NATIONAL QUALITY FORUM
Driving measurable health improvements together

Surgery Spring 2021 Topical Web Meeting

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Welcome

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Meeting Logistics

- This is a Webex meeting with audio and video capabilities
  - Direct your web browser to the following URL: https://nqf.webex.com/nqf/j.php?MTID=m020d5ffff05771d0c2f44a629b9c13de
- Optional: Dial **1-844-621-3956** and enter access code **179 440 3987**
- 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 a Committee roll call once the meeting begins

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

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Housekeeping Rules

During the discussions, Committee members should:

- Remain engaged in the discussion without distractions
- Attend the meeting at all times
- Keep comments concise and focused
- Allow others to contribute

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NQF Project Team

Amy Moyer, MS, PMP
Senior Director

Janaki Panchal, MSPH
Manager

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Senior Project Manager

Susanne Young, MPH
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Agenda

- Introductions and Meeting Objectives
- Surgery Measure Gap Discussion
- Social Risk Discussion
- NQF Member and Public Comment
- Next Steps
- Adjourn

Introductions and Meeting Objectives

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Surgery Standing Committee

- Alex Sox-Harris, PhD, MS (Co-chair)
- Ashrith Amarnath, MD
- Sherry Bernardo, CRNA
- Kenya Brown, LCSW-C
- Richard D'Agostino, MD
- TeMaya Eatmon
- Michael Firstenberg, MD, FACC, FAIM
- Linda Groah, MSN, RN, CNOR, NEA-BC
- Vilma Joseph, MD, MPH, FASA
- Miklos Kertai, MD, PhD
- Barbara Levy, MD, FACOG, FACS
- Jaime Ortiz, MD, MBA, FASA
- Shawn Rangel, MD, MSCE
- Kimberly Richardson
- Christopher Saigal, MD, MPH
- Salvatore T. Scali, MD, FACS, DFSVS, RPVI
- Allan Siperstein, MD
- Kevin Wang, MHA
- Mark A. Wilson, MD, PhD

Surgery Measure Gap Discussion

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Key Aspects of Surgical Care

- What aspects of surgical care are important to know to ensure we are measuring good care?

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Key Aspects of Surgical Care – Current Portfolio

- Which key aspects are not captured in the current portfolio?

- The expanded surgery measure portfolio is included on the following slides and in a supplemental spreadsheet for reference
  - The expanded portfolio includes all endorsed surgery measures across all consensus development process (CDP) projects

Expanded Surgery Measure Portfolio

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Endorsed NQF Surgery Measures (page 1)

- 0113^ Participation in a Systematic Database for Cardiac Surgery
- 0114 Risk-Adjusted Postoperative Renal Failure
- 0115 Risk-Adjusted Surgical Re-exploration
- 0116^ Anti-Platelet Medication at Discharge
- 0117 Beta Blockade at Discharge
- 0118 Anti-Lipid Treatment Discharge
- 0119 Risk-Adjusted Operative Mortality for CABG
- 0120 Risk-Adjusted Operative Mortality for Aortic Valve Replacement (AVR)
- 0121 Risk-Adjusted Operative Mortality for Mitral Valve (MV) Replacement
- 0122 Risk-Adjusted Operative Mortality for Mitral Valve (MV) Replacement + CABG Surgery

^ Reserve Status * Non-Surgery Project **(Project Name is After Measure Name)**

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Endorsed NQF Surgery Measures (page 2)

- 0123 Risk-Adjusted Operative Mortality for Aortic Valve Replacement (AVR) + CABG Surgery
- 0126^ Selection of Antibiotic Prophylaxis for Cardiac Surgery Patients
- 0127 Preoperative Beta Blockade
- 0128^ Duration of Antibiotic Prophylaxis for Cardiac Surgery Patients
- 0129 Risk-Adjusted Postoperative Prolonged Intubation (Ventilation)
- 0130 Risk-Adjusted Deep Sternal Wound Infection
- 0131 Risk-Adjusted Stroke/Cerebrovascular Accident
- 0134 Use of Internal Mammary Artery (IMA) in Coronary Artery Bypass Graft (CABG)
- 0268^ Perioperative Care: Selection of Prophylactic Antibiotic: First OR Second Generation Cephalosporin
- 0269^ Timing of Prophylactic Antibiotics - Administering Physician
- 0271^ Perioperative Care: Discontinuation of Prophylactic Parenteral Antibiotics (Non-Cardiac Procedures)

^ Reserve Status * Non-Surgery Project **(Project Name is After Measure Name)**

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Endorsed NQF Surgery Measures (page 3)

- 0425* Functional Status Change for Patients with Low Back Impairments **(Patient Experience and Function)**
- 0456 Participation in a Systematic National Database for General Thoracic Surgery
- 0465 Perioperative Anti-platelet Therapy for Patients undergoing Carotid Endarterectomy
- 0527^ Prophylactic Antibiotic Received Within One Hour Prior to Surgical Incision
- 0528^ Prophylactic Antibiotic Selection for Surgical Patients
- 0529^ Prophylactic Antibiotics Discontinued Within 24 Hours After Surgery End Time
- 0531* Patient Safety and Adverse Events Composite **(Patient Safety)**
- 0563* Primary Open-Angle Glaucoma: Reduction of Intraocular Pressure by 15% or Documentation of a Plan of Care **(Primary Care and Chronic Illness)**
- 0696 STS CABG Composite Score

^ Reserve Status * Non-Surgery Project **(Project Name is After Measure Name)**

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Endorsed NQF Surgery Measures (page 4)

- 0697 Risk Adjusted Case Mix Adjusted Elderly Surgery Outcomes Measure
- 0696 STS CABG Composite Score
- 0697 Risk Adjusted Case Mix Adjusted Elderly Surgery Outcomes Measure
- 0706 Risk Adjusted Colon Surgery Outcome Measure
- 0732 Surgical Volume for Pediatric and Congenital Heart Surgery: Total Programmatic Volume and Programmatic Volume Stratified by the 5 STAT Mortality Categories
- 0733 Operative Mortality Stratified by the 5 STAT Mortality Categories
- 0734 Participation in a National Database for Pediatric and Congenital Heart Surgery
- 0753* American College of Surgeons – Centers for Disease Control and Prevention (ACS-CDC) Harmonized Procedure Specific Surgical Site Infection (SSI) Outcome Measure **(Patient Safety)**
- 1501 Risk-Adjusted Operative Mortality for Mitral Valve (MV) Repair

^ Reserve Status * Non-Surgery Project **(Project Name is After Measure Name)**

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Endorsed NQF Surgery Measures (page 5)

