor is not included in the model, the developer should, at a minimum, provide evidence that its removal does not create a misprediction for that group or subgroup. Developers should be transparent about their approach and their interpretation of the results.
- 7** Risk stratification should be conducted in conjunction with risk adjustment to ensure that the risk-adjusted measure to identify healthcare disparities.

A Path Forward

- NQF will continue to seek to advance measurement science in this important area by engaging relevant stakeholders to garner feedback on the feasibility and utility of this guidance.
- This feedback will be instrumental in updating the guidance and subsequent NQF measure evaluation criteria and policies to reflect the ever-changing healthcare landscape.

Option Period Objectives

The TEP will be charged with steering the development of major project components, including:

- ▣ Leveraging the experience and expertise of TEP members to inform the broadened stakeholder engagement (i.e., focus groups) and its execution;
- ▣ Driving to consensus on updates to the Technical Guidance based on findings from the stakeholder engagement; and
- ▣ Outlining a potential path forward for areas where consensus can not be reached

Option Period Activities

- Conduct six (6) focus groups to be inclusive of individuals from medically underserved communities, as noted in the [White House Executive Order](#)
- Present and receive feedback at CMS-convened meetings
- Aggregate stakeholder feedback to inform updates to Technical Guidance
- Update the Technical Guidance based on findings from focus groups and CMS-funded meetings
- Garner public comments on the updated Technical Guidance

Focus Groups

- NQF will host six (6) focus groups to further inform consensus decisions regarding elements of the Technical Guidance
- The focus groups will include stakeholders such as:
 - ▣ Consumers/Patients
 - ▣ Payer and Purchasers
 - ▣ Providers
 - ▣ Measure Developers
 - ▣ NQF-convened groups
 - ▣ CMS senior leadership
- Focus groups will be asked to weigh in on:
 - ▣ The importance of the conceptual model
 - ▣ Tradeoffs when choosing social or functional risk factors for adjustment
 - ▣ Common pitfalls and choices made during empirical testing
 - ▣ The importance of calibration across subgroups
 - ▣ Utilizing stratification to measure disparities
 - ▣ Overall feedback on the utility of the Technical Guidance and clarity/feasibility of the minimum standards

Stakeholder Feedback Memo

- NQF will aggregate findings within a Stakeholder Feedback Memo that will document input on the Technical Guidance, along with suggestions for clarifications or updates to the Technical Guidance
- Information will be gathered from the focus groups and CMS-convened presentations
- The Stakeholder Feedback Memo will synthesize audience input on the Technical Guidance, identifying key themes and opportunities to make the Technical Guidance more useful to the quality measurement community
- The Stakeholder Feedback Memo will be included as an Appendix within the Technical Guidance

Updating the Technical Guidance

- NQF will incorporate the feedback and findings summarized in the Stakeholder Feedback Memo into an updated version of the Technical Guidance to ensure that it serves its intended purpose: as a detailed guide to measure developers and program implementers on how to consider functional and social risk adjustment for outcome and resource use measures
- The Technical Guidance will be revised to reflect TEP-input/recommendations, stakeholder feedback, CMS-convened stakeholder meetings, and public comments

Overview of Roles and Responsibilities

Roles and Responsibilities of the TEP

- Serve as experts working with NQF staff to achieve the goals of the project
- Review meeting materials in advance and engage in meeting discussions
- Provide timely and relevant feedback on project deliverables
- Respond to public comments submitted during the review period
- Steer the development of major project components by providing input and guidance on:
 - ▣ the current state of risk adjustment for social and functional status in measurement, including emerging best practices;
 - ▣ the preparation and methods to conduct focus groups;
 - ▣ the revisions to the Technical Guidance

Providing Input

- **How to provide input during the web meetings?**
 - ▣ Provide timely input on major deliverables during facilitated discussion sections of the TEP meetings, either verbally or by messaging the project team (via chat box)
- **How to provide input outside of the meetings?**
 - ▣ Submit additional input on major deliverables through the project inbox (RAguidance@qualityforum.org)

Roles of the Co-chairs

- Group leaders and facilitators of the TEP
- Assist in facilitating TEP meetings by driving the TEP to consensus on technical guidance and outlining potential path forward for areas where consensus cannot be reached
- Keep the TEP focused and on track to meet project goals without hindering critical discussion/input
- Assist NQF staff in identifying key issues for TEP discussion

Roles of the Federal Liaisons

- Attend and listen to TEP meetings
- Serve as a resource to supplement TEP discussions, providing input on important topics such as practical consideration of data needs, ongoing challenges that federal programs face, etc.
- Provide factual reviews and evaluations of project deliverables (i.e., accuracy of technical descriptions of how quality measures are used in particular programs)

Roles of the NQF Staff

- Work with the TEP to achieve project goals
- Serve as a neutral convener of multistakeholder representatives
- Work with the TEP to facilitate consensus development and to achieve project goals
- Organize meetings and conference calls
- Facilitate necessary communication and collaboration between different NQF projects and external stakeholders
- Respond to NQF member and public queries about the project
- Maintain documentation of project activities
- Draft and edit reports and project materials for public commenting
- Publish final project reports

Role of CMS

- Funder of this project under the Task Order 75FCMC20F0001 – Best Practices for Developing and Testing Risk Adjustment Models. The funding source is Social Security Act Section 1890(b)(7)(C)-(D).
- Provide input and feedback on project deliverables for completeness and accuracy
- Coordinate federal agencies' engagement
- Work with the NQF staff to forecast potential risks and create risk mitigation strategies
- CMS respects the independence of the NQF consensus development process and the TEP

Stakeholder Feedback Memo

NQF Member and Public Comment

Next Steps

Next Steps

- Web Meeting #2 (January 28, 2022)
 - ▣ Review and gain TEP input on stakeholder feedback (i.e., focus groups)
 - ▣ Begin discussion on Technical Guidance updates
- Web Meeting #3 (March 30, 2022)
 - ▣ Continue discussion on Technical Guidance updates
- Web Meeting #4 (May 6, 2022)
 - ▣ Obtain TEP input on Draft #1 of Technical Guidance updates
- Web Meeting #5 (August 2, 2022)
 - ▣ Discuss and adjudicate public comments on Technical Guidance updates
 - ▣ Finalize the Technical Guidance

Project Contact Info

- Email: RAGuidance@qualityforum.org
- NQF phone: 202-783-1300
- Project page:
 - [http://www.qualityforum.org/Risk Adjustment Guidance.aspx](http://www.qualityforum.org/Risk_Adjustment_Guidance.aspx)
- SharePoint site:
 - <https://share.qualityforum.org/portfolio/DevelopingandTestingRisk/SitePages/Home.aspx>

THANK YOU.

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