NATIONAL QUALITY FORUM
Driving measurable health improvements together

Social Risk Trial Final Report

FINAL REPORT

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Executive Summary

The ongoing COVID-19 pandemic has unmasked and exacerbated the long-standing societal, health, and healthcare **inequities** of marginalized populations. Throughout every phase of the pandemic, these marginalized populations have experienced striking inequities in virus exposure, susceptibility, and access to testing, treatments, and vaccinations. The root causes of these inequities are multifactorial and intertwined, both originating from and reinforced by social, cultural, economic, and other diverse individual and community factors and forces that are often steeped in racial or social discrimination. The complexity of the "causation" of inequity further underscores the vital importance of recognizing and appropriately considering all applicable risk factors (i.e., demographic, clinical, functional, and social) when evaluating, reporting, and recommending **performance measures** for high-stakes incentive and accountability purposes. This report summarizes the findings and recommendations of a five-year journey that the National Quality Forum (NQF) has taken to test the inclusion of **social risk factors** in the quality measure development, endorsement, and implementation evaluation processes.

In 2014, NQF convened a panel of experts in healthcare performance measurement and disparities, officially named the Risk Adjustment Technical Expert Panel (hereafter, *Risk Adjustment TEP*), to advance the measurement science of **risk adjustment** in responding to the increased use of performance measures in value-based purchasing (VBP) programs and public reporting. Based on the Risk Adjustment TEP's recommendations, NQF began the initial two-year Social Risk Trial and requested that developers evaluate social risk and demographic factors in risk adjustment models. Guided by the Centers for Medicare & Medicaid Services (CMS), NQF formed the Disparities Standing Committee to both oversee and evaluate the trial. The core belief of the Disparities Standing Committee is that disparities in health and healthcare should be identified and reduced; furthermore, performance measurement should neither lead to increased disparities nor penalize the providers caring for a large proportion of marginalized patients. The 2017 Disparities Standing Committee report titled A Roadmap for Promoting Health Equity and Eliminating Disparities: The Four I's for Health Equity (hereafter, *Health Equity Roadmap*) details how performance measurement and its associated policy levers can be used to reduce health and healthcare inequities.[1]

NQF's Social Risk Trial journey began in 2014 and culminates in 2021 with the publishing of the *Social Risk Trial Final Report* (henceforth, it is called the *final report*). NQF's multiyear Social Risk Trial journey sought to answer the following question: ***"Should quality measures adjust for social risks factors?"*** The final report summarizes the findings and recommendations of a five-year journey that NQF has traveled to test the inclusion of social risk factors in the quality measure development, endorsement, and implementation evaluation processes. Similar to the findings of the First Social Risk Trial Report, NQF acknowledges in the final report that the entirety of healthcare still faces many theoretical, practical, and analytical challenges regarding adjustment for social risks.[2] As healthcare moves towards value-based care and additional VBP models are introduced, the need to advance measurement science and to ensure that performance measurement is fair, accurate, and unbiased is now more important than ever. A concerted, immediate, and actionable effort is required from all performance measurement stakeholders to achieve the following tasks:

- Prioritize the elimination of health and healthcare inequities as a top national health, healthcare, and performance measurement strategy.
- Enact policies that require government agencies, payers, and providers to report patient-level demographic and social risk data (e.g., race and ethnicity, education, and language).

- Utilize the best available existing social risk data elements and proxies for risk adjustment and performance reporting as patient-level demographic and social risk data reporting increases.
- Permanently formalize the submission and analysis of social risk factors for all NQF initial endorsement and maintenance measure submissions and implementation evaluations, including performance rates by social risk factors.
- Permanently formalize the evaluation of the appropriateness and inclusion (when appropriate) of adjustment for social risk factors for each individual measure at the initial endorsement and maintenance submission.
- Redesign and monitor payment models to support health equity and ensure that organizations that disproportionately serve populations with increased social risks can compete in VBP programs.

A key insight for all measure stakeholders is the acknowledgement that risk adjustment has a broader context beyond individual measure evaluation. How measures incorporate adjustment for social risks and how risk-adjusted measures are or will be implemented (e.g., public reporting, payment incentives, advanced payment models, and quality improvement methods, rules, and requirements) have the potential to advance, stagnate, or deter improvements in health outcomes and **health equity**. To make real improvements, we must prioritize and address the root causes of inequities, including social and structural barriers, which are disproportionately faced by underserved populations. Furthermore, real improvement will require better data to make measurement, policy, and resource determinations. Genuine progress will also require collaborative and orchestrated efforts with a private-public sector action plan to define and standardize social risk factors, streamline the collection and sharing of such data, report measure performance for well-defined subgroups, and determine how to fairly use measures to advance health equity.

This final report summarizes comments from multiple public and private stakeholders, including provider, payer, and patient/consumer perspectives, as well as the Disparities Standing Committee members who may have differing opinions on the next steps for social risk adjustment. (Note: Throughout the final report, NQF references adjusting for social risks in *performance measurement*, which encapsulates the continuum of measure development, endorsement, maintenance, and implementation activities.) For readers' convenience, a glossary of relevant terms is provided in Appendix A.

Introduction

The continuing COVID-19 pandemic highlights the long-standing social inequities experienced by our nation's most vulnerable and marginalized populations. The relationships between social, economic, and environmental risk factors to health and health-related outcomes and the unequal burden of these risks across sociodemographic groups (e.g., race, ethnicity, language preference, disability status, sexuality and gender identity, and rural subgroups) have become even more apparent as the pandemic continues to unfold. Among the marginalized populations most affected by the pandemic, inequities are especially alarming for the urban, poor, racial, and ethnic minorities. Black, Hispanic, and Native Americans have much higher rates of infection, hospitalization, and death than White Americans.[3,4] Other marginalized groups include the Asian population, individuals with disabilities, the elderly, and all who are subjected to suffering and loss from root causes that reflect deep inequities in virus exposure, susceptibility, access to testing and treatment,[5] and vaccinations.[6] In a June 2021 study of Medicare beneficiaries with

COVID-19, the odds of 30-day inpatient mortality or discharge to hospice were 11 percent higher for Black patients than for White patients after adjusting for demographic, clinical, and social risks. This difference was largely due to the quality of the hospitals' care delivery.[7]

Other factors increase the impact of COVID-19 on these marginalized populations. Groups with lower **socioeconomic status (SES)** are unlikely to be able to work from home, have a higher dependence on public transportation and childcare, and are more likely to live in dense, residential multiunit dwellings with larger household sizes—all risk factors for exposure and transmission of the virus. Moreover, marginalized groups are already more likely to have a higher prevalence of underlying chronic conditions (e.g., heart disease, diabetes, chronic kidney disease, obesity, and sickle cell disease) that are associated with severe cases of COVID-19.[8] Severe COVID-19 cases lead to increased hospitalization, intensive care unit (ICU) admissions, intubation or mechanical ventilation, and death.

Experiences with discrimination and racism, in both society and healthcare, can lead to mistrust of the healthcare system and increase virus susceptibility through an impaired immune system[9]. Mistrust in the healthcare system may also increase vaccine hesitancy for marginalized people. According to a December 2020 survey, only 62 percent of Black Americans expressed willingness to get vaccinated compared with 73 percent of White Americans.[10] Furthermore, marginalized groups are more likely to be uninsured and underinsured and less likely to have regular access to a primary care doctor. They are also more likely to use an emergency department (ED) for non-life-threatening illnesses and injuries.[11] During the pandemic, an overcrowded ED was the frontline for COVID-19 patients, which increases virus exposure, susceptibility, and transmission. Marginalized groups also face systemic and structural discrimination in care delivery, including reduced admissions and appropriate treatment in hospitals.[12,13]

The COVID-19 pandemic demonstrated and intensified the stark inequities and impact that social risk factors have on healthcare access and health outcomes. A growing body of evidence reports that genetics (30 percent) and healthcare (10 percent) play a relatively limited role in determining one's health, while behavioral (40 percent), social (15 percent), and environmental (5 percent) risk factors together determine approximately 60 percent of one's health.[14–16] These statistics clearly depict that inequities in health and healthcare outcomes are not solely the result of inequities in the care access or quality. Non-healthcare related individual and community factors of care also effect outcomes and should be considered within measure evaluation, payment models and reimbursement methods .[17] Therefore, to know where inequities exist, we first need to report and categorize or stratify performance rates by subgroups and social risks. The influence of social risk factors underscores the importance of recognizing and appropriately analyzing all applicable sociodemographic risk factors in performance measurement to ensure that providers are fairly compared and that the comparisons reflect the providers' populations. Collection and analysis of social risk data will also aid in policy development and implementation specific to the allocation of resources based on population needs. To gain deeper insight, additional analyses will be necessary to understand social risk inequities in measurement by data elements and sources, measure types (e.g., outcome, intermediate outcomes, and process), and measure use. This is the second and final report for the Social Risk Trial, summarizing the findings and recommendations of a five-year journey related to the acceptance, evaluation, and testing of the adjustment of social risk factors for measure endorsement and maintenance.

Context and History

To advance the science of risk adjustment in healthcare performance measures, NQF initiated a series of projects to understand available data sources for characterizing social risk factors and the conceptual and empirical relationships between social risk and various areas of performance measurement. Prior to 2014, NQF's policy prohibited the use of social risk factors in risk adjustment models of measures submitted for endorsement or maintenance. This policy was based on a concern that adjustment could conceal inequities in care and result in lower standards of provider performance. However, the increased use of NQF-endorsed measures in accountability applications, such as setting payment incentives and penalties, informing decisions of individuals seeking care, or purchasers paying for care, brought increased attention to the validity and fairness in comparative conclusions of provider performance. A key function of the 2014 Risk Adjustment TEP was to examine NQF's policy prohibiting the inclusion of social risk factors in the risk adjustment models of measures submitted to NQF for endorsement. After its deliberations, the Risk Adjustment TEP recommended that NQF allow the inclusion of social risk factors in risk adjustment models when conceptual reasons and empirical evidence demonstrated it was appropriate.[18] In conjunction with the Risk Adjustment TEP, the Disparities Standing Committee made 10 recommendations in the *Health Equity Roadmap* that may apply to outcome performance measures, including patient-reported outcome performance measures (PRO-PMs), as well as resource use and process measures. However, the Risk Adjustment TEP stressed the need for *each* performance measure to be assessed *individually* to determine the appropriateness of such adjustment.

First Social Risk Trial

Based on those recommendations, NQF began a two-year trial starting in 2015, requesting measure developers to evaluate social risk factors in their risk models for measures submitted for endorsement and to include their use when appropriate. Measure developers were required to provide information on the conceptual relationship between social risk factors and the outcome of interest. If a conceptual relationship existed, developers were required to conduct empirical analyses to evaluate the strength of the relationship between social risk factors and the outcome of interest. In addition, based on the Risk Adjustment TEP's recommendation, NQF formed a Disparities Standing Committee, which is charged with providing oversight and evaluation of the Social Risk Trial period, as well as recommendations to an NQF cross-cutting organizational emphasis on reducing disparities.

At the conclusion of the initial two-year trial period, NQF published a Social Risk Trial report.[2] This report found that adjusting measures for social risk factors is feasible but challenging. NQF reviewed 303 measures during this period, which included all measure types: outcomes, intermediate outcomes, PRO-PM, process, and resource use. Of the reviewed measures, 93 of them used some form of risk adjustment and 65 of the 93 included a conceptual basis for adjusting for social risk factors. Twenty-one of these 65 measures included social risk factors in the final risk adjustment model. Ultimately, 17 out of the 21 measures were determined to have both a conceptual basis and empirical evidence to support adjustment; thus, they were endorsed with adjustment for social risk. Generally, the rationale provided for not including a social risk factor in the final risk model included small effect size, lack of a statistical change in results among entities, lack of available robust data for social risk factors, and that use of the risk factor did not meaningfully improve the risk model performance or fit.