- 1502 Risk-Adjusted Operative Mortality for Mitral Valve (MV) Repair + CABG Surgery
- 1519 Statin Therapy at Discharge after Lower Extremity Bypass (LEB)
- 1523 Rate of Open Repair of Abdominal Aortic Aneurysms (AAA) Where Patients Are Discharged Alive
- 1534 In-hospital mortality following elective EVAR of AAAs
- 1540 Postoperative Stroke or Death in Asymptomatic Patients undergoing Carotid Endarterectomy
- 1543 Postoperative Stroke or Death in Asymptomatic Patients undergoing Carotid Artery Stenting (CAS)
- 1550 Hospital-level risk-standardized complication rate (RSCR) following elective primary total hip arthroplasty (THA) and/or total knee arthroplasty (TKA)

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Endorsed NQF Surgery Measures (page 6)

- 1551 Hospital-level 30-day risk-standardized readmission rate (RSRR) following elective primary total hip arthroplasty (THA) and/or total knee arthroplasty (TKA)
- 1741* Consumer Assessment of Healthcare Providers and Systems (CAHPS)® Surgical Care Survey Version 2.0 **(Patient Experience and Function)**
- 1790 Risk-Adjusted Morbidity and Mortality for Lung Resection for Lung Cancer
- 2038 Performing vaginal apical suspension at the time of hysterectomy to address pelvic organ prolapse
- 2063 Performing cystoscopy at the time of hysterectomy for pelvic organ prolapse to detect lower urinary tract injury
- 2513* Hospital 30-Day All-Cause Risk-Standardized Readmission Rate (RSRR) following Vascular Procedures **(All-Cause Admissions and Readmissions)**

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Endorsed NQF Surgery Measures (page 7)

- 2514* Risk-Adjusted Coronary Artery Bypass Graft (CABG) Readmission Rate **(All-Cause Admissions and Readmissions)**
- 2515* Hospital 30-day, all-cause, unplanned, risk-standardized readmission rate (RSRR) following coronary artery bypass graft (CABG) surgery **(All-Cause Admissions and Readmissions)**
- 2558 Hospital 30-day, all-cause, risk-standardized mortality rate (RSMR) following coronary artery bypass graft (CABG) surgery
- 2561 STS Aortic Valve Replacement (AVR) Composite Score
- 2563 STS Aortic Valve Replacement (AVR) + Coronary Artery Bypass Graft (CABG) Composite Score
- 2624* Functional Outcome Assessment **(Patient Experience and Function)**
- 2643* Average change in functional status following lumbar spine fusion surgery **(Patient Experience and Function)**

^ Reserve Status * Non-Surgery Project **(Project Name is After Measure Name)**

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Endorsed NQF Surgery Measures (page 8)

- 2653* Average change in functional status following total knee replacement surgery **(Patient Experience and Function)**
- 2677 Preoperative evaluation for stress urinary incontinence prior to hysterectomy for pelvic organ prolapse.
- 2683 Risk-Adjusted Operative Mortality for Pediatric and Congenital Heart Surgery
- 2687 Hospital Visits after Hospital Outpatient Surgery
- 2958* Informed, Patient Centered (IPC) Hip and Knee Replacement Surgery **(Patient Experience and Function)**
- 2962* Shared Decision Making Process **(Patient Experience and Function)**
- 3025* Ambulatory Breast Procedure Surgical Site Infection (SSI) Outcome Measure **(Patient Safety)**
- 3030 STS Individual Surgeon Composite Measure for Adult Cardiac Surgery

^ Reserve Status * Non-Surgery Project **(Project Name is After Measure Name)**

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Endorsed NQF Surgery Measures (page 9)

- 3031 STS Mitral Valve Repair/Replacement (MVRR) Composite Score
- 3032 STS Mitral Valve Repair/Replacement (MVRR) + Coronary Artery Bypass Graft (CABG) Composite Score
- 3227* CollaboRATE Shared Decision Making Score **(Patient Experience and Function)**
- 3294 STS Lobectomy for Lung Cancer Composite Score
- 3357 Facility-Level 7-Day Hospital Visits after General Surgery Procedures Performed at Ambulatory Surgical Centers
- 3366* Hospital Visits after Urology Ambulatory Surgical Center Procedures **(All-Cause Admissions and Readmissions)**
- 3461* Functional Status Change for Patients with Neck Impairments **(Patient Experience and Function)**

^ Reserve Status * Non-Surgery Project **(Project Name is After Measure Name)**

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Endorsed NQF Surgery Measures (page 10)

- 3470* Hospital Visits after Orthopedic Ambulatory Surgical Center Procedures **(Patient Safety)**
- 3474* Hospital-level, risk-standardized payment associated with a 90-day episode of care for elective primary total hip and/or total knee arthroplasty (THA/TKA) **(Cost and Efficiency)**
- 3493 Risk-standardized complication rate (RSCR) following elective primary total hip arthroplasty (THA) and/or total knee arthroplasty (TKA) for Merit-based Incentive Payment System (MIPS) Eligible Clinicians and Eligible Clinician Groups
- 3494 Hospital 90-Day, All-Cause, Risk-Standardized Mortality Rate (RSMR) Following Coronary Artery Bypass Graft (CABG) Surgery
- 3509* Routine Cataract Removal with Intraocular Lens (IOL) Implantation **(Cost and Efficiency)**

^ Reserve Status * Non-Surgery Project **(Project Name is After Measure Name)**

Endorsed NQF Surgery Measures (page 11)

- 3512* Knee Arthroplasty **(Cost and Efficiency)**
- 3534* 30 Day All-cause Risk Standardized Mortality Odds Ratio following Transcatheter Aortic Valve Replacement (TAVR) **(Cardiovascular)**
- 3559* Hospital-Level, Risk-Standardized Patient-Reported Outcomes Following Elective Primary Total Hip and/or Total Knee Arthroplasty (THA/TKA) **(Patient Experience and Function)**

^ Reserve Status * Non-Surgery Project **(Project Name is After Measure Name)**

Social Risk Discussion

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Best Practices for Developing and Testing Risk Adjustment Models

August 11, 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.

