NATIONAL QUALITY FORUM
Driving measurable health improvements together

http://www.qualityforum.org

Best Practices for Developing and Testing Risk Adjustment Models

Web Meeting #3

April 2, 2021

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

Welcome

NATIONAL QUALITY FORUM

Welcome

- The RingCentral web platform will allow you to visually follow the presentation.
- Please mute your lines when you are not speaking to minimize background noise.
- You may submit questions to project staff via the RingCentral web platform chat function.

If you are experiencing technical issues, please contact the NQF project team at RAGuidance@qualityforum.org

NATIONAL QUALITY FORUM

Agenda

- Roll Call and Meeting Objectives
- Web Meeting #2 Recap
- Review & Discuss Public Comments on the Environmental Scan Report Version 2
- Review & Discuss Draft Technical Guidance Outline
- Standard Risk Adjustment Framework
- NQF Member and Public Comment
- Next Steps

Roll Call and Meeting Objectives

Project Team

NQF Staff
Sai Ma, PhD, MPA, Managing Director / Senior Technical Expert
Matthew Pickering, PharmD, Senior Director
Taroon Amin, PhD, MPH, Consultant
Monika Harvey, Project Manager
Janaki Panchal, MSPH, Manager
Hannah Ingber, MPH, Senior Analyst
Juanita Rogers, MS, CHES, Analyst

CMS Staff

CMS
Sophia Chan, PhD, MPH, TO COR, CCSQ, CMS
Maria Durham, MS, MBA, Director, Division of Program and Measurement Support (DPMS), CCSQ, CMS
Helen Dollar-Maples, RN, MSN, Deputy Director, DPMS, CCSQ, CMS
Patrick Wynne, Senior Analyst, IDIQ COR, CCSQ, CMS

NATIONAL QUALITY FORUM

Technical Expert Panel (TEP) Members

Co-Chairs	Philip Alberti, PhD
	Karen Joynt Maddox, MD, MPH

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	

NATIONAL QUALITY FORUM

Federal Liaisons

Federal Liaison	Affiliation
Andy Frankos-Rey, MA	CMCS/CMS
Craig Caplin, PhD	HRSA
David Nyweide, PhD	CMMI/CMS
Jesse Roach, MD	CCSQ/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

NATIONAL QUALITY FORUM

Meeting Objectives

- Review and discuss public comments on the Environmental Scan Report.
- Review and discuss Technical Guidance draft outline, including
  - introductory discussion on step-by-step processes and guidance,
  - recommended approaches to content, and
  - options for document structure.
- Discuss the appropriateness of a Standard Risk Adjustment Framework
  - use of the same set of risk factors for quality, cost and resource use measures?
  - use of standard risk adjustment methodologies?

Web Meeting #2 Recap

TEP Recommendations

Literature and Measure Reviews:

- Data aggregated and clustered too broadly; consider greater stratification and parsing of the data, especially as it relates to social risk factors
- Review if age was analyzed as a true social risk factor, a demographic factor or a clinical factor
- Replace zeros with dashes for easier reading
- Add a list of emerging data sources for inclusion in an appendix
- Revise the stepwise regression designation
- Further distinguish between the statistical analysis used (e.g., multivariate regression, hierarchical modeling) and the tests or approaches for assessing model fit and for testing correlations of social and/or functional status risk factors to the outcome
- Include a list of additional social and functional status-related factors (not identified from the reviews) in the appendix
- Additional references and/or measures

TEP Recommendations (cont'd)

Program Review:

- Include narrative descriptions for the figures
- For programs with varying approaches, describe and classify the approach
- Add another example from Michigan Medicaid plans

Review & Discuss Public Comments on the Environmental Scan Report

Key Themes from Public Comments

- During the public comment period from February 24 – March 17, 2021, NQF received comments from two stakeholders:
  - AHIP (America's Health Insurance Plans)
  - RELI Group Inc.
- Key themes identified
  - Emerging data sources
  - Risk factors by care setting and/or level of analysis
  - Principles
  - Conceptual model
  - Confounding of social and functional risk
  - State programs (Minnesota Integrated Health Partnerships)
  - Clarification edits

Review & Discuss Draft Technical Guidance Outline

NATIONAL QUALITY FORUM

Core Principles for Risk Adjustment

- Performance measurement is critical to the aims of the Quality Measurement Action Plan.
- Performance measurement and risk adjustment must be based on sound measurement science.
- Disparities in health and healthcare should be identified and reduced.
- Performance measurement should not lead to increased disparities in health and healthcare.
- Outcomes may be influenced by patient health status, clinical, and sociodemographic factors, in addition to the quality and effectiveness of healthcare services, treatments, and interventions.
- When used in accountability applications, performance measures that are influenced by factors other than the care received, particularly outcomes, need to be adjusted for relevant differences in patient case mix to avoid incorrect inferences about performance.
- Risk adjustment may be constrained by data limitations and data collection burden.
- Race/ethnicity variables incorporate elements of socioeconomic status (SES) and effects independent of SES such as direct effects of racism through neurohormonal stress pathways. In situations where only race and ethnicity are available, but SES variables are not, the inclusion of variables such as race/ethnicity as the best available – though imperfect – proxies for social risk factors like racism and SES.
- The methods, factors, and rationale for risk adjustment should be transparent.

NATIONAL QUALITY FORUM

Discussion of Technical Guidance Draft Outline

- Introductory discussion on step-by-step processes and guidance
- Recommended approaches to content
- Options for document structure

Current NQF Evaluation Guidance on Risk Adjustment for Social Risk Factors

Guidance for Considering Adjustment for Social Risk Factors

Guidance for Measure Developers

Background Information on the SDS Trial Period

- In late 2014, NQF's Board of Directors approved a 2-year trial period for risk adjustment for social risk factors prior to a permanent change in NQF policy.
- During the trial period, the NQF policy that restricted use of social risk factors in risk-adjustment approaches was suspended, and NQF implemented several of the Risk Adjustment Expert Panel's recommendations.
- The initial SDS Trial concluded in Spring 2017. After review of the findings of the trial, NQF's Board of Directors agreed to allow, for the present, use of social risk factors in risk-adjustment approaches. A second Social Risk Trial began in 2017 and will run until 2021. As in the first trial, measure developers **are required** to provide a conceptual rationale for how a social risk factor affects an outcome of interest. If a conceptual relationship exists, developers **should conduct empirical analyses** to examine the relationship between the social risk factor and the outcome of interest.

Instructions for providing required information on inclusion of social risk factors in risk adjustment

NOTE: These instructions ***are applicable to all*** health outcome measures, instrument-based measures (including patient-reported outcome based performance measures (PRO-PMs)), and intermediate outcome measures, and are potentially applicable to some process measures.

- Enter patient-level social risk variables that were available and analyzed during measure development in Section **1.8** of the Measure Testing Attachment. These variables could include:
  - Patient-reported data (e.g., income, education, language)
  - Proxy variables when social risk data are not collected from each patient (e.g., based on patient address and use of census tract data to assign individual patients to a category of income, education, etc.) and conceptual rationale for use
  - Patient community characteristics (e.g., crime rate, percent vacant housing, smoking rate, level of uninsurance) assigned to individual patients for the specific community where they live (not in the community in which the healthcare unit is located) [NOTE that these do not have to be a proxy for patient-level data]
- If you ARE risk-adjusting your measure, in addition to the conceptual/clinical and statistical methods and criteria used to select patient risk factors, describe the conceptual description (logical rationale or theory informed by literature and content experts) of the pathway between the patient social risk factors, patient clinical factors, quality of care, and outcome in Section **2b3.3a** of the Measure Testing Attachment. In Section **2b3.3b** of the Measure Testing Attachment, indicate how the conceptual model was developed.
- If you are NOT risk-adjusting your measure, include discussion of, and data for, social risk factors as part of the rationale and analysis included in Section **2b3.2** of the Measure Testing Attachment.
- Enter the analyses and interpretation resulting in the decision to include or not include social risk factors in Section **2b3.4b** of the Measure Testing Attachment. This analysis could include:
  - Variation in prevalence of the factor across measured entities
  - Empirical association with the outcome (univariate)
  - Contribution of unique variation in the outcome in a multivariable model
  - Assessment of between-unit effects vs. within-unit effects to evaluate potential clustering of disadvantaged patients in lower quality units
  - Impact of adjusting for social risk (or not) on providers at high or low extremes of social risk
- Enter reliability and validity testing for the measure as specified in Sections **2a2** and **2b1** of the Measure Testing Attachment.
  - If changing from a risk adjustment model that did not include social risk factors to one that does include social risk factors, then updated reliability and validity testing is required and must be entered into section 2a2 and 2b2 of the Measure Testing Attachment.
- Enter a comparison of performance scores with and without social risk factors in the risk adjustment model in Section **2b5** of the Measure Testing Attachment.
  - In Section **2b5.1**, enter the method of testing conducted to compare performance scores with and without social risk factors in the risk adjustment model for the same entities. Describe the steps and the statistical approach used.
  - In Section **2b5.2**, enter the statistical results from testing the differences in the performance scores with and without social risk factors in the risk adjustment model. (e.g., correlation, rank order)
  - In Section **2b5.3**, provide an interpretation of your results in terms of the differences in performance scores with and without social risk factors in the risk adjustment model for the same entities. What do the results mean, and what are the norms for the test conducted?
  - NOTE: If the measure has more than one set of specifications/instructions (e.g., one for medical record abstraction and one for claims data), then section 2b6 must also be used to demonstrate comparability of the performance scores.
- If a performance measure includes social risk variables in its risk adjustment model, the measure developer must provide the information required to stratify a clinically-adjusted only version of the measure results for those social risk variables in Section **S.11** in the Measure Submission Form. This information should *include* the stratification variables, definitions, specific data collection items/responses, code/value sets, and the risk-model covariates and coefficients for the clinically-adjusted version of the measure when appropriate.
- Enter the details of the final statistical risk model and variables in Section **2b3.1.1** of the Measure Testing Attachment.

Measure Evaluation Criteria Guidance
(pg 47-48)

Standard Risk Adjustment Framework

NATIONAL QUALITY FORUM

Discussion of Standard Risk Adjustment Framework

- What is the statistical rationale for or against a standard framework?
- What are the pros and cons of such a framework from a policy point of view (e.g., stakeholder buy-in, feasibility, usability, transparency to clinicians/providers and consumers, etc.)?
- What combination of clinical and/or social risk factors should be included for outcome and resource use measures?

NQF Member and Public Comment

Next Steps

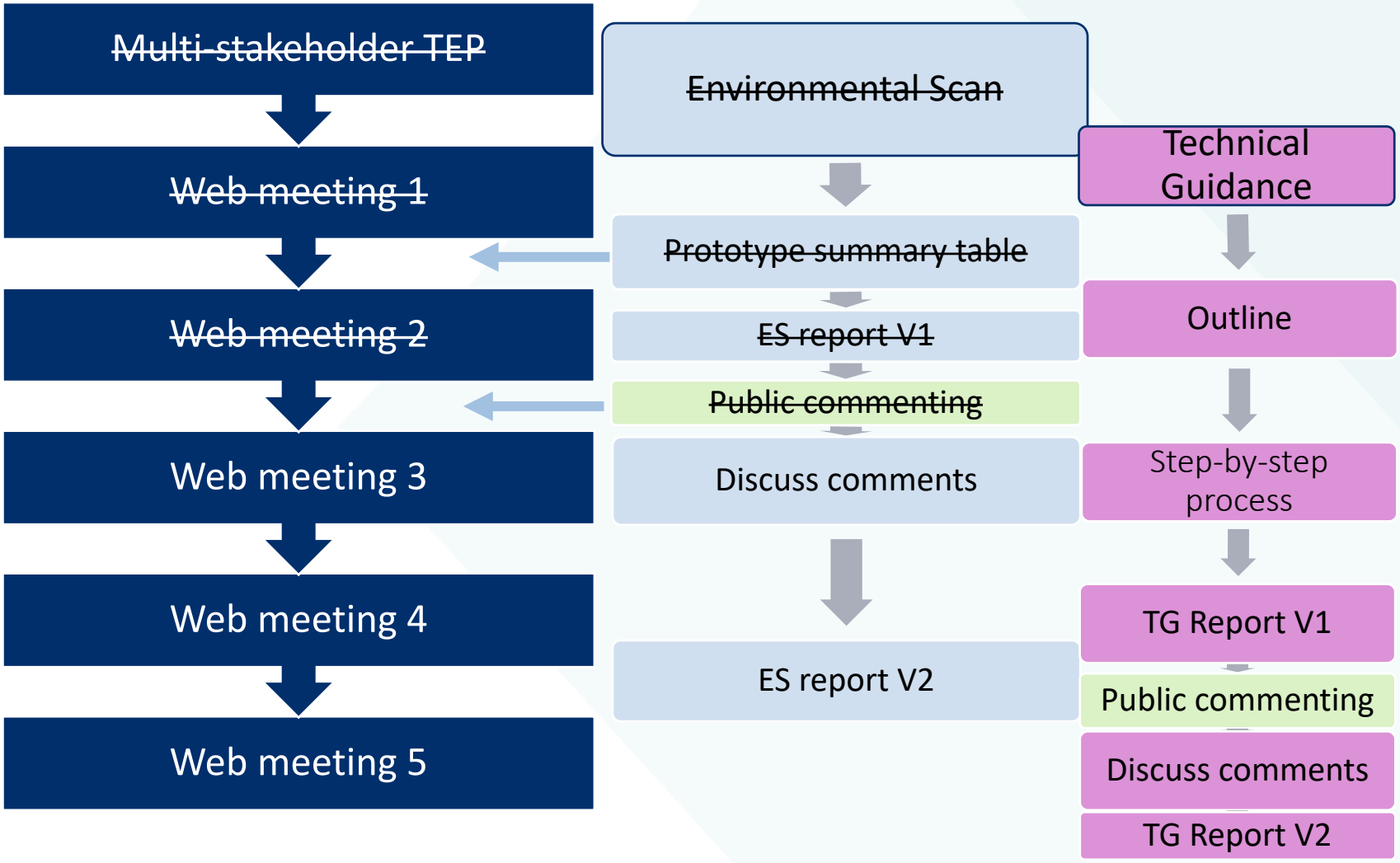
Next Steps

Meeting dates

Meeting (2 hours each)	Date/Time
Web Meeting 3 (TODAY!): Technical Guidance and Public Comment Feedback	April 2, 2021; 1-3pm ET
Web Meeting 4: Technical Guidance Feedback	May 13, 2021; 1-3pm ET
Web Meeting 5: Public Comment Feedback	July 14, 2021; 1-3pm ET

NATIONAL QUALITY FORUM

Key Milestones *(Base Year)*



NATIONAL QUALITY FORUM

Project Contact Info

- Email: RAGuidance@qualityforum.org
- NQF phone: 202-783-1300
- Project page:
  - http://www.qualityforum.org/Risk_Adjustment_Guidance.aspx
- SharePoint site:
  - https://share.qualityforum.org/portfolio/DevelopingandTestingRisk/SitePages/Home.aspx

THANK YOU.

NATIONAL QUALITY FORUM

http://www.qualityforum.org