Questions remained about the most appropriate approach to developing a conceptual rationale and the empirical analysis requirements needed to support social risk adjustment. Specifically, this first Social Risk Trial report found that measure developers used various data and methodologies to test the impact of social risk and highlighted the challenge of obtaining patient-, provider-, and community-level data on relevant social risk factors. The Disparities Standing Committee members also reiterated the need for the most granular information possible to ensure an accurate reflection of a person's social risks, as well as the social risks in the community (i.e., where a person lives). This first trial report noted the importance of addressing all factors (i.e., clinical, demographic, and social) that can influence the performance and validity of a performance measure in reflecting the quality of care delivered. The Disparities Standing Committee highlighted several challenges observed during the first trial, including the lack of empirical relationship for outcomes with a clear conceptual basis, the limited availability of patient- and neighborhood-level data, the use of race and ethnicity as a proxy for SES and social risk more broadly, inconsistency in reporting stratified results, and the limited implementation of measures adjusted for social risks.

Social Risk Factors

According to the National Academies of Sciences, Engineering, and Medicine (NASEM) report titled *Accounting for Social Risk Factors in Medicare Payment: Identifying Social Risk Factors*,[19] social risk factors are the social conditions that may influence health outcomes as much as—or more than—medical care does, including socioeconomic position/status (e.g., income, education, and occupation), race and ethnicity and cultural context, gender[20], social relationships, residential and community characteristics, and health literacy. Within the context of inclusion in a risk adjustment model, these factors must possess a conceptual and empirical relationship to healthcare outcomes of interest, precede care delivery, and refrain from being either a consequence of the quality of care or a characteristic that could be swayed by healthcare interventions.

Race, Ethnicity, and Gender

Based on evolving national tensions related to bias and discrimination, which are exacerbated by the COVID-19 pandemic and other societal inequities' unrest, the demographic factors of *race, ethnicity,* and *gender* are often used as proxies for social risk factors to differentiate population characteristics and performance in healthcare delivery, research, and measurement. Many disparities experts state that these demographic factors do not and should not speak to inherent and measurable social risks, as having the characteristics of a certain race, ethnicity, or gender does not present a risk to health outcomes. Rather, the implicit and explicit discrimination or bias to these demographic factors is a negative social phenomenon that acts as a risk to health outcomes. An unfair and unjust distribution of material resources and opportunity (e.g., health access and housing security) further creates social and structural conditions and systematic discrimination, which may also prompt individual behaviors in response to those conditions and may further heighten outcome inequities for marginalized populations. However, readily accessible social risk factors or methods that assess discrimination and bias experience by individuals or are embedded in structural systems have not been developed. Currently, no social risk factors are available at a larger scale to assess for bias and discrimination. Although they are considered imperfect proxies, the continued use of self-identified race, ethnicity, and gender demographic factors may be warranted until discrimination-related risk factors or social discrimination risk adjustment methods are available to quantify the exposure of inequities or predictors of outcomes in healthcare delivery, measurement, and measure use. In May 2021, the Assistant Secretary for Planning and Evaluation (ASPE) announced it is investigating health equity measurement approaches in VBP programs and quality reporting that encourage providers to target quality improvement and disparities reduction in care delivery.[21]

Effects of Social Risks Data to Patients and Providers

Increasing adjustment for social risks data must also meet practical considerations, such as increasing access to robust data elements within healthcare delivery, providing structures and incentivizing providers to collect social risk data, and prioritizing the use of self-identified and patient-level data elements in adjustment models. There is a growing body of research assessing the effects of the multiple and complex pathways of social risks to healthcare outcomes, independent of medical care and performance measurement. In developing scales or indices of social inequity, the healthcare industry must also explore the ill-defined biological and psychological impacts of social risk on individuals and populations. In 2016, the First Report of the Department of Health and Human Services (HHS) ASPE to Congress found that people with social risk factors had worse outcomes on many quality measures regardless of the provider's performance.[22] As the understanding of the impact of social risk factors evolves, researchers and policy experts are considering whether and how to incorporate social risk factors into the performance measurement process.

Risk adjustment is a statistical approach that allows patient-related factors to be "taken into account" or controlled when computing performance measure scores. Risk adjustment domains in performance measurement include demographic, clinical, functional, and social risk factors. Clinical risk factors include concepts such as comorbidities (e.g., diseases or conditions) or illness severity. Proponents of social risk adjustment have long argued that when certain social factors that are outside of the providers' control are not adequately accounted for, providers that care for a large proportion of marginalized patients may receive disproportionate and compounded financial penalties. An April 2021 *Health Affairs* article titled "Policy Insight: Adjusting Quality Measures For Social Risk Factors Can Promote Equity" states that "Adjusting for social risk avoids misclassifying providers as giving poor-quality care."[23] Furthermore, not adequately accounting for social risks may perversely result in taking resources from the organizations that need them the most[24,25] and may eventually discourage providers from caring for marginalized patients.[26] In contrast, some have raised concerns that because observed differences in outcomes reflect both the influence of social risk factors and true differences in the quality of care, the two are hard to quantitatively separate. As a result, accounting for social risk factors may mask the true quality of care disparities.[27] Amid the COVID-19 pandemic, difficulties in admission to hospitals and inferior quality care, which may or may not be due to bias or discrimination, may have contributed to higher mortality for marginalized populations,[12,13] a trend that requires a public analysis and address. In 2020, ASPE's Second Report to Congress recommended that the presence of existing provider and structural bias (either explicit or implicit) should be assessed and distinguished from patient need or complexity when examining risk factors that may drive differences in performance.[28]

Stratification is another approach to addressing social risk factors in the quality measurement process. In addition to reporting overall performance, stratification consists of computing measure performance rates separately for different strata or groupings of patients based on certain characteristic(s) (i.e., each healthcare unit has multiple performance scores [one for each stratum] rather than one overall performance score).[18] Stratification may be used for demographic, clinical, functional, and social risks.

To reduce inequities, it is critical to first report and document where performance gaps exist. Stratifying public reporting of performance by patient characteristics, including social risk factors, within reporting entities is key to identifying and closing the gaps in health and healthcare inequities.

Data Elements and Resources

The inclusion of risk adjustment of clinical, demographic, and/or social factors in performance measurement, HHS measure reporting programs, and VBP models requires robust data sources that are accessible, standardized, interoperable (i.e., feasible), able to produce consistent results (i.e., reliable), and indicative of an accurate representation of the evidence and practice (i.e., valid). The First Social Risk Trial focused on the assessment of potential data elements that represent the social risk concept of interest for potential risk adjustment. Although numerous laws and regulations (e.g., Patient Protection and Affordable Care Act [ACA] of 2010[25], Improving Medicare Post-Acute Care Transformation Act of 2014 [the IMPACT Act][26], and the Medicare Access and CHIP Reauthorization Act of 2015 [MACRA][27]) encourage the collection of electronic data, developers reported significant challenges incorporating social risk concepts in measure submissions due to the scarcity of **sociodemographic status (SDS)** data and a lack of incentivization for providers to collect said data.[25,26] From the progress of the First Social Risk Trial and with more measure submissions, social risk data elements, and sources to be evaluated, CMS extended NQF's Social Risk Trial for an additional three years.

Data standardization, interoperability, and access are long-standing barriers to acquiring and sharing healthcare information among and between care delivery settings and providers. Although the processes for identifying and capturing data (e.g., machine learning, semantic searching, and natural language processing [NLP]) are improving, this chronic challenge is compounded as the bulk of healthcare information resides in unstructured formats (e.g., messages, voicemail, emails, photos, radiological images, pathology slides, and PDF files). When describing the data and data elements needed for risk adjustment consideration, several essential concepts should be incorporated when identifying available and appropriate data. Primary data (i.e., directly from the source), which are also self-identified (i.e., patient-reported or -inputted), are the preferred data choice when assessing and risk-adjusting for clinical, demographic, and/or social risks. Primary self-identified data sources may include patient portals, surveys, and outcomes assessment tools. Examples of secondary (i.e., information about the patient that is not sourced from the patient) patient-level data include, but are not limited to, census data, clinical data registries, and administrative claims. Proxy data (i.e., data that represent or reflect the patient) is not at the patient level, yet it may infer information about patient risks. Examples of proxy data may include information about the population (e.g., provider-level data, insurance status, and safety-net hospital), community (e.g., disadvantaged area, safe housing), or geography (e.g., ZIP Code, urban/rural, and disadvantaged area).

Social Risks Data

In 2011, ASPE released the *HHS Implementation Guidance on Data Collection Standards for Race, Ethnicity, Sex, Primary Language, and Disability Status*, which disseminates a set of uniform data collection standards for inclusion in surveys conducted or sponsored by HHS as required by Section 4302 of the ACA. The report overview states, "While data alone will not reduce disparities, it can be foundational to our efforts to understand the causes, design effective responses, and evaluate our progress."[31] For access to self-identified, patient-level, social risks data elements for consideration in risk adjustment, two different sources are readily available for provider use: (1) the International Statistical Classification of Diseases and Related Health Problems, Tenth Revision (ICD-10) Z Codes for Social Determinants of Health (SDOH)[32] and (2) Supplemental Data Elements (SDEs) of an electronically specified clinical quality measure (eCQM).[30] The ICD-10 Z Codes include concepts for food, housing, transportation, education, violence, social support, health behaviors, and employment that may have a significant effect on healthcare outcomes; the eCQM SDEs include ethnicity, payer, race, and sex.[32–34] In 2017, the Office of Minority Health (OMH) reported that only 1.4 percent of the 33.7 million total Medicare Fee-for-Service beneficiaries reported Z Codes for SDOH, and the top five focused on homelessness, problems with living alone, disappearance and death of a family member, other specified problems related to psychosocial circumstances, and problems in a relationship with a spouse or partner.[33,34] Of note, each of these social risks reflects minimal to no opportunity for improvement based on healthcare interventions alone. For eCQM SDEs, race, ethnicity, sex, and payer should be submitted with patient-level data to calculate measure performance. In eCQMs, both payer and sex are also reported within the claims data and should be available to consider for adjustment of social risk. Although the reporting of all patient-level data in eCQMs increases, most eCQMs report aggregated performance data at the provider or facility level rather than the individual patient level. This reinforces the existing gap in collecting, stratifying, and considering race and ethnicity in risk adjustment models.

The absence of robust and routinely reported primary patient-level data does not license the performance measurement community to postpone the consideration, testing, and inclusion (if applicable) of social factors in risk adjustment models until these data are widely reported. Rather, the continuum of stakeholders must seek the best social risk data available, including the use of validated and standardized proxy data. Although these data do not always reflect the individual needs of the individual patient in assessing outcomes inequities, they may more accurately and comprehensively reflect the social risk of groups, populations, and communities. (Note: Caution must be exercised when inferring social risks at the patient level when using proxy data.) Examples of publicly available validated sources of community proxy data related to social risk include the Agency for Healthcare Research and Quality (AHRQ) SES Index,[35] the Health Resources & Services Administration (HRSA) Area Deprivation Index (ADI),[36] the HRSA Medically Underserved Areas/Populations (MUA/P),[37] and the Centers for Disease Control and Prevention (CDC)/Agency for Toxic Substances and Disease Registry (ATSDR) Social Vulnerability Index (SVI).[38] **Social vulnerabilities** are potential negative community stressors or effects that are external to health stressors, including natural or human-caused disasters or disease outbreaks.

Implementation of Social Risk Trial Extension

Based on the learnings from the initial trial period and to continue the advancement of measurement science for risk adjustment, CMS funded a three-year extension of the trial to NQF in 2017. This additional period allowed all measure types submitted for endorsement and/or maintenance to continue including social risk factors in their risk adjustment models. The intent of this extension was to allow measure developers time to gain more experience in working with available data sources, building **conceptual models**, and testing empirical approaches to risk adjustment.

In 2017, NQF formed the Scientific Methods Panel (SMP), which consists of methodological experts in performance measurement. The role of the SMP is to evaluate the scientific acceptance of complex measures, including any initial endorsement or maintenance measure submitted with risk adjustment. The SMP also serves in an advisory capacity to NQF on methodological issues, including those related to measure testing, risk adjustment, and measurement approaches.[39] The SMP evaluates and rates the validity and reliability (i.e., the scientific acceptability criteria) of complex measures, and their reviews and ratings are provided to the respective Standing Committees during the Consensus Development Process (CDP). The CDP Standing Committees include clinical experts in specific topical domains (e.g., Surgery and Behavioral Health), along with other important purchasers and consumer stakeholders (e.g., patients, caregivers, and healthcare advocates). The CDP Standing Committees evaluate each measure against five criteria: (1) importance (evidence and performance gap), (2) validity and reliability (taking the SMP's ratings into consideration), (3) feasibility, (4) use and usability, and (5) comparison to related or competing measures. After each measure evaluation has concluded, the CDP Standing Committees make initial recommendations for endorsement. Following this stage of the process, a public comment period regarding the Standing Committee's recommendations occurs. The CDP Standing Committee then discusses any concerns received for potential, "need-to-adjust" recommendations received from the post-evaluation public comments. The final CDP Standing Committee recommendations proceed to NQF's Consensus Standards Approval Committee (CSAC) for the final endorsement decision.[40,41] Initial endorsement evaluations may include recommendations from the NQF Measure Applications Partnership (MAP), an NQF multistakeholder group that guides CMS on the selection of performance measures for federal health programs, including incentivization for performance measurement, measure reporting programs, and VBP payment models.

The Disparities Standing Committee plays an integral role in NQF's multiyear Social Risk Trial journey to answer the following question: ***"Should quality measures adjust for social risks factors?"*** They also provide guidance to the SMP and CDP Standing Committees on the consideration of social risk adjustment to ensure that social risk adjustment does not inadvertently worsen healthcare inequities and that inequities are addressed throughout the Social Risk Trial. As previously discussed, CMS funded the Disparities Standing Committee, which led the development of the 2017 *Health Equity Roadmap* that focused on ways in which the United States (U.S.) healthcare system (i.e., providers and payers) can use more traditional pathways to eliminate disparities. The report also identified areas in which collaboration and community partnerships could expand healthcare's role in addressing inequities. In particular, the roadmap lays out the *Four I's for Health Equity* that healthcare stakeholders can employ to reduce inequities: (1) *identify* and prioritize reducing health disparities, (2) *implement* evidence-based interventions to reduce disparities, (3) *invest* in the development and use of health equity performance measures, and (4) *incentivize* the reduction of health disparities and achievement of health equity.

Results of Trial Period 2

NQF employed a multipronged analytic approach to evaluating the second trial period, including the following focuses: (1) deliverables of the extended three-year trial, (2) measure submissions during this trial period, (3) increased availability of social risk data elements, (4) evaluating advancements in social risk data elements not previously submitted or submitted for new purposes, and (5) "lessons learned" from the first trial period. The importance of the evaluation was reinforced by the public outcry against the pandemic-related access, testing, treatment, and vaccination inequities of marginalized populations, as well as other contemporary discrimination events.

Methods and Findings

For the Second Social Risk Trial, NQF staff collected, compiled, and analyzed data that considered and included adjustment for social risks for six measure review cycles during the fall of 2017 through the spring of 2020 in new and endorsed measures. These data included general measure information (e.g., NQF #, title, and measure type) and submission responses to questions regarding considered and included risk adjustment and social risk data elements. NQF's process for identifying the social risk factors that measure developers considered for risk adjustment included an analysis of measure submission content relating to social risk factors. Appendix B outlines the social risks data submission fields within the Measure Information Form (MIF) and the Testing Attachment that demonstrate the importance and scientific acceptability of conceptualizing and including social risk factors in final risk-adjusted measure specifications. For example, requested evaluation documentation asks for available patient-level data (e.g., income, education, and language) or patient proxy data in community-level characteristics (e.g., percentage of vacant housing and crime rate).

Trial information was collected throughout the steps of measure evaluation steps, including the Intent to Submit (ITS), the SMP review, Standing Committee measure evaluations, post-comment evaluations (i.e., only for "consensus not reached" measures), and after CSAC endorsement recommendations. Table 1 provides a breakdown of measures by type and percent for adjustment for social risks. To evaluate the second trial period, NQF staff tracked the following submission and evaluation questions:

- Which measures had a conceptual rationale for the inclusion of social risk factors?
- What approaches were used to establish a conceptual rationale (e.g., literature versus data driven)?
- Which social risk variables were available and analyzed?
- What was the final inclusion of social risks for measures submitted with a conceptual rationale?
- If social risk factors were included in the risk model, was stratification also included?
- Technical and methodological evaluations and discussions of adjusting for social risks by the Disparities Standing Committee, Risk Adjustment TEP, SMP, Standing Committees, and the CSAC

Table 1 provides a detailed breakdown of measures by measure type and percent of measures that were risk-adjusted. A total of 125 measures were adjusted for clinical, demographic, and/or social risks, the majority of which were outcome (94; 75 percent) and resource use measures (14; 11 percent). The analysis included a total of 317 measures: 111 (35 percent) new measures submitted for initial endorsement and 206 (65 percent) measures submitted for continued endorsement.

Table 1. Second Social Risk Trial Measure Submission Totals and Percent by Type and Risk Adjustment

Submissions by Measure Type	Number of Measures	Percent of Total Measures (N 317)	Number of Submissions Considered for Risk Adjustment by Clinical, Demographic, and/or Social Risk Factors	Percent of Submissions Considered for Risk Adjustment by Clinical, Demographic, and/or Social Risk Factors (N 125)
Outcome (includes Intermediate Outcome and PRO-PM)	135	43%	94	75%
Process	142	45%	8	6%
Structure	6	2%	2	2%
Resource Use	17	5%	14	11%
Composite	13	4%	7	6%

Submissions by Measure Type	Number of Measures	Percent of Total Measures (N 317)	Number of Submissions Considered for Risk Adjustment by Clinical, Demographic, and/or Social Risk Factors	Percent of Submissions Considered for Risk Adjustment by Clinical, Demographic, and/or Social Risk Factors (N 125)
Efficiency	4	1%	0	0%
Total	**317**	**100%**	**125**	**100%**

Of the 317 measures submitted, 135 (43 percent) were outcome or intermediate outcome measures (including intermediate outcome measures and (PRO-PMs), 142 (45 percent) were process measures, six (2 percent) were structure measures, 17 (5 percent) were resource use measures, 13 (4 percent) were composite measures, and four were efficiency measures (1 percent). Of the 125 measures considered for clinical, demographic, and/or social risk adjustment, 120 measures (95 percent) provided a conceptual rationale for the potential impact of social risk factors. A conceptual rationale supporting the inclusion of social risks in the risk adjustment model for 74 measures (59 percent), as depicted in Table 2. Appendix C lists the 38 measures (30 percent) that included individual social risk factors in the final risk model, including race and ethnicity, insurance, relationship status, SES, income, disadvantaged areas, and other factors.

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.*

For measures that did not adjust for social risk factors in the final specification, several developer themes emerged when submissions included a conceptual rationale to adjust for social risk:

- Small effect size (i.e., quantifiable differences), insignificant coefficients (i.e., weak outcome predictors) of social risks, or marginal changes in performance scores. Some developers noted that existing clinical factors captured most of the risks. This applied to the risk model testing approach. Clinical and social risk 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 masking quality of care disparities when adjusting for social risks
- Lack of available patient, provider, and/or community-level social risks data to analyze

Analysis of Social Risk Data Elements

For the second trial, NQF utilized a coding schema for routinely submitted risks factors commonly included in the measure submission documents. The coding schema groups similar variables (see Table 3) with the bolded social risk concepts (in the left column) submitted in individual measures that were defined with specific variables (in the right column).

Table 3. Social Risk Concepts and Submitted Variables

Submitted Social Risk Concepts	Examples of Submitted Social Risk Variables
Race and Ethnicity	• Race • Ethnicity • White vs. non-White • African Americans • Each race separately • Hospital proportion of non-White patients
Insurance	• Insurance product • Payment source • Insurance status • Dual eligibility • Payer • Medicare/Medicaid
Relationship Status	• Percentage of single female with child • Relationship of veteran's next-of-kin (e.g., spouse) • Marital status • Lives alone
Socioeconomic Status (SES)	• AHRQ SES Index
Income	• Percentage on public assistance
Disadvantaged Area	• Residents below federal poverty line in home ZIP code • Area Deprivation Index (ADI)
Other	• Hospital safety-net status • Home ownership • Regional healthcare provider shortage • Disability/disability status • Undocumented immigrant • History of social risks (e.g., substance abuse) • Gender • Health literacy
Social risk concept not required	• Education • Language • Rural/Urban • Employment status

To be clear on the process of requesting social risks or performance disparities information, NQF’s measure submission form does not prescribe categories for identifying social risk factors to developers. Rather, these forms use an open-ended text box that allows each developer to define, consider, test, and include (if applicable) the social risk factors based on the evaluation and pilot guidance. This approach presented taxonomy challenges for developers in the second trial analysis considering the variability of responses, the lack of clear definitions for each risk factor, and the open question of whether some social risk factors served as proxies for others. It also highlighted the need to establish clear and standardized guidance for the social risk variables used within measurement development.

As mentioned earlier, these concepts and variables were commonly included within the measure submissions; however, many of the social risk factors cited in the literature as critical to health and outcomes (e.g., access to transportation, loneliness, and food insecurity/access to healthy food) are not readily available, tested, or included in any of the measures or models.[42,43] Also, the consideration of social risk factors strongly depends on accessible, routine, and robust data. The most common social risk factors considered consist of insurance, race and ethnicity, education, and "other" (e.g., hospital safety-net status, disability status, gender, and health literacy). Insurance and race/ethnicity were the two most common factors included in adjustment models, with greater than 50 percent of both factors being considered for risk adjustment inclusion. A summary of the social risk factors considered and included in measure submissions is presented in Table 4.

Table 4. Summary of Social Risk Factors Considered and Included for Risk Adjustment

Social Risk Factor	Percent of risk adjusted measures that considered the social risk factor*	Percent of risk adjusted measures that included the social risk factor⁺
Insurance	59%	14%
Race and Ethnicity	51%	8%
Socioeconomic Status (SES)	32%	2%
Education	19%	6%
Employment	17%	1%
Other	12%	7%
Income	11%	0%
Relationship Status	9%	2%
Rural/Urban	9%	0%
Language	7%	3%
Disadvantaged areas	5%	0%

**Some measures considered more than one social risk factor for risk adjustment. Hence, percentages are more than 100.*

⁺Most measures did not include social risk factors in the final specification. Hence, percentages are less than 100.

Data collection methods also play a role in data accuracy. If the primary social risks data are not consistently collected, a proxy (i.e., data reflecting the characteristics of the measured population) may be used. The varied use of primary and proxy data may have an impact on testing results and comparisons across measures if data elements are not consistently applied or if they do not closely reflect the measured population. NQF's examination of the social risk concepts also shows that several variables may overlap into other social risk concepts. For example, within the *SES* concept, the AHRQ SES Index variable could also be considered as a *disadvantaged area* variable in a separate submission. The AHRQ SES Index is a proxy variable based on the nine-digit ZIP code and is composed of population percentages with Supplemental Nutrition Assistance Program (SNAP) SNAP benefits, in poverty, on unemployment, on public assistance, and single females with child. The *insurance* variable is frequently substituted for a patient-level SES variable, and each of the variables could be defined differently based on the measure submission. One instance is the social risk variable of *payer* in the concept of *insurance*, which may be defined by health plan names, payer categories, or insurance status.

Discussion

Including social risk concepts and variables in risk adjustment models in performance measurement will require additional clarity, guidance, and guardrails to truly understand inequities in healthcare and health outcomes. The volume of measure submissions that considered adjusting for any risk (i.e., clinical, demographic, and/or social) was 39 percent (125 out of 317), which increased significantly from the first trial period. Ultimately, 38 (12.0 percent of 317 and 30.4 percent of 125) measures in the Second Social Risk Trial included social risk in the final risk model submissions. In this report, NQF provides more details for the analyses of race and ethnicity within measure submissions and the changes to variables within measures between the first and second trial periods. The analysis also reveals the added complexities to endorsement and maintenance evaluations as measure developers replace variables with open-ended submission requirements as more social risk data become available, risk adjustment methods advance, and testing methods improve.

Race and Ethnicity, Bias, and SES

The 2014 Risk Adjustment TEP highlighted the multifactorial and mediating effects of race and ethnicity on health outcomes, specifically that structural and situational discrimination exists in healthcare delivery from all stakeholders. The rationale of inclusion or exclusion of race and ethnicity in the final risk adjustment model underscores the ongoing debate and challenge in considering race and ethnicity in measure development, as well as payment model implementation. As articulated by the 2017 NASEM report titled *Accounting for Social Risk Factors in Medicare Payment*, “[R]ace and ethnicity are related but conceptually distinct constructs that are dimensions of a society’s stratification system by which resources, risks, and rewards are distributed.”[44] Race and ethnicity are strongly associated with health and healthcare outcomes through many, often entangled, mechanisms. In the absence of available and consistent data on SES, positions, or experiences of racism and discrimination, race and ethnicity are often used as a proxy for such underlying social risks. However, many studies have shown that race and ethnicity possess an independent empirical association with the outcome of interest, even when SES variables are also accounted for in risk adjustment;[45,46] therefore, race and ethnicity are not solely proxies for SES.

It is important to recognize that unquantifiable effects, independent of SES, are cumulative in nature, including the differences in genetics and biology; the long-term exposure to social, economic, and environmental-induced stress; the direct, negative physical effects of decreased immunity for marginalized individuals and communities exposed to racism and discrimination; and the body’s neurohormonal response to stress pathways that induce chronic psychological and behavioral responses. Therefore, race and ethnicity are not the cause of structural, systematic, and institutional discrimination and bias and healthcare inequities. As previously stated, racial and ethnic bias and discrimination are negative human and social phenomenon as reactions to race and ethnicity. In practice, however, many data sets lack robust SES variables, and because no measure of healthcare bias exists, race and ethnicity have been used as proxy variables in risk adjustment models. To urgently address structural discrimination in populations and unintendedly avoid misclassifying provider care delivery performance, the best available social risks data should be employed throughout performance measurement activities.

For the measures in the second trial, more than half of the risk-adjusted measures considered race and ethnicity as risk factors; however, only 10 of those measures eventually included primary race and ethnicity data in the final risk adjustment models, which are derived from registry data sources. NQF #0369 *Standardized Mortality Ratio for Dialysis Facilities* is the only measure that used both claims and registry patient-level data to adjust for social risk. The risk model in NQF #0369 is adjusted for age, gender, race, (e.g., White, Black, Asian/Pacific Islander, Native American, or other), and ethnicity (e.g., Hispanic, non-Hispanic, or unknown). Race and ethnicity were collected through an extensive, national End-Stage Renal Disease (ESRD) patient database. None of the other claims-based measures included race or ethnicity in the final risk adjustment models. (Note: This observation is based on measures submitted in the second trial and not NQF's entire portfolio of measures.)

In the case of NQF #0369, the developer cited literature that suggested a potential protective factor of the Black race and Hispanic ethnicity that could mask a disparity in quality of care.[47,48] The other nine measures that included race and ethnicity in the risk adjustment models represent risk-adjusted measures of surgery results, which all stated that race and ethnicity were not included as an SES factor nor as a surrogate for such factors. As the developer of NQF #3534 *30-Day All-Cause Risk-Standardized Mortality Odds Ratio Following Transcatheter Aortic Valve Replacement (TAVR)* explicitly stated in the rationale, "Race has an empirical association with outcomes and has the potential to confound the interpretation of a hospital's outcomes, although the underlying mechanism is unknown (e.g., genetic factors, differential effectiveness of certain medications, rates of certain associated diseases that are not accounted for in the risk models, and racial differences in vessel anatomy and suitability for bypass). This is similar to the well-known fact that female gender is associated with worse outcomes and is included in our CABG [Coronary Artery Bypass Grafting] models (e.g., their coronary arteries tend to be smaller and more challenging for anastomoses [surgical connection])."[49]

Changes Over Time

An additional layer of analysis conducted by NQF was a review of specific measures from the first trial period (2015–2017) compared with the second trial period (2017–2021). The objective of this analysis is to reflect on the evolution of social risk factors being considered, tested, and included in quality measurement. The three measures chosen for analysis were selected because they represent different measure types, settings, and developers. Each measure included adjustment for social risk factors in the final measures. NQF's internal review highlighted some differences between submissions and specific observations regarding the evolution of collecting and analyzing data from the first to the second trial. Table 5 shows a side-by-side comparison of three measures.

These measures demonstrated a number of changes between the two submission periods. For example, in NQF #0076 *Optimal Vascular Care*, the consideration of social risk factors was expanded in the second trial period. The factor of insurance product was included as an SES proxy in 2016, which was changed to the HRSA ADI in 2019 as an SES proxy for ***r***ace, Hispanic ***e***thnicity, preferred ***l***anguage, and country of ***o***rigin (RELO) data[36]. The developer's rationale stated that an empirical analysis of the RELO data showed differences in vascular outcomes based on race and ethnicity and age; however, when used in the risk adjustment model, the developer asserted that it was impossible to separate the patient's environment from the clinic's contribution to the disparity in the outcome (i.e., the impact of provider-implicit bias, which can influence interactions with patients). Provider-implicit bias refers to the unknowing influence of unconscious prejudice and the contribution to outcomes and disparities through one's own cultural stereotypes about individuals. It can affect one's understanding and actions in an unconscious manner and lead to unintended biases in decision making.

Table 5. Comparative Analysis for Select Measures

NQF Measure # and Title	Social Risk Factors (Trial 1)	Social Risk Factors (Trial 2)
NQF #0076 Optimal Vascular Care	**Review Period: 2016** • Insurance product	**Review Period: 2019** • Insurance product • Area Deprivation Index (ADI)
NQF #0369 Standardized Mortality Ratio for Dialysis Facilities	**Review Period: 2017** • Race • Ethnicity • Sex • Dual eligibility • Employment status • ZIP code-level ADI	**Review Period: 2020** • Race • Ethnicity • Sex • Employment status six months prior to End-Stage Renal Disease (ESRD) • ZIP code-level ADI • Medicare coverage
NQF #2651 Consumer Assessment of Healthcare Providers and Systems (CAHPS® Hospice Survey)	**Review Period: 2016** • Primary payer • Respondent education • Variable indicating language of survey administration and respondent's home language	**Review Period: 2019** • Decedent [Deceased] education • Primary payer • Caregiver respondent education • Caregiver respondent language

For NQF #0369 *Standardized Mortality Ratio for Dialysis Facilities* and NQF #2651 *Consumer Assessment of Healthcare Providers and Systems (CAHPS® Hospice Survey)*, the social risk factors analyzed changed between the two submissions. For NQF #0369, the standardized mortality ratio adjusted for race, ethnicity, sex, dual eligibility, employment status, and ADI in the 2017 submission. However, the 2020 submission for Medicare coverage was replaced with dual-eligibility status. Patient-level SES data were obtained from both Medicare claims and administrative data and evaluated based on the empirical association with the outcome, the support in published literature, and whether it related to disparities in care. The developer also noted that for the 2020 measure, the ADI elements were derived from census data, which are calculated using the variables of unemployment rate (%), median family income (rescaled as [income-60,000]/10,000), income disparity, families below the poverty level (%), single-parent households with children (<18 [%]), and home ownership rate (%). Similar results were observed for NQF #2651 using the specific variables of decedent education and caregiver respondent's education, which were chosen for analysis based on testing because they were strongly associated with outcomes. In the rationale for this change, the developer simply stated the methodological change in defining the social risk variables from the 2017 to 2020 submissions. The submission does not discuss whether these changes substantiate a material construct shift in the specification, the implications of redefining the variables to shifts in performance, nor the implementation implications to VBP program stakeholders for all aspects of performance measurement.

Recommendations

The second trial period provided the Disparities Standing Committee with the opportunity to review and analyze additional findings and provide final recommendations concerning social risk adjustment. In this report, NQF outlines measurable and actionable recommendations that will necessitate collective and individual collaboration across the landscape of performance measurement stakeholders to improve health, healthcare, and outcomes inequities. These key recommendations chart a path forward and forge a future state that addresses past and present policy, process, and care delivery gaps because advancing is the only just and equitable option. All performance measurement stakeholders (e.g., NQF, policymakers, payers, measure developers, providers, researchers, and others) must collaborate, share the responsibility to remediate the entrenched status quo, and act without delay. We are charged to prioritize and address the root causes of health and healthcare inequities in performance measurement, including social and structural barriers, which are disproportionately suffered by marginalized populations. To accomplish this vital mission, we need access to robust, primary self-identified patient-level data to make performance measurement, policy, and resource determinations. Action should also include implementing the tenets of the *Health Equity Roadmap*: to identify, prioritize, and implement evidence-based interventions that eliminate health and healthcare inequities.

Key Recommendations for All Stakeholders

Building upon the *Health Equity Roadmap*, all stakeholders should harness the passion, partnerships, and productivity demonstrated in healthcare's heroic efforts in managing the never-before experienced COVID-19 pandemic. The first step is to develop an intensive and rigorous private-public sector action plan to define, standardize, collect, and analyze social risk factors. In convening health disparities, policy, payer, measures, and health information technology experts, a culminating action plan should accomplish the following tasks:

- Commit to identifying, prioritizing, and implementing evidence-based interventions that eliminate health and healthcare inequities
- Outline a framework and levers to streamline the collection, stratification, and sharing of such clinical, demographic, and social data from self-identified, primary, and proxy sources for use across the performance measurement landscape
- Develop actionable and measurable milestones, responsible parties, and deliverables for each stakeholder group, including challenges and mitigation strategies
- Outline policy recommendations to incentivize social risk data collection and reporting and the analysis of social risk, including unintended consequences that affect patients, providers, payers, and the public throughout performance measurement
- Standardize social risk concepts and variables for use throughout performance measurement to drive meaningful and consistent progress in eliminating health and healthcare inequities
- Report performance for populations and subgroups of well-defined categories in endorsement, maintenance, and measure application evaluations using measures to advance health equity
- Invest and incentivize reporting social risk data throughout performance measurement

Make elimination of health and healthcare inequities a top priority. This includes aligning resources with equity promotion and creating an explicit description of how quality measurement, through incentive programs, can be used to promote health and healthcare equity.[1,50] This may involve partnering with measure developers to develop and pilot measures of social risks that can be used to align capitated payments with healthcare needs, as well as quality measures that are specifically designed to incentivize equity in health and healthcare. Meaningful progress will require an action plan and accountability among partners (e.g., NQF, measure developers, measure users, payers, healthcare organizations, and providers).

To reduce inequities and disparities, it is critical to first report and document where they exist. As theCOVID-19 pandemic crisis revealed striking inequities, African American healthcare leaders spoke up to “broadly record and report demographic data on virus spread and mortality. This data is critical to mobilize resources to the hardest-hit, most underserved areas.”[51] However, the Social Risk Trial has highlighted the continuing challenges of the lack of person-level data on social risks. **The Disparities Standing Committee recommends that demographic and stable social risk factors, such as race and ethnicity, education, and language, be consistently collected by government agencies, including, but not limited to, HHS, payers, and providers.** Currently, CMS collects self-reported race and ethnicity data for some Medicare beneficiaries in certain settings through instruments such as the Minimum Data Set (MDS) and the Outcome and Assessment Information Set (OASIS). For the remaining Medicare beneficiaries, an imputed (i.e., proxy) variable has been developed but is often found to be inaccurate for Hispanics and Asians when compared to self-reported data sources.[52] For this reason, the NASEM report recommended that CMS collect race, ethnicity, and language data directly from Medicare beneficiaries at the time of enrollment. Although payers have expressed strong interest in collecting information on race, ethnicity, and language, studies have shown that such data are largely incomplete.[53,54] An analysis of the Healthcare Effectiveness Data and Information Set (HEDIS) data found that the largest gaps in race data occurred in commercial and Medicaid plans, while all plan types reported incomplete data on ethnicity and language.[55] Support from private and public stakeholders is needed to develop an action plan that defines racial and ethnic categories, streamlines the data collection, and reports overall and stratified measure performance. Robust data collection will require commitment from policymakers, payers, providers, and other performance measurement stakeholders. To keep patient-level social risk data current, NQF recommends that these data be collected at enrollment and updated at least annually for all payers.

Furthermore, **the Disparities Standing Committee recommends that *each* performance measure be assessed *individually* to determine appropriateness of adjustment for social risk factors.** Although the Committee acknowledges the convenience of having clear cut-off guidance on adjustment decision by measure type, it also appreciates the complexity of measurement in the real world. For example, some process measures, such as populations receiving COVID-19 vaccinations and the percentage of patients refilling a drug prescription, could well be affected by social risks, such as structural discrimination from access, marginalized trust in the healthcare system, low income, or education. Based on known methods to capture social risks data, each measure could also be explored for potential variables and data sources to increase data completeness. Once again, the collective performance measurement community is essential; the developers need data from providers to test, convening bodies to endorse, and payers to include the measures in reporting programs and payment models.

Recommendations for NQF

Consensus standards endorsed by NQF are used for measuring and publicly reporting on the performance of different aspects of the healthcare system and are widely viewed as the "gold standard" for the measurement of healthcare quality. NQF’s endorsement processes are designed to ensure that measures are evidence-based, scientifically rigorous, patient-centric, and may be used on care delivery to improve outcomes without undue implementation burden. Within HHS’ annual pre-rulemaking process, CMS notes that, "If a candidate measure is not yet endorsed by the consensus-based entity with a contract under Section 1890 of the Act (currently the National Quality Forum [NQF]), then a rationale for the use of the measure must be included in the notice."[56] Implementation of NQF-endorsed measures within HHS measure-reporting programs and/or advanced payment models (APMs) places weighted responsibility on NQF measure evaluation processes, which includes reducing the effects of health and healthcare inequities.

Measure Submission and Evaluation

- **NQF should make the consideration and analysis of social risk factors a permanent component of the requirement for endorsement and maintenance measure evaluation.** Recognizing the various challenges highlighted during the Social Risk Trial, the Disparities Standing Committee encourages NQF to leverage the new 2021 CMS-funded NQF Risk Adjustment TEP to develop concrete guidance for measure developers. This should include instructions on conceptualizing and operationalizing social and functional risk factors; identifying appropriate data sources, variables, and specification; conducting exploratory analyses to select potential social risk factors for the outcome of interest; testing for reliability and validity; and finalizing the risk adjustment model for endorsement review.
    - The measure submission and evaluation processes should continue to require measure developers to provide information on the conceptual relationship between social risk factors and the outcome of interest, along with a description of the source(s) of data on social risk factors. If a conceptual relationship exists, developers should be required to conduct empirical analyses to the extent feasible and to evaluate the strength of the relationship between social risk factors and the outcome of interest. NQF should provide more granular-level guidance on the development of conceptual models.
    - Clear guidance in endorsement requirements is needed on whether clinical, demographic, and social risk factors should be considered differently for risk adjustment, such as the order of factors being entered into the risk adjustment model and inclusion criteria (e.g., significance of coefficients and improvement of model fit). This could vary depending on the measure type, settings, and the intended use.
    - Measure developers should discuss the potential consequences of inclusion of social risk factors (e.g., attenuated disparities, improved survival rates within the population, improved access to care, etc.) to allow for follow-up of potential unintended consequences as appropriate. For example, inclusion of social risk factors in a risk adjustment model may reduce or eliminate unfair financial penalties or unfair public reporting (e.g., star ratings) for safety-net providers. Reducing the unfair penalties or public reporting will, in turn, preserve financial resources and/or patient volume for those providers, allowing providers to maintain or expand staffing or service provision, including outreach services in the communities served. As a result, it will enhance access to care and potentially reduce or eliminate healthcare and health disparities. Furthermore, when adjustment enables comparison of providers with the same patient mix, it will help to identify high-performing providers who take care of socially complex patients.
- **NQF should continue to track social risk factors used in measure submissions and should review, analyze, and promote new data sources as they become available.** With the wealth of data collected through measure submission, NQF should keep the aforementioned developer guidance as a living document with annual updates on new data sources for social risk factors and new analytical approaches.

- **NQF should work with the SMP, Standing Committee members, and the Risk Adjustment TEP to update the evaluation guidance and set clear expectations for the inclusion of social risk factors in risk adjustment, the use of stratification, and the reporting of disparities in care across population groups.**
    - The evaluation guidance should include a requirement obligating the developer to include a core set of parameters (e.g., availability) for a descriptive assessment of key social risk factors that are part of the development of the measure.
    - Clear evaluation and testing guidelines should be established for modifying social risk data elements in risk adjustment models in consecutive submission and maintenance evaluations, including the assessment of potential substantive or material content shifts with the modification.
    - Stratification by social risk factors under validity testing should continue to be a requirement for all measures. NQF should provide clear guidance on how stratification specifications (e.g., categories and combinations of social risk factors) should be included in the measure submission form and require that they be aligned with the intended use of the measure.
    - Currently under the performance gap criterion (1b.), NQF expects developers to report disparities in care and performance across population groups. NQF could clarify and specify this requirement further by defining subgroup categories, particularly by racial/ethnic categories, gender, and SES. In this way, NQF can track changes in disparities over time.
    - Specific changes to measure submission and testing requirements may be phased in over a two-year period to allow measure developers time to plan and gather data as needed.
- **The Risk Adjustment TEP should continue to explore measurement science related to adjusting for social risk through established performance measurement pathways and relationships.** The following steps offer further guidance as it pertains to this exploration:
    - Conduct a detailed analysis of the submitted measures for the First and Second Social Risk Trials for considered and included factors by project, domain and cross-cutting topic areas, measure type, critical data element, primary and proxy data uses, geographic designations, multiple uses and definitions for social risk factors, intended use, and other analyses.
    - Conduct a pilot with measure developers within development activities to explore and identify data sources, collection methods, and analyses of social risk data and risk adjustment methods.
- **NQF should increase the technical assistance capacity and available resources to developers and the performance measurement community to support the development and submission of measures that consider and include measures that adjust for social risk, particularly for emerging measure developers.**
    - NQF should develop a resource guide to assist performance measurement stakeholders in identifying data resources to consider, test, and include adjustment for clinical, demographic, and social risk factors in measures and measure programs, with an emphasis on supporting the needs of providers and measure developers.
    - NQF should routinely request and trend feedback from measure developers regarding their ability to both collect new data and use available data for social risk factors.
    - NQF should also create an open platform that allows for exchange of information, best practices, and use/usability among developers (e.g., data platform/database, discussion forums for developers, or informational web meetings).

Effects of Measure Implementation

- When performance measures are adjusted for social risk factors and used for accountability applications (e.g., public reporting and pay-for-performance), **NQF should work with purchasers, policymakers, and other users of performance measures to assess and track the potential impact on marginalized populations and the providers/health plans serving them to identify unintended consequences and ensure alignment with program and policy goals**. The Disparities Standing Committee stated that even a statistically marginal change can result in real-world financial impact, and developers should consider how misclassification analyses of provider rankings before and after adjustment can be analyzed. More important than a retrospective review for unintended negative consequences is the proactive design of performance measurement systems and their use to advance health equity. Such a proactive approach is the message from our key recommendation to all stakeholders: "Make elimination of health and healthcare inequities a top priority."
- The rationale to include or exclude race and ethnicity in a final risk adjustment model underscores the ongoing debate and challenge in considering race and ethnicity in measure development and performance measurement. As it has been established, multiple expert bodies state that these alternative proxies do not quantify discrimination based on race and ethnicity. Until more suitable social risk indices are available, these temporary social characteristics are used to identify social risk. This highlights the duty to **assess measure programs and VBP models for the impacts of magnitude, access, outcomes, incentivization, and unintended consequences on patients, populations, practice, and providers when using race and ethnicity as proxies for social risk.**

Health Equity Roadmap

- **NQF should implement the Disparities Standing Committee's recommendations from the *Health Equity Roadmap* in concert with payers, funders, measure developers, measure users, and healthcare organizations.** These stakeholders aim to use measurement as the foundation for developing, piloting, and implementing various payment strategies and comparative data analyses that are explicitly designed to promote health and healthcare equity.
    - NQF should also consider facilitating a summit in partnership with CMS centered on promoting health and healthcare equity through new payment models and public reporting platforms. The purpose of the summit should be to reach consensus on goals, strategies, roles, and accountability among the various stakeholders.

Recommendations for Policymakers and Payers

Resource distribution is at the core of avoiding, creating, and perpetuating structural discrimination and racism, given that race and SES are interwoven. HHS, CMS, and other policy and payer stakeholders are in a unique position to increase the access, reporting, stratification, consideration, inclusion, and incentivization of social risk data and adjusting for social risk when appropriate. **Through their actions, dramatic, expedient, and judicious use of policy, regulations, and programmatic requirements (e.g., public reporting, payment incentives, APMs, and quality improvement), must support the elimination of health and healthcare inequities.** Policymakers and payers should consider the following recommendations to accomplish this mission:

- Evaluate and redesign (when necessary) measure program and VBP model requirements to support health equity and ensure that organizations that disproportionately serve populations with increased social risk can compete in VBP programs
- Evaluate the impact and unintended consequences to patients and providers when adjusting (or not adjusting) for clinical, demographic, and social risks:

  - In existing and planned endorsment, measure application, reporting and incentization programs, and VBP models
  - When developers modify risk adjustment variables or models from previous submissions
  - When measures or risk adjustment models are modified from the endorsement and maintenance evaluation based on program or VBP model implementation requirements
- Evaluate the development, testing, and implementation of data elements, risk tools, risk adjustment methods, and implementation evaluation processes that aid in defining and quantifying health, healthcare, and societal inequities and discrimination that decrease outcomes
- Establish and institute payment codes for the collection of social risks data by healthcare providers (e.g., physicians, advance practice nurses, pharmacists, physician assistants, case managers, social workers, community health workers, or other providers), and incentivize providers for reporting data in measure reporting, health programming, and VBP models.

Recommendations for Measure Developers

Developers should consider the impact of social risks on healthcare outcomes to ensure accurate reporting of care quality that reduces harm and unintended consequences to marginalized patients and their providers.

- Developers also have an obligation to advance measurement science. While other stakeholders share the responsibility of reducing the burden of measure development and implementation activities, developers should strive to meet the essence of submission requirements to adequately assess population needs and provider performance in a fair and just manner.
- The Disparities Standing Committee encourages measure developers to carefully conceptualize pathways or methods for considering how social risk factors affect the measure being developed. Too often a data-driven approach is used, and important potential risk factors may be omitted without due consideration. Developers are encouraged to seek NQF's technical assistance for adjustment for social risk use in measure submissions.
- Developers should always stratify the performance data and the numerator outcome of interest by social risk factors, in addition to considering risk adjustment.

Recommendations for Providers

Providers bare a heavy burden in measure reporting and quality improvement with duplicative and often nonproductive administrative activities associated with performance measurement. Providers may be financially penalized when treating marginalized populations with heavy social risk burdens that require additional care for which they may not be reimbursed. This may be compounded by other financial disincentives in reporting programs and VBP models when measures and program requirements are not evaluated for financial impacts on providers with heavy risk populations.

Providers share the responsibility of collecting, reporting, analyzing, and improving care delivery based on their populations' needs.

- In providing care that is patient centered, improving outcomes warrants the collection and analysis of self-identified primary, clinical, demographic, and social risk data to tailor care to patient needs.
- Partner with payers and performance measurement stakeholders to provide feedback on the utility, stratification, and burden of data collection and reporting to identify resources needed to collect, report, stratify, and analyze data by clinical, demographic, and social risk variables.
- Incorporate community-level, proxy social risk data in the absence of self-identified primary data to tailor healthcare delivery that targets population-based needs.

- Examine and identify policy, procedural, practice, and personal explicit and implicit biases that may contribute to health and healthcare inequities and remediate modifiable findings as able.

Recommendations for Other Stakeholders (Researchers and Research Funders)

- **A concerted effort among funders and researchers is needed to develop a standardized set of social risk variables that builds upon established data sets, allows the field to move beyond adjustment by proxy identifiers, and recognizes which variables or measures are best suited for identifying social risk factors.** The standardized set should consider the following aspects:
    - Specific data standards and governance that could be aligned with other initiatives, such as existing electronic data initiatives (e.g., ensuring demographic data are self-reported and at the person level), and be leveraged in ongoing efforts with existing tools that screen for basic social determinants and incentivize adoption in various settings
    - Social risk factors at a sufficiently granular level to capture the impact on outcomes (e.g., data at nine-digit ZIP or census block for the provider and the patient, as well as person- and encounter-level data, including functional status)
    - Data at the community level that should capture demographics and an array of social risk factors (e.g., homelessness, food insecurity, unemployment, lack of public transportation, neighborhood unemployment, and availability of affordable housing)
- **Researchers and funders should work together to build a better understanding of the consequences of failing to adjust or stratify for social risk factors.** As several studies have shown that some measures are quite sensitive to social risk stratification or adjustment,[57–59] it is critical to support a stronger infrastructure for measuring and publicly reporting how social risk adjustments are conducted for quality measures and in payment and public reporting programs. Critical building blocks may include the following elements:
    - Connect important social risk factors to evidence-based interventions that address those factors so that their influence can be mitigated in the real world to reduce disparities in care delivery and outcomes.
    - Build transparency in public reporting and encourage results to be stratified to highlight inequities.
    - Support more education and learning opportunities on socio-ecological models of health.
    - Study the most effective ways to incorporate social factor risk adjustment and stratification in public reporting and payment systems to proactively advance health equity.
    - Ensure sustained funding to support integration of social risk factor considerations into practice and subsequently measure their impact on access to care and health outcomes.

Public Comments on the Draft Report Recommendations

NQF opened a 30-day NQF member and public comment period from April 19–May 18, 2021. This period offered commenters the opportunity to provide feedback on initial findings and recommendations for applicable performance measurement stakeholders. During that time, nine organizations and individuals submitted a total of 22 total comments, from which NQF identified four public comment themes:

- NQF should formalize requirements of adjusting for social risks.
- Social risks data are pivotal to reversing inequities.

- Social risks extend beyond measure endorsement.
- Stakeholders request detailed social risks guidance.

Following the commenting period, the Disparities Standing Committee held a meeting to discuss comments received and provide any additional feedback on the draft report and recommendations. Guidance on prioritizing actionable recommendations and gaps would aid in outlining the next steps for policy and lever planning.

NQF Should Formalize Requirements of Adjusting for Social Risks

Stakeholders demonstrated overwhelmingly positive support for adjusting for social risks in performance measurement. NQF should formalize and consistently adhere to requiring developers to report and stratify performance data by demographic, clinical, functional, and social risks for each measure submission to differentiate performance among and between measure populations. Although the measurement community must engage many other levers to make a demonstrable effect in reducing health and healthcare inequities, all parties clearly agree this recommendation is an actionable and needed step to addressing health and healthcare inequities in performance measurement.

Social Risks Data Are Pivotal to Reversing Inequities

Standardized, validated, interoperable, accessible, measurable, and actionable data are the mainstay for all aspects of quality measurement development, testing, endorsement, implementation, and maintenance.

- Public and private stakeholders should collaborate and fund a national social risks data-reporting infrastructure that uses standardized and interoperable data elements for collection, aggregation, and risk adjustment. Funding would expedite development of a social risk data infrastructure for use by patients, providers, payers, and other parties and purposes, such as measure performance stratification and adjustment for social risks. The infrastructure should also house nonhealth and healthcare data. For example, The Office of the National Coordinator for Health IT (ONC) has announced new health IT demographic electronic health record (EHR) certification requirements to standardize race and ethnicity data collection.[60] Also, the Robert Wood Johnson Foundation (RWJF) has established a new commission to tackle how national health data are collected, shared, and used, including age, race, ethnicity, gender, income, disability, and other factors.[61]
- Providers should also be incentivized to collect and report social risks data as a fundamental step to reversing societal, health, and healthcare inequities as well as identify population-defined social risks needs and care delivery quality. CMS reported that in 2017, a unique Medicare beneficiary count for reported ICD-10 SDOH Z codes represented 1.4 percent of total beneficiaries.[34] Incomplete, inaccurate, and inconsistent social risks data can negatively affect the distribution of social resources and payments to providers caring for marginalized populations.
- Measure and VBP programs and payment models should be examined and continuously monitored for any unintended consequences of tying payment to adjusted measures, unadjusted measures, and inappropriate risk adjustment. Similarly, measure implementation requirements and measure construct modifications, specifically modifications to social risks that are not tested by developers nor evaluated by NQF, should be closely monitored. Care delivery

reimbursements and high-stakes incentive programs should pay providers who treat patients with high clinical, demographic, functional, and social risk needs. Inequitable payments, incentives, and resource allocations to providers who care for intensive social needs risk their ability to continue to care for marginalized populations.

- The social risk concept of *insurance* is often used to define SES and lack of healthcare access, which is significantly higher in Black and Hispanic populations. For example, with Federally Qualified Health Centers (FQHCs), the type of insurance, lack of insurance, "churn" of insurance, or underinsurance holds heavy real-world measure effects for safety net clinics when measures do not account for social risks. Unadjusted measures in VBP programs may have negative unintended consequences, such as excluding or removing safety net providers from Accountable Care Organizations (ACOs). Also, the Merit-Based Incentive Payment System (MIPS) 30 percent interoperability requirement and EHR limitations and delays disproportionately and financially harm safety net clinics, thus resulting in lower public reporting performance that lowers their Medicare revenue. A recent Medicare Shared Savings Program (MSSP) change may require data inclusion and performance reporting for all patients via eCQMs, which encourages ACOs with large incentives to potentially remove safety net clinics from their ACOs.
- Social risks data elements are accessible yet very minimally collected. This includes ICD-10 Z-Codes for SDOH; eCQM SDEs; race, ethnicity, and language (REaL); nine-digit ZIP codes used to determine community-based healthcare access, food insecurity, transportation, violence, and broadband; dual eligibility; low-income status (LIS); and other data elements, such as disability status, housing instability, social isolation, sexual orientation, gender identity, rural/urban, and service setting. Social risk data elements that capture actual and proxy risk factors will aid in assessing performance and care delivery gap. In considering and testing the best current data available, measurement science and risk adjustment will advance with fairer assessments of provider performance based on population risks and needs.

Social Risks Extend Beyond Measure Endorsement

The Social Risk Trials were limited to recommending adjustment for social risks in quality measures, yet the history of the project and responses received demonstrate depth and breadth beyond measure endorsement.

- **Developers** should evaluate the effects and unintended consequences to patients and providers when adjusting (or not) for social risks before and after implementation in incentive programs. Of the most prominent themes are the use, usability of social risks in payment models, and the unintended consequences to patients and providers of including risks. Adjusting for social risks for an individual measure does not tell the "whole story", and discussions of usability (i.e., quality versus accountability) and measure use cannot be separate conversations from the question of adjusting for social risks.

- **Providers** should collect and compile social risks data to identify and tailor care delivery to patient-defined needs and reduce quality of care inequities. Social risk data are the heart of patient-centered care delivery. Care delivery needs, including social risks, are defined by individual assessments at the patient level, yet individual patient data that are aggregated and analyzed offer insights into population-based clinical and social needs, as well as health programming priorities across provider practices. Population priorities and care gaps are the targets of data-driven measure reporting, quality improvement, and incentivization programs.

- **Researchers** should explore the effects and unintended consequences of social risks to patient outcomes in measure programs and payment models to ensure providers caring for populations with increased social risks can be incentivized and compete in VBP programs fairly.

Stakeholders Request Detailed Social Risks Guidance

- Measurement stakeholders should widely consider NQF a prominent national leader to advancing health equities and that adjusting for social risks is only one facet of a wide social risks landscape. In maintaining its leadership role, NQF should challenge the measurement community to move beyond current measure development limitations and understand that quality measurement, in its current utility, is a "color blind" concept that is not used as a lever to achieve health and healthcare equity.
- NQF should catalogue available and tested social risk data for reporting and risk adjustment consideration, identifying standardized, new, and emerging data sources and application. By scanning and cataloguing available data by social risk concepts for consideration and inclusion in adjustment models, and the reasons for not including others, NQF is taking its next steps. As an example, the Risk Adjustment TEP considered testing the social risk concepts of *education* and *income* to identify whether the two factors "cancel out" or are endogenous in risk adjustment models, as one may hypothesize that individuals with more education have higher incomes. This TEP also conducted the Risk Adjustment Guidance Final Environmental Scan of the variables used in the adjustment of social risks.
- NQF should provide developers guidance and technical assistance for data feasibility, collection standardization, and risk adjustment uses. NQF should further engage and collaborate with other external measurement partners as conceptual frameworks continue to change, widen, and deepen over time. For example, CDC has used the **Social Vulnerability Index** (SVI) for policies and the RWJF Culture of Health Action Framework, which identifies priorities, organized under distinct action areas, for driving measurable, sustainable progress and improving the health and well-being of all people.[62]
- The undeniable messages received from the Second Social Risk Trial is that adjustment for social risks is not solely about risk adjustment technical guidance and that risk adjustment is more than a measure-by-measure concept. NQF's unique neutral convener role could lead national discussions to further understand the consequences of how measures are used in programs, from use perspectives within programs, payment models, and for providers among and between varied populations, including previously implemented measures.

Patient Perspectives on Social Risks

The perceptions of patient and consumer groups emphasize their request of measure performance stratification by demographic and social risks. To them, these data help provide care choice information with the ability to differentiate care between providers' care for patients with varying social risks using stratification (rather than risk adjustment), specifically seeking performance data that represent their own patient priorities and characteristics. Further, patients and consumers want to define their demographic characteristics and healthcare priorities rather than have them represented with community proxy data. This was especially true for marginalized, vulnerable, and low-volume populations, individuals, and communities with perhaps the greatest social risk needs. Patients and consumers also want social risks data that are collected with care delivery processes to be utilized by nonhealthcare social and community stakeholders to support and improve the overall quality of life and reduce societal inequities. They also wanted to understand how and why social risks data are used and how resources for health and nonhealthcare-related community services that affect health are allocated.

Actionable Next Steps From the Second Social Risk Trial

Many questions and challenges remain that are beyond the scope of this project, yet the undeniable and unjust differences in health and healthcare quality for marginalized populations demand immediate remedy. Based on NQF's hallmark 2017 Disparities Standing Committee report titled A Roadmap for Promoting Health Equity and Eliminating Disparities: The Four I's for Health Equity, performance measurement and its associated policy levers may be instrumental in reducing health and healthcare inequities. Based on the four *I's* of the *Health Equity Roadmap,* the performance measurement community should perform the following tasks:

- **Identify** and prioritize reducing health disparities.
- **Implement** evidence-based interventions to reduce disparities.
- **Invest** in the development and use of health equity performance measures.
- **Incentivize** the reduction of health disparities and achievement of health equity.

NQF Actionable Priorities and Recommendations

- Finalize, ratify, and implement the Risk Adjustment TEP and technical guidance for adjustment for social and functional status activities, including the development of concrete guidance on social risk data elements, resources, methods, and guidance for how to consider, test, and include adjustment for social risk in measure submissions, when applicable.

- Request developer accountability for the anticipated risk adjustment technical guidance for each individual measure submission, if ratified.

- Request developer accountability for submitting both stratified measure performance rates and potential negative effects of the measure and use in implementation based on key social risk factors for each individual measure evaluation, if ratified.

- Request additional support for increased technical assistance to developers to conduct data feasibility, collection standardization, and risk adjustment use activities, including instruction for risk model development, testing, and implementation throughout measurement stakeholders.

Public and Private Stakeholder Actionable Priorities and Recommendations

- Review and update measure, program, and payment model implementation requirements based on an evaluation of social risks to align payment for social risks and population-based needs so that providers who care for large proportions of marginalized patients may be reimbursed and incentivized and compete fairly in VBP programs. Review all policy, reimbursement, and payment reform levers within CMS' purview to address structural racism head on and advance health equity, including the allocation of health-related community resources based on patient-reported population needs.

- Disseminate the final report and collaborate with other HHS agencies and discuss how health equity is defined, experienced, and operationalized, as well as each agency's role in advancing both health and healthcare equity. For example, CMS may collaborate with CDC, which collects health data, and HRSA, which provides healthcare services. Here at this stage, CMS and HRSA would further align goals and policies, especially for FQHCs with optional functioning and funding. Other HHS agencies that would significantly benefit from enhanced collaboration related to the findings of the final report include the Substance Abuse and Mental Health Services Administration (SAMHSA), which funds behavioral and mental services, and the CMS Office of Minority Health (OMH), whose mission is to improve the health of racial and ethnic minority populations through the development of health policies and programs that will help eliminate health disparities.[63]

Conclusion

The conclusion of the NQF Social Risk Trial highlights many theoretical, practical, and analytical challenges that the entire healthcare field still faces in approaching social risk adjustment. As the U.S. moves towards value-based care, the need to advance the field and ensure that performance measurement is fair, accurate, and unbiased is greater than ever.

The Disparities Standing Committee provided clear recommendations for all stakeholders, including NQF, as a pathway to bridge the earlier work from the First Social Risk Trial to the more recent Second Social Risk Trial. Ultimately, the recommendations centered on several key concepts. These included making the elimination of health and healthcare inequities a top priority, ensuring the analysis of social risk factors as a permanent element of the NQF endorsement process, and encouraging NQF to update the evaluation guidance with clear expectations for the consideration and inclusion of social risk factors. In addition, the need for stratification, as well as risk adjustment, decreases the risk of masking inequities and increases the accuracy of reporting by considering the impact of social risk on healthcare outcomes. Lastly, the Disparities Standing Committee advocated for systematic tracking, analysis, and support regarding the impact adjustment for clinical, demographic, and social risks in performance measures when used in reporting and VBP programs, as well as the use of these measures to proactively advance health equity in public reporting and payment systems specifically designed to reduce health inequities.

The Disparities Standing Committee noted the importance of clearly articulating the differences between developing new measures that assesses bias and discrimination, stratifying measure performance by social risks, and adjusting for social risks, with each having separate intended implications for advancing health equity. A new social risk measure would attempt to quantify unfair treatment based on unjust structural or systematic discrimination or individual behaviors. Stratifying performance assists with care delivery choices by identifying care gaps for marginalized populations. In adjusting for social risks, the focus is protecting providers who are caring for our most vulnerable population so that they may continue to serve these communities.

Using the recommendations and results from both Social Risk Trials, the Risk Adjustment TEP will finalize the examination of functional and social risks data and modeling approaches, which suggests the exploration of electronic data sources to support social risk adjustment as a critical next step. Furthermore, quality of care for the most vulnerable may be further mediated by functional status.

Therefore, functional status-related risk adjustment should be explored within quality measurement, in addition to social risk factors.

NQF will continue to seek to advance measurement science in this important area by convening a panel of experts in risk adjustment methodologies, conducting an environmental scan of the current approaches of risk adjustment at the individual measure level and payment- or public-reporting program level, and developing step-by-step technical guidance for measure developers that includes best practices for functional and social risk factor adjustment in measure development.

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Appendix A: Glossary

Composite Measure[1] – A composite performance measure is a combination of two or more component measures, each of which individually reflects quality of care into a single performance measure with a single score.

Conceptual Model[2] – Evidence-based models that describe a potential pathway between social risk factors and health outcomes. At the individual level, a social risk factor may influence a person's health through one or more of the pathways described in the models.

Efficiency Measure[1,3] – These measures combine the concepts of resource use and quality. NQF has defined *efficiency* broadly as the resource use (or cost) associated with a specific level of performance with respect to the other six Institute of Medicine (IOM) aims of quality for a healthcare system: (1) safe, (2) effective, (3) patient-centered, (4) timely, (5) efficient, and (6) equitable.

Health Equity[9,10] is the principle underlying a commitment to reduce—and ultimately eliminate—disparities in health and in its determinants, including social determinants. Pursuing health equity means striving for the highest possible standard of health for all people and giving special attention to the needs of those at greatest risk of poor health based on social conditions.

Inequity[4,5] – *Inequity* and *disparity* are two distinct and interdependent concepts. Disparity simply implies a difference or a lack of parity. In contrast, inequity implies "a state of being unfair." Equity in healthcare requires that "patients who are alike in relevant respects be treated in like fashion and that patients who are unlike in relevant respects be treated in appropriately unlike fashion." This report addresses social risk inequities in healthcare measurement and the implications of measures adjusted for social risk in care delivery.

Intermediate Clinical Outcome Measure[3] – An intermediate clinical outcome measure assesses the change in physiologic state that leads to a longer-term health outcome (e.g., assessment of blood pressure control that may lead to decreased heart attacks or strokes).

Outcome Measure[1] – An outcome measure assesses the outcome or health status of a patient (or change in health status) resulting from healthcare—desirable or adverse.

Patient-Reported Outcome (PRO)[1,6] – A PRO is any report of the status of a patient's (or person's) health condition, health behavior, or experience with healthcare that comes directly from the patient without interpretation of the patient's response by a clinician or anyone else. Key PRO domains include health-related quality of life, functional status, symptom/symptom burden, experience with care, and health-related behaviors (e.g., the patient self-reported response to having "little interest or pleasure in doing things" in a 0 to 3 scale in the Patient Healthcare Questionnaire [PHQ-9], which grades the severity of Major Depressive Disorder [MDD] symptoms).

Patient-Reported Outcome Measure (PROM)[1] – A PROM is an instrument, scale, or single-item measure used to assess a PRO concept as perceived by the patient, which is obtained by asking the patient to directly self-report their response (e.g., PHQ-9 MDD symptom questionnaire).

Patient-Reported Outcome-Based Performance Measure (PRO-PM)[1] – A type of outcome measure that uses aggregated data from a PROM to assess for a clinical action or finding of an accountable healthcare entity (e.g., percentage of patients in an accountable care organization whose depression scores improved as measured by the PHQ-9 in the last 12 months).

Performance Measure[7] – Numeric quantification of healthcare quality for a designated accountable entity, such as a hospital, health plan, nursing home, clinician, etc.

Process Measure[1] – Process of care is a healthcare-related activity performed for, on behalf of, or by a patient. Appropriate Use is a type of process measure that has been used to evaluate procedures and medical technologies. Appropriate use measures are neither cost/resource use measures nor efficiency measures.

Resource Use Measure[1] – A resource use measure counts the frequency of use of defined health system resources; some may further apply a dollar amount (e.g., allowable charges, paid amounts, or standardized prices) to each unit of resource use.

Risk Adjustment (also known as case-mix adjustment)[7] – Statistical methods to control or account for patient-related factors when computing performance measure scores; methods include multivariable modeling, indirect standardization, or direct standardization. These methods can be used to produce a ratio of observed to expected, a risk-adjusted rate, or other estimate of performance.

Social risk factor[8] – These factors are the social conditions that may influence health outcomes as much as—or more than—medical care does, including socioeconomic position/status (e.g., income, education, and occupation); race/ethnicity and cultural context; gender; social relationships; and residential and community context, as well as health literacy. These factors must possess a conceptual and empirical relationship to healthcare outcomes of interest, preceding care delivery, and refrain from being a consequence of the quality of care or something the provider can manipulate. They must also meet practical considerations.

Social vulnerability[11] – The potential negative effects on communities caused by external stresses on human health. Such stresses include natural or human-caused disasters or disease outbreaks. Reducing social vulnerability can decrease both human suffering and economic loss.

Sociodemographic Status (SDS)[7] – A broad term referring to a variety of socioeconomic (e.g., income, education, and occupation) and demographic factors (e.g., age, race, ethnicity, and primary language).

Socioeconomic Status (SES)[7] – Broadly conceptualized as one's relative position within society. Socioeconomic status has traditionally been defined and measured by education, income, and occupation.

Stratification[7] – This process consists of computing performance scores separately for different strata or groupings of patients based on some characteristic(s) (i.e., each healthcare unit has multiple performance scores [one for each stratum] rather than one overall performance score).

Structure Measure[1] – Structure of care measures assess the capacity or infrastructure of a healthcare organization or clinician to provide high quality healthcare.Glossary References

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Appendix B: NQF Social Risk Factor Measure Submission Details

From the NQF Measure Information Form (MIF), references to social risk factor data collection include:

- 1b. Performance Gap: Demonstration of quality problems and opportunity for improvement, i.e., data demonstrating: Disparities in care across population groups.
    - 1b.2. Provide performance scores on the measure as specified (current and over time) at the specified level of analysis… Describe the data source including number of measured entities; number of patients; dates of data; if a sample, characteristics of the entities include.
    - 1b.3. If no or limited performance data on the measure as specified is reported in 1b2, then provide a summary of data from the literature that indicates opportunity for improvement or overall less than optimal performance on the specific focus of measurement.
    - 1b.4. Provide disparities data from the measure as specified (current and over time) by population group, e.g., by race/ethnicity, gender, age, insurance status, socioeconomic status, and/or disability. (This is required for maintenance of endorsement.)
- De.6. Non-Condition Specific: If no or limited data on disparities from the measure as specified is reported in 1b.4, then provide a summary of data from the literature that addresses disparities in care on the specific focus of measurement.

From the NQF Testing Attachment, references to social risk factor data collection include:

- 1.6. How many and which patients were included in the testing and analysis (by level of analysis and data source)? (identify the number and descriptive characteristics of patients included in the analysis (e.g., age, sex, race, diagnosis); if a sample was used, describe how patients were selected for inclusion in the sample).
- 1.8 What were the social risk factors that were available and analyzed? For example, patient-reported data (e.g., income, education, language), proxy variables when social risk data are not collected from each patient (e.g., census tract), or patient community characteristics (e.g., percent vacant housing, crime rate) which do not have to be a proxy for patient-level data. e.g., census tract), or patient community characteristics (e.g., percent vacant housing, crime rate) which do not have to be a proxy for patient-level data.
- 2b3. RISK ADJUSTMENT/STRATIFICATION FOR OUTCOME OR RESOURCE USE MEASURES
- 2b3.1. What method of controlling for differences in case mix is used?
    ☐ No risk adjustment or stratification
    ☐ Statistical risk model with Click here to enter number of factors risk factors
    ☐ Stratification by Click here to enter number of categories risk categories
    ☐ Other, Click here to enter description Click here to enter description
    - 2b3.1.1 If using a statistical risk model, provide detailed risk model specifications, including the risk model method, risk factors, coefficients, equations, codes with descriptors, and definitions.
    - 2b3.3a. Describe the conceptual/clinical and statistical methods and criteria used to select patient factors (clinical factors or social risk factors) used in the statistical risk model or for stratification by risk (e.g., potential factors identified in the literature and/or expert panel; regression analysis; statistical significance of p<0.10; correlation of x or higher; patient factors should be present at the start of care) Also discuss any “ordering” of risk factor inclusion; for example, are social risk factors added after all clinical factors?

- 2b3.3b. How was the conceptual model of how social risk impacts this outcome developed? Please check all that apply: developed? Please check all that apply:
  ☐ Published literature ☐ Internal data analysis ☐ Other (please describe)
- 2b3.4a. What were the statistical results of the analyses used to select risk factors?
- 2b3.4b. Describe the analyses and interpretation resulting in the decision to select social risk factors (e.g., prevalence of the factor across measured entities, empirical association with the outcome, contribution of unique variation in the outcome, assessment of between-unit effects and within-unit effects.) Also describe the impact of adjusting for social risk (or not) on providers at high or low extremes of risk.
- 2b3.5. Describe the method of testing/analysis used to develop and validate the adequacy of the statistical model or stratification approach (describe the steps—do not just name a method; what statistical analysis was used)

Appendix C: NQF Measures Adjusted for Social Risk

NQF #[a]	Title	Variable(s) Included	Association	Stratification
0005	Consumer Assessment of Healthcare Providers and Systems CAHPS® Clinician & Group Surveys (CG-CAHPS)-Adult, Child	Education[b]	Significant	No
0006	CAHPS Health Plan Survey, Version 5.0 (Medicaid and Commercial)	General health status, mental health status, age, and education	Significant	No
0076	Optimal Vascular Care	Insurance product and area deprivation index	Significant	No
0114	Risk-Adjusted Postoperative Renal Failure	Asian, Black, Hispanic ethnicity	Significant	No
0115	Risk-Adjusted Surgical Re-exploration	Asian, Black, Hispanic ethnicity	Significant	No
0129	Risk-Adjusted Postoperative Prolonged Intubation (Ventilation)	Asian, Black, Hispanic ethnicity	Significant	No
0130	Risk-Adjusted Deep Sternal Wound Infection	Asian, Black, Hispanic ethnicity	Significant	No
0131	Risk-Adjusted Stroke/Cerebrovascular Accident	Asian, Black, Hispanic ethnicity	Significant	No
0166	HCAHPS® (Hospital Consumer Assessment of Healthcare Providers and Systems) Survey	Education, primary language spoken at home	Significant	No
0167	Improvement in Ambulation/Locomotion	Payment source	Significant	No
0174	Improvement in Bathing	Payment source	Significant	No
0175	Improvement in Bed Transferring	Payment source	Significant	No
0176	Improvement in Management of Oral Medications	Payment source	Significant	No
0177	Improvement in Pain Interfering With Activity	Payment source	Significant	No
0258	Consumer Assessment of Healthcare Providers and Systems (CAHPS) In-Center Hemodialysis Survey (ICH CAHPS)	Education, primary language spoken at home, and help with completing the survey	Significant	No

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[a] *The table includes both NQF-endorsed and nonendorsed measures.*

[b] *Mean scores are risk-adjusted in the CAHPS database and by users who choose to risk-adjust their results. Optional for users; top box scores presented in CAHPS public online reporting are not case-mix adjusted.*

NQF #[a]	Title	Variable(s) Included	Association	Stratification
0369	Standardized Mortality Ratio for Dialysis Facilities	Employment status six months prior to ESRD, sex, race, ethnicity, Medicare coverage	Significant	No
0425	Functional Status Change for Patients With Low Back Impairments	Payment source	Significant	No
0517	CAHPS Home Health Care Survey	Education, language in which the survey was completed, whether the patient lives alone, survey answered by a proxy	Significant	No
0541	Proportion of Days Covered (PDC): Three Rates by Therapeutic Category	Dual eligibility, disability	Significant	No
0696	STS CABG Composite Score	Race/ethnicity	Significant	Yes
0729	Optimal Diabetes Care	Insurance product, area deprivation index	Significant	No
1463	Standardized Hospitalization Ratio for Dialysis Facilities (SHR)	Sex	Significant	No
1623	Bereaved Family Survey (Deferred)	Survey respondent's relationship to the decedent	Significant	No
2496	Standardized Readmission Ratio (SRR) for Dialysis Facilities (Not Endorsed)	Sex, age	Significant	No
2548	Child Hospital Consumer Assessment of Healthcare Providers and Systems (Child HCAHPS) Survey	Parent education, language preference	Significant	No
2561	STS Aortic Valve Replacement (AVR) Composite Score	Race	Significant	No
2563	STS Aortic Valve Replacement (AVR) + Coronary Artery Bypass Graft (CABG) Composite Score	Black, Hispanic ethnicity	Significant	No
2651	CAHPS Hospice Survey (Experience With Care)	Caregiver education	Significant	No
3452	Access to Independence Promoting Services for Dual-Eligible Beneficiaries (Withdrawn)	Education	Significant	Yes
3461	Functional Status Change for Patients With Neck Impairments	Payment source	Significant	Yes

NQF #[a]	Title	Variable(s) Included	Association	Stratification
3474	Hospital-Level, Risk-Standardized Payment Associated With a 90-Day Episode of Care for Elective Primary Total Hip and/or Total Knee Arthroplasty	Dual eligibility	Significant	No
3514	Intracranial Hemorrhage or Cerebral Infarction (Withdrawn)	Dual eligibility	Significant	Yes
3534	30 Day All-Cause, Risk-Standardized Mortality Odds Ratio Following Transcatheter Aortic Valve Replacement (TAVR)	Race/ethnicity	Significant	No
3538	All-Cause Emergency Department Utilization Rate for Medicaid Beneficiaries Who May Benefit From Integrated Physical and Behavioral Healthcare (Not Endorsed)	Disability status	Significant	No
3559	Hospital-Level, Risk-Standardized Patient-Reported Outcomes Following Elective Primary Total Hip and/or Total Knee Arthroplasty (THA/TKA)	Health literary	Significant	No
3565	Standardized Emergency Department Encounter Ratio (SEDR) for Dialysis Facilities	Sex	Significant	No
3566	Standardized Ratio of Emergency Department Encounters Occurring Within 30 Days of Hospital Discharge (ED30) for Dialysis Facilities	Sex	Significant	No
3575	Total Per Capita Cost (TPCC)	Sex and dual eligibility	Significant	Yes

Appendix D: Public Comments

Comments were solicited for the draft *Social Risk Trial Final Report* from NQF members and the public in six posed questions in a 30-day public comment period from April 19, 2021, through May 18, 2021. NQF received 22 member and public comments, including representation from the two patients/consumer (one individual and one organization), four providers, and three payer organizations for the overall draft report and recommendations. NQF received 22 member and public comments, including representation from the two patients/consumer, four providers, and three payer organizations for the overall draft report and recommendations. The received comments are categorized by posed public comment questions. The commenter name, organization, comment, and proposed responses are listed.

1. What general comments, feedback, or additional recommendations do you have for the report?
2. In the context of demographics versus social risk factors (e.g., race versus racism), what approaches are used to assess social risk in health care performance measurement?
3. What other mechanisms, sources, or recommendations will increase the inclusion of social risk data throughout performance measurement?
4. What additional recommendations do you have for the National Quality Forum (NQF) to advance social risk adjustment and stratification?
5. What mechanisms or other recommendations could payers and government agencies employ to address social risks?
6. How could providers, researchers, and other stakeholders support demographic and social risk factors to improve health and healthcare equity?

Commenter	Comment	Proposed Response
Betty Chu, Henry Ford Health System	**Question 1 comment:** The Henry Ford Health System strongly supports the recommendations made by the Disparities Standing Committee in its report on the Social Risk Trial. Addressing the social determinants of health for our patients is a key component of effective and sustainable clinical and community-based care. Within our system-wide Diversity, Equity, Inclusion and Social Justice 3-Year Strategic Plan, we have committed to systematically capturing the social needs of our patients, identifying disparities, and developing innovative solutions to address these barriers to care. We would emphasize the following points in indicating that support: The rationale for including social risk factors in risk-adjustment models is the same as that for including clinical risk factors - accurate and unbiased measurement of quality requires the statistical adjustment of factors affecting a score that are NOT quality of care.	We appreciate the commenter's support on the recommendations included in the NQF Social Risk Final Report. We agree that risk adjustment, when done appropriately, would not mask disparities nor excuse poor quality care. We share the same concerns that all risk factors (i.e., demographic, clinical, functional and social risks) should be considered and reviewed consistently

Commenter	Comment	Proposed Response
	Adjustment for social risk factors will neither mask disparities nor excuse poor-quality care. The initial report by the NQF Expert Panel in 2015 and published papers by other authors since then have shown how adjustment can be done in a way that controls for non-quality factors while leaving the "quality signal" used to compare entities unaffected. Monitoring and reducing health disparities at the societal level is a very important goal, Unadjusted measures, or stratified measures, can be used for the former; fairly and accurately measuring and reporting the quality of care provided by health care entities, adjusted measures can be used for the latter. Many safety-net providers are providing above-average or excellent care; these accomplishments are masked in the absence of social risk adjustment, so that those providers are not identified for public reporting and consumer choice purposes nor rewarded appropriately in financial incentive programs. We are very concerned about the number of measures coming through the NQF endorsement process where one or more social risk factors are clearly identified as significantly affecting a measured health outcome, but then the decision is made by the developer or the measure steward to not include those factors in the final risk adjustment model. These decisions are not being made in the same way for clinical risk factors, and one core principle that should be permanently adopted by NQF is that clinical and social risk factors should be treated the same in developing risk-adjustment models.	across measures. This is the premise of the need for specific and actionable recommendations. The NQF Risk Adjustment Technical Expert Panel (TEP) was established in 2014 and initiated a project to provide additional concrete guidance on when and how to adjust for social and functional risks in 2020. Please refer to the Risk Adjustment Guidance project page for more information.
Janice Tufte, Hassanah Consulting	**Question 1 comment:** I feel the Social Risk draft II covers most of the issues that need to be addressed when looking forward to better capturing and utilizing and balancing social risk factors and clinical concerns. I think a couple of issues could be added into the document 1) Polypharmacy I believe should be called out in regards to clinical care regular medication management as well as reconciliation as medications can cause new patient condition concerns that are important and might greatly impact the health of patients	We appreciate the commenter's extra suggestions on the data sources and risk factors (i.e., demographic, functional, clinical, and social risks). The NQF Risk Adjustment Technical Expert Panel (TEP)

Commenter	Comment	Proposed Response
	through toxicity 2) The best care possible that involves important shared decision making as well as patient centric individualized care taking into account the patient's medical state and social risk factors	was established in 2014 and initiated a project to provide additional concrete guidance on when and how to adjust for social and functional risks in 2020. The Risk Adjustment Environmental Scan Final Report provides a comprehensive list of key social risk factors that have been used by measure developers and researchers and identified future opportunities.
Erin O'Rourke, America's Health Insurance Plans (AHIP)	**Question 1 comment:** America's Health Insurance Plans (AHIP) commends the National Quality Forum (NQF) for its leadership on the challenging issue of accounting for social risk factors in performance measurement. The shift to a healthcare payment system based on value necessitates the underlying measures be as accurate, fair, and unbiased as possible to ensure the promotion of health equity, that healthcare disparities are not inadvertently worsened, and that outcomes improve for all. We support NQF's recommendation that all stakeholders commit to identifying, prioritizing, implementing evidence-based solutions to address disparities. For far too long, discrimination and systemic racism have served as barriers to health equity for minority and underserved communities. Health insurance providers know that ending these barriers is key to an equitable health care system. AHIP concurs with the importance of eliminating disparities and recognizes that measurement is a powerful tool for both identifying disparities and motivating change. We agree better data on patients' social determinants of health is essential to improving both care and performance measurement. Better data will support stratification to identify disparities, confirm patients' needs are being met, and ensure value-based payment models and alternative payment models are fair to providers serving	We appreciate the commenter's support on the recommendations included in the NQF Social Risk Final Report. We share the concerns of the urgent need for data collection of social risks to improve population-based healthcare inequities and fairly assess provider performance. In this report, we recommended policymakers and payers to "establish and institute payment codes for the collection of social risks data by healthcare providers (e.g., physicians, advance practice nurses, pharmacists, physician

Commenter	Comment	Proposed Response
	vulnerable populations. We recognize the challenge of the current lack of data and encourage NQF and measure developers to look to the work of the Gravity Project and others to increase the availability of interoperable data on SDOH—particularly those socioeconomic barriers that are