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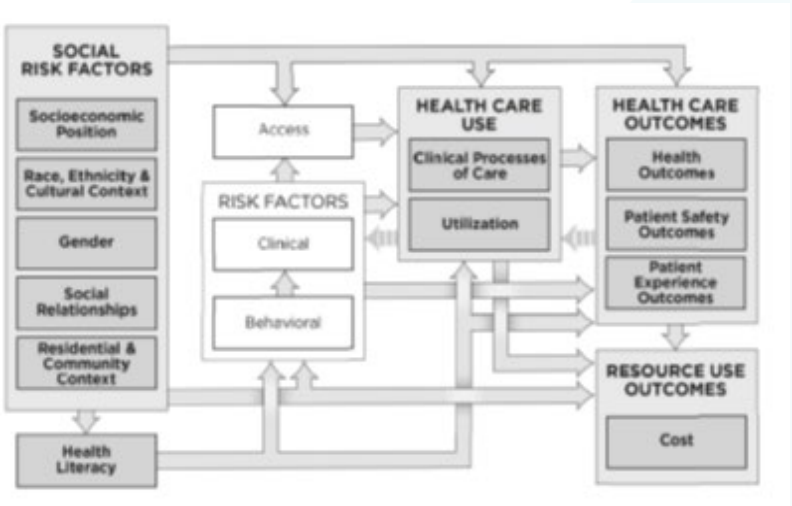
The importance and challenges of adjusting for social and functional risk factors

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 affect outcomes and/or indirectly do so through behavioral or clinical factors
- However, *when and how* to adjust for social and functional factors remains inconsistent with limited consensus

Project Overview and Timeline

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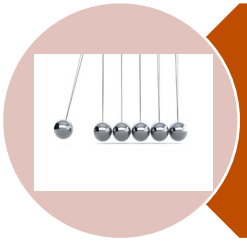
Project Objectives *(Base Year)*

- Conduct 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.
- Develop Technical Guidance for measure developers that includes emerging best practices on when and how to adjust for functional and social risk factor in measure development.
- Convene a multistakeholder TEP over the next 24-months to provide expertise and guidance towards major project components.

Environmental Scan: Three-pronged Approach *(Base Year)*

Literature review

Consensus Development Process (CDP) submission scan



Programs review

Focuses of the scan:

- Conceptual model
- Datasets used
- Social risk and functional risk factors available for testing
- Statistical methods
- Existing guidance
- How federal and non-federal programs currently adjust for social and functional risk factors: measure vs. payment or program level

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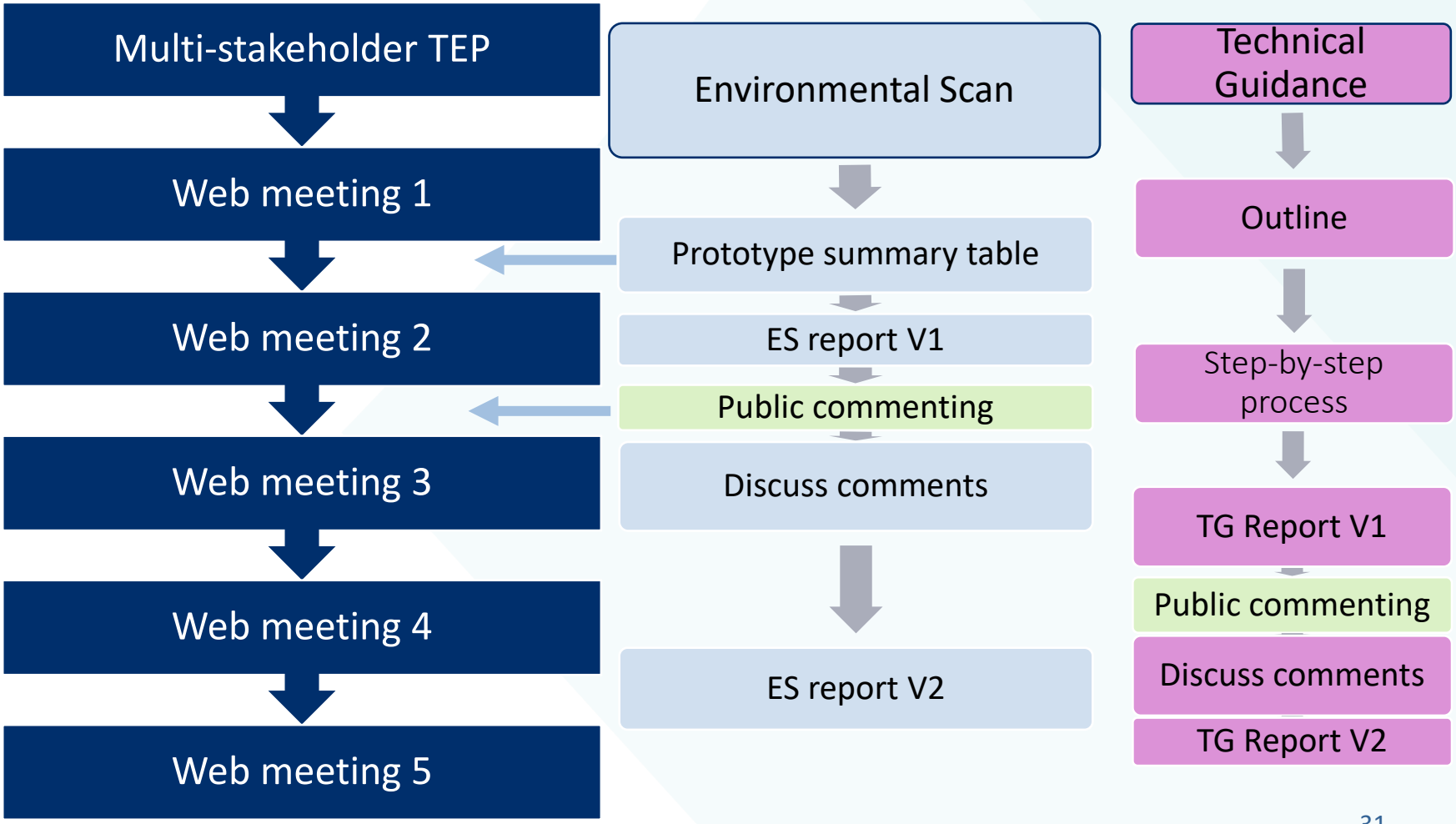
Technical Guidance *(Base Year)*

1. Datasets used for risk adjustment and measure specifications
2. Functional or social risk factors available for testing and measure development
3. Approaches to conceptual and statistical methods
4. Approaches for inclusion of functional and social risk factors
5. Fit for purpose in a measurement system

Key Milestones *(Base Year)*



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Option Year (*if awarded*)

- Re-convene TEP web meetings
- Conduct Key Informant Interviews (KIIs)
- Update the Technical Guidance based on findings from KIIs

Environmental Scan

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Environmental Scan Findings

- Common data sources used to calculate the measure and for social and/or functional status risk factor analyses include the American Community Survey, Medicare Enrollment Database, and Medicare administrative claims.
- Commonly used methods include:
  - Assessment of variation in prevalence of the risk factor across measured entities
  - Empirically testing the association between the factor and the outcome
  - Testing the incremental effect of risk factors in a multivariable model
  - Assessing the adequacy of the risk model
  - Examining the correlation of the social/functional status risk score with the measure scores
- Additionally, assessments of the contribution of social and/or functional risk factors to risk model fit and the correlation of social or functional status-adjusted risk score and comparable unadjusted scores were both common approaches for determining the inclusion of social and/or functional risk factors within the final risk model.

Overview of Technical Guidance

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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

NQF Minimum Standards for Social and/or Functional Risk Adjustment

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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

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 marker 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.

NQF Minimum Standards for Social and/or Functional Risk Adjustment – Conceptualizing the Model

- **Conceptualizing the Model**
- Identifying and Selecting Potential Data Sources and Variables
- Empirically Testing Risk Factors
- Empirically Testing the Adequacy of the Risk Model
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NQF Minimum Standards for Social and/or Functional Risk Adjustment – Selecting Data Sources and Variable

- Conceptualizing the Model
- **Identifying and Selecting Potential Data Sources and Variables**
- Empirically Testing Risk Factors
- Empirically Testing the Adequacy of the Risk Model
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- Conceptualizing the Model
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Considerations for Assessing Data Quality

Consideration	Description
Reliable	The method of collection must be reproducible with minimal variation between one collection and another if the same population is the source.
Valid	Validation ultimately rests on the strength of the logical connection between the construct of interest and the results of operationalizing their measurement, recording, storage, and retrieval.
Complete	Data should contain as few missing values as possible, and the allowable percent missingness should be stated. Missing values are difficult to interpret, and they lower the validity of the model. Missingness should be evaluated as to cause (e.g., the Rubin taxonomy, which includes missing completely at random, missing at random, and missing not at random).
Comprehensive	Data are sufficiently comprehensive to adjust for known and suspected risk factors in the causal model and to limit the number of proxy measures required for the model. Obtaining the primary information is sometimes impossible, so some proxy measures might be inevitable for certain projects.
Timely	Data are as recent as possible. If the measure developer used 1990 data in a model designed for use in 2021, many people would argue that the healthcare system has changed so much since 1990 that the model may not be relevant.
Generalizable	Steps to ensure findings can be generalized to target populations should also be taken when developing the model. Findings from algorithms based on populations of limited size and scope should be validated in broader populations to assure generalizability.

NQF Minimum Standards for Social and/or Functional Risk Adjustment – Empirically Testing Risk Factors

- Conceptualizing the Model
- Identifying and Selecting Potential Data Sources and Variables
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- Empirically Testing the Adequacy of the Risk Model
- Considerations for Determining the Final Risk Adjustment Model

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NQF Minimum Standards for Social and/or Functional Risk Adjustment – Empirically Testing Risk Factors (continued)

- 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

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5	Developers should provide descriptive statistics on how the risk variables identified from the conceptual model are distributed across the measured entities.
	that the risk-adjusted measure to identify healthcare disparities.

"When a risk factor has been identified in the conceptual model, then the use of statistical significance testing for social or functional risk factor variables ***should not be deterministic*** *for inclusion of that factor within the final risk adjustment model."*

NQF Minimum Standards for Social and/or Functional Risk Adjustment –Testing the Adequacy of the Risk Model

- 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

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7	Risk stratification should be conducted in conjunction with risk adjustment to ensure that the risk-adjusted measure to identify healthcare disparities.

NQF Minimum Standards for Social and/or Functional Risk Adjustment – Determining the Final Risk Adjustment Model

- 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**

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 marker 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.

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A Path Forward

- 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.
- 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

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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.

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http://www.qualityforum.org

Social Risk Adjustment for Health Care Performance Measures

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Director Emeritus, Center for Health Policy and Health Services Research

Henry Ford Health System

Detroit, MI

August 11, 2021

Readmission Penalties and Safety-Net Hospitals

Characteristics of Hospitals Receiving Penalties Under the Hospital Readmissions Reduction Program

Karen E. Joynt, MD, MPH
Ashish K. Jha, MD, MPH

Table. Hospital Characteristics by Penalty Group[a]

	High Penalties (n = 1097)[b]			Low Penalties (n = 1092)[c]			No Penalties, Unadjusted Rates, No. (%) (n = 1093)[d]
	Unadjusted Rates, No. (%)	Multivariate-Adjusted OR (95% CI)	*P* Value	Unadjusted Rates, No. (%)	Multivariate-Adjusted OR (95% CI)	*P* Value	
Size of hospital							
Large (≥ 400 beds)	178 (40)	1.98 (1.44-2.74)	<.001	158 (36)	2.07 (1.50-2.87)	<.001	108 (24)
Medium (200-399 beds)	622 (35)	2.09 (1.73-2.53)	<.001	659 (37)	2.43 (2.01-2.94)	<.001	482 (27)
Small (<200 beds)	296 (28)	1 [Reference]		275 (26)	1 [Reference]		503 (47)
Teaching hospital							
Major	118 (44)	1.56 (1.04-2.32)	.03	102 (38)	1.46 (0.98-2.19)	.07	50 (19)
Not major	979 (33)	1 [Reference]		990 (33)	1 [Reference]		1043 (35)
Safety-net hospital							
Yes	337 (44)	2.38 (1.91-2.96)	<.001	275 (36)	1.83 (1.46-2.29)	<.001	157 (20)
No	760 (30)	1 [Reference]		817 (33)	1 [Reference]		936 (37)

Abbreviation: OR, odds ratio.
[a] The unadjusted mean (SD) payment penalty for hospitals with high penalties is 0.72% (0.23%); low penalties, 0.15% (0.10%); and no penalties, 0. The unadjusted mean (SD) number of admissions for hospitals with high penalties is 945.7 (790.1); low penalties, 791.3 (654.5); and no penalties, 623.8 (743.6). The number of admissions includes the following types of diagnoses: acute myocardial infarction, congestive heart failure, and pneumonia, which are the 3 conditions assessed under the Hospital Readmissions Reduction Program.
[b] Made up of hospitals that will receive above-average penalties under the Hospital Readmissions Reduction Program.
[c] Made up of hospitals that will receive below-average penalties.
[d] Made up of hospitals that will not be penalized.

Concern

- Bias in quality measures used for either public reporting or pay-for-performance
- Absent some form of adjustment, “safety-net” providers may appear to have worse quality of care than they actually do.
- Absent some form of adjustment, providers serving affluent and patients and communities may be appear to have better quality of care than they actually do.

Concern – Reduced Access

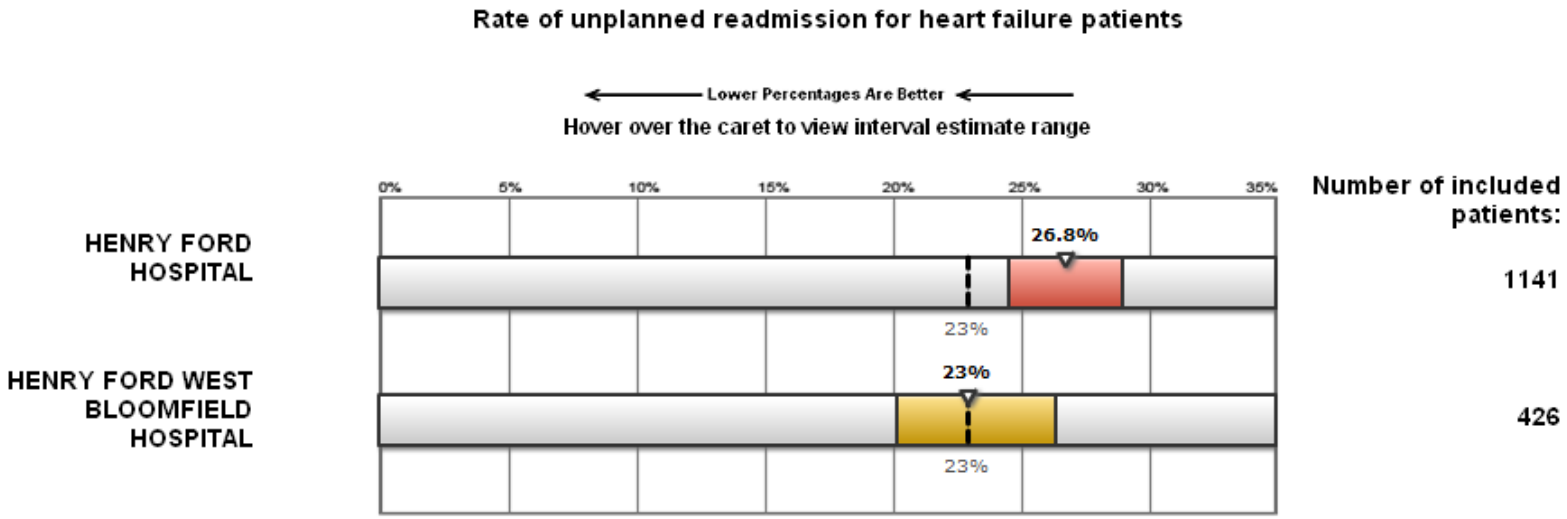
- Absent adjustment, providers and plans will be less willing to serve “vulnerable” patients and communities because:
  - fewer resources available because of penalties or absence of rewards;
  - serving “vulnerable” populations will lead to identification in public reporting programs as being a “poor performer”
  - Individual patients and public and private payors using publicly reported information to make decisions will avoid plans and providers serving those communities

Misleading Information?
Hospital Compare

Rate of unplanned readmission for heart failure patients

Why is this important?

Hide Graph



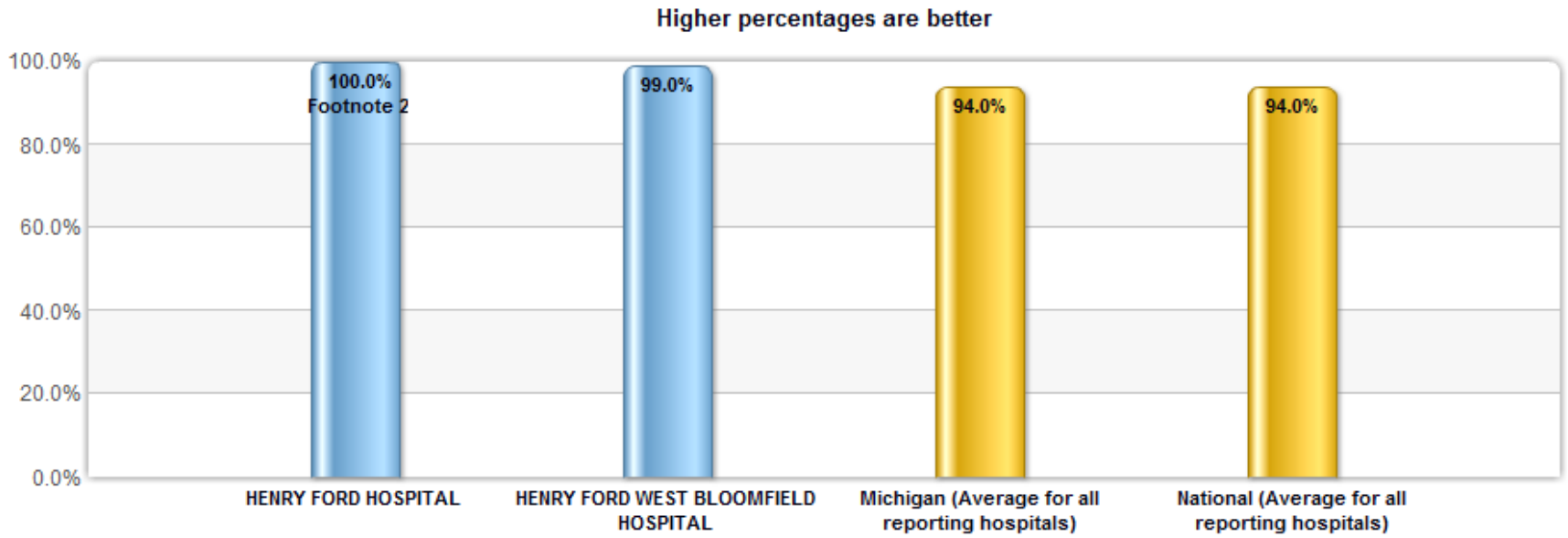
U.S. national rate of unplanned readmission for heart failure patients = 23.0%

Related Process Measure

Heart failure patients given discharge instructions

Why is this important?

Hide Graph



For this measure, the rate for the top 10% of hospitals was 100%.

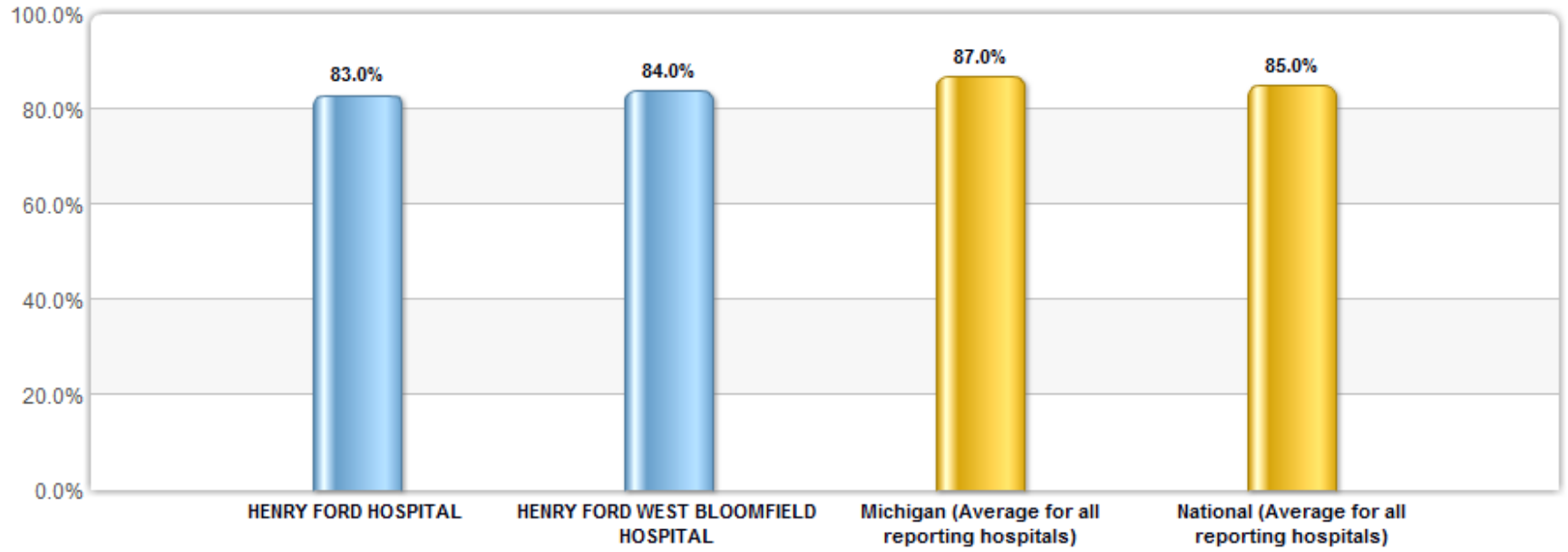
[2] Data submitted were based on a sample of cases/patients.

Related Process Measure (continued)

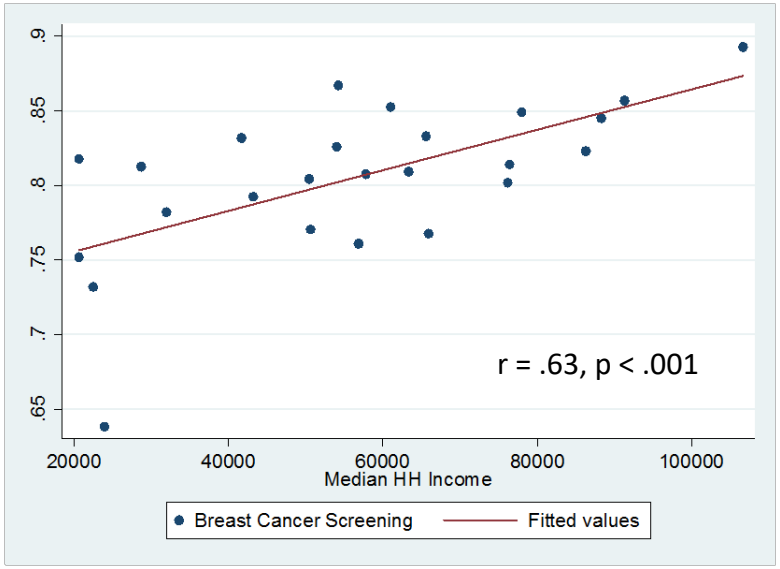
Patients who reported that YES, they were given information about what to do during their recovery at home

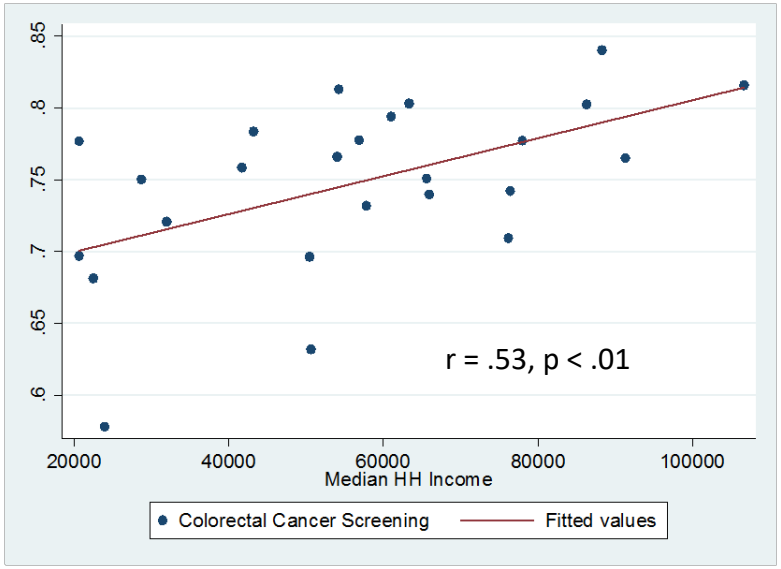
Why is this important?

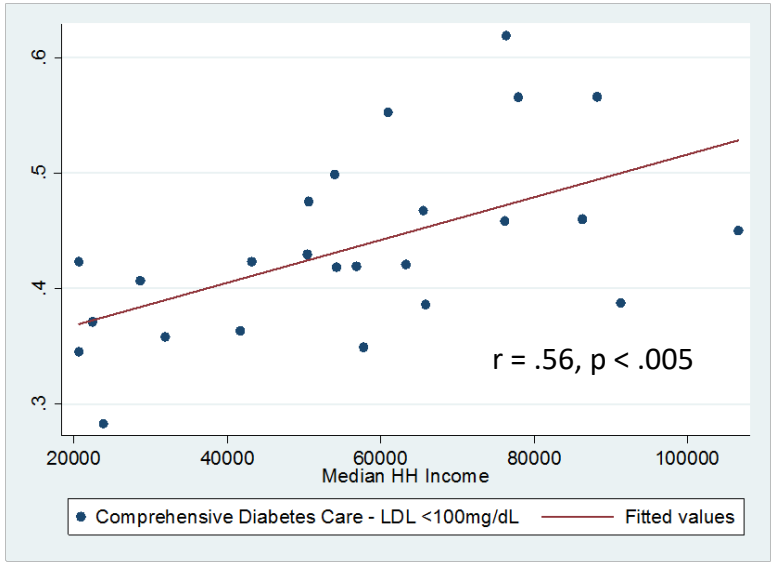
Hide Graph

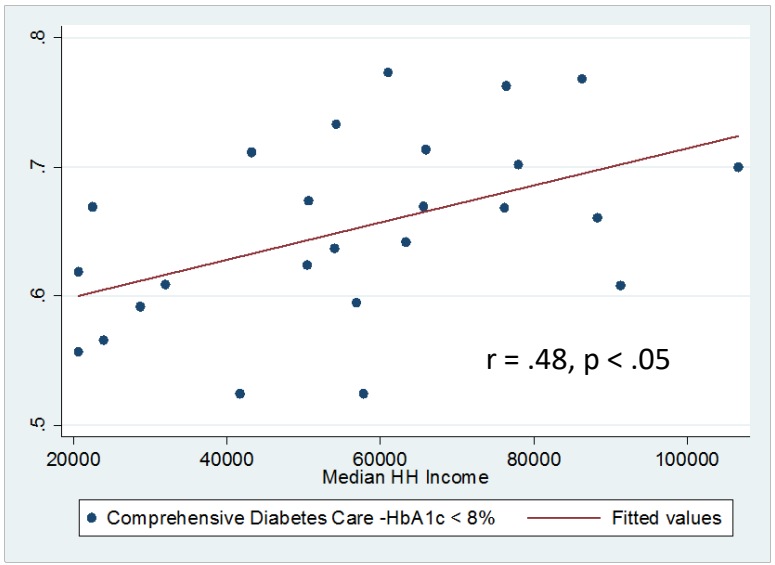


SES and HEDIS – Clinic-level









Quality of Care –
Just one of many factors leading to outcomes

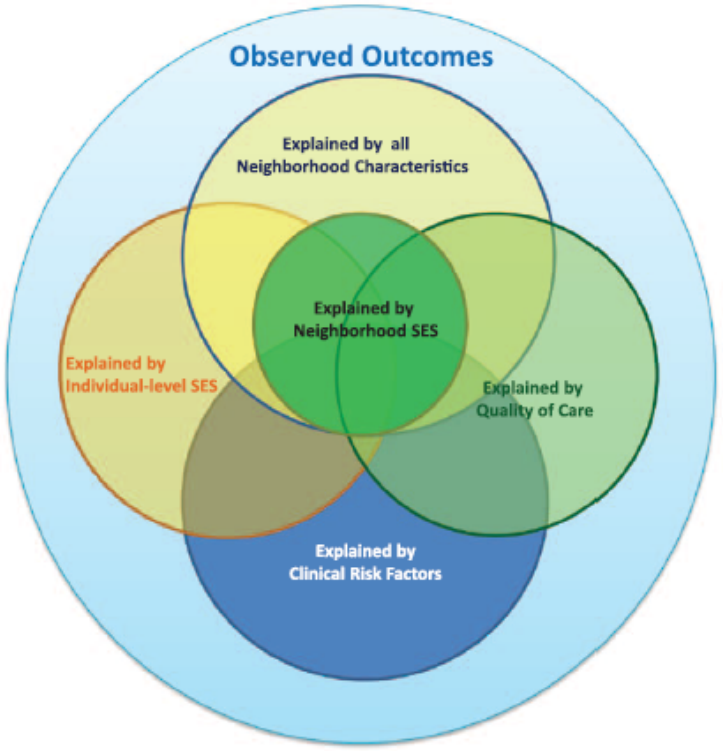
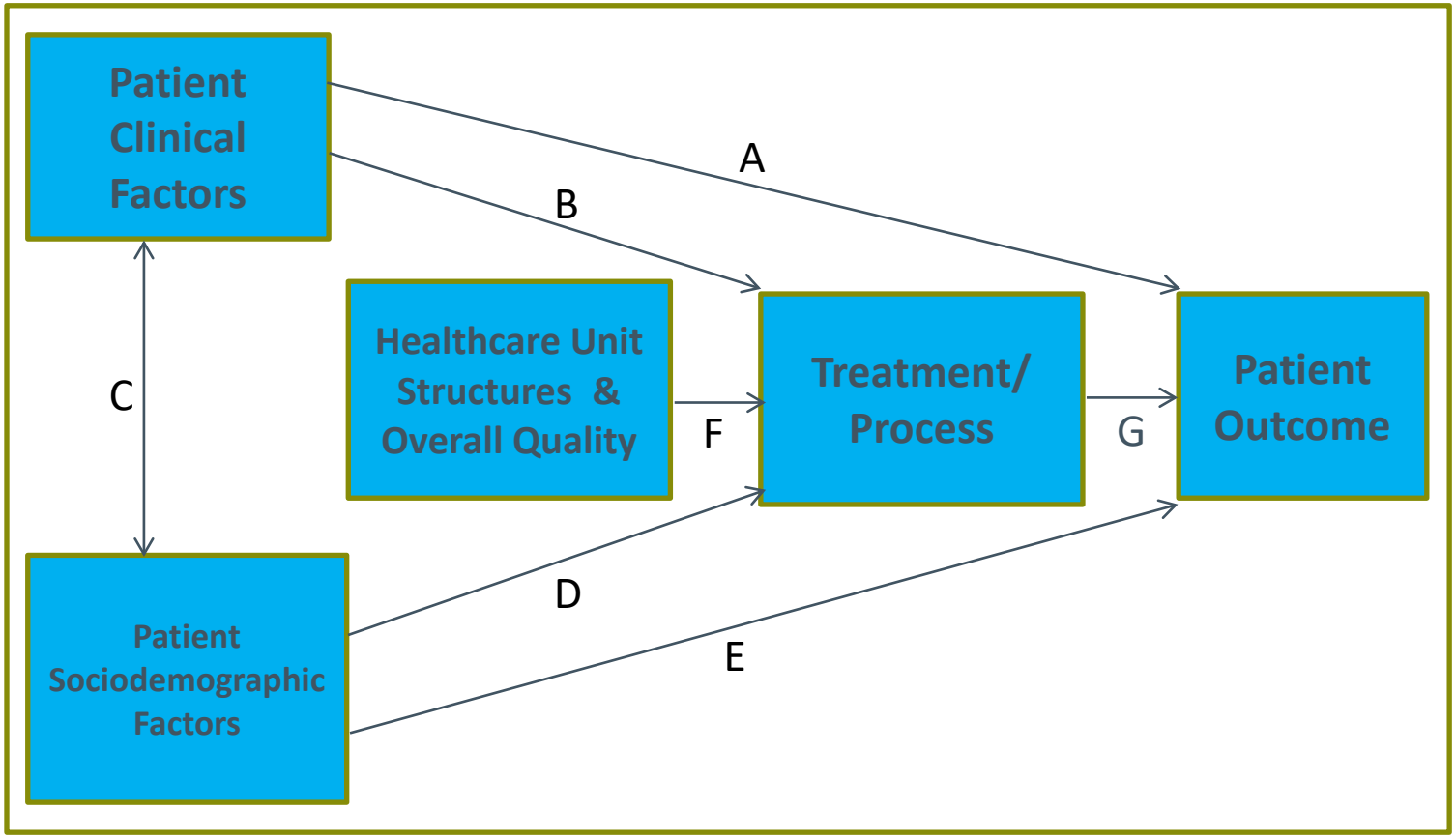


Figure 2. Proposed model for contribution of individual-level and neighborhood factors in disease outcomes. SES indicates socioeconomic status.

Bikdeli, B, et al, Place of
outcomes of patients wit
Analysis from the telemc
Improve heart failure ou
Circulation – Carduivascu
and Outcomes, 2014, eP

Causal Paths



NQF Expert Panel Report

Risk Adjustment for Socioeconomic Status or Other Sociodemographic Factors

TECHNICAL REPORT

August 15, 2014

NATIONAL QUALITY FORUM

Recommendations Related to NQF Criteria and Processes Related to SDS Adjustment

Recommendation 1: When there is a conceptual relationship (i.e., logical rationale or theory) between sociodemographic factors and outcomes or processes of care and empirical evidence (e.g., statistical analysis) that sociodemographic factors affect an outcome or process of care reflected in a performance measure:

- those sociodemographic factors should be included in risk adjustment of the performance score (using accepted guidelines for selecting risk factors) unless there are conceptual reasons or empirical evidence indicating that adjustment is unnecessary or inappropriate;

AND

- the performance measure specifications must also include specifications for stratification of a clinically-adjusted version of the measure based on the sociodemographic factors used in risk adjustment.

Public Comments – NQF Panel Draft Recommendations

Summary Counts of Comments Received

- 667 comments
- 158 organizations (or individuals)
- 143 commenters were in support of the recommendations
- 7 commenters were opposed to the recommendations
- 7 commenters provided mixed comments (supportive and not supportive) or reservations
- 5 commenters were supportive of most recommendations but opposed to Recommendation 7 - NQF having role in guidance on implementation

Social Risk Factor Trial Period

Social Risk Trial Final Report

FINAL REPORT

July 14, 2021

Key Findings from Trial Period

Table 2. Summary of Social Risk Adjustment Rationale and Inclusion in Second Social Risk Trial

Type of Rationale for Social Risk Adjustment	Number of Measures	Percent of 317 Submitted Measures During the 2nd Trial*	Percent of 125 Risk Adjusted Measures*
Total Measures	**n/a**	**317**	**125**
Measures with a conceptual rationale for the social risk adjustment	120	37.9%	96.0%
Measures that used "Published Literature" to develop rationale for social risk factors	92	29.0%	73.6%
Measures that used "Expert Group Consensus" to develop rationale for social risk factors	14	4.4%	11.2%
Measures that used "Internal Data Analysis" to develop rationale for social risk factors	68	21.5%	54.4%
Measures with conceptual rationale that supported inclusion of social risk factors	74	23.3%	59.2%
Measures that included social risk factor(s) in final risk adjustment approach	38	12.0%	30.4%

**Column numbers and percentages are more than 317 and 125 measures and 100 percent, as more than one social risk factor was considered for many measures*

Reasons for NOT doing Social Risk Adjustment

- Small effect size (i.e., quantifiable difference), insignificant coefficients (i.e., weak outcome predictors) of social risks, or marginal changes in performance scores. Some developers noted that existing clinical factors were often entered into the risk models in two sequential steps. As a result, social risk factors often showed small or no effect when included in a risk adjustment model.
- Pathways that detail the relationship between social risks and measure outcomes are often complex, which creates challenges for inclusion into the final adjustment model (e.g., whether differences are attributable to patient or community social risks versus facility or practice risks).
- Concerns about mistaking quality of care disparities when adjusting for social risks
- Lack of available patient, provider, and/or community-level social risks data o analyze

Possible Discussion Questions

- One generally adjusts for risk factors that affect outcomes but that are outside of providers' control. Are social risk factors and their effects on outcomes outside of providers' control?
- Most of the data on the effects of social risk factors on outcomes and measures like readmission come in the context of medical conditions (e.g., pneumonia, CHF). Is there any reason to think that surgery is different?
- How much difference should adjustment make (e.g., percent of hospitals that change ranks or deciles) in order to justify the use of social factors in risk adjustment?
- Should there be different considerations applied to social factors vs. clinical factors in building risk-adjustment models?

Within- and Between-Unit Disparities

Table. Hypothetical Scenarios Illustrating the Effects of Accounting for Socioeconomic Status in Quality-Performance Measures

Hospital A[a]				Hospital B[a]					
	Stratified Results, % of Patients	Score[b]			Stratified Results, % of Patients	Score[b]		Difference in Score, %	
		Unadjusted	Adjusted			Unadjusted	Adjusted	Unadjusted	Adjusted
Scenario 1									
Poor	70	70	70	Poor	80	80	80	10	10
Nonpoor	70			Nonpoor	80				
Scenario 2									
Poor	60	70	76	Poor	60	79	76	9	0
Nonpoor	80			Nonpoor	80				

[a] Hospital A is a safety-net facility, treating 50% poor patients; only 5% of patients treated at hospital B are poor.

[b] Values represent performance measures on a scale of 0 to 100.

Jha, AK & Zaslavsky, AM. Quality reporting that addresses disparities in health care. *JAMA*, 2014*, 312(3*), 225-226.

Note –authors used direct standardization, based on a hypothetical performance measure and a Hypothetical national mix of patients – 20% poor and 80% non-poor

NQF Member and Public Comment

Next Steps

NATIONAL QUALITY FORUM

Spring 2021 Cycle

- Topical webinar summary will be posted on September 22, 2021
- Fall 2021 events: to be determined

Project Contact Information

- Email: surgery@qualityforum.org
- NQF phone: 202-783-1300
- Project page: https://www.qualityforum.org/Surgery_2017-2018.aspx
- SharePoint site: https://share.qualityforum.org/portfolio/Surgery/SitePages/Home.aspx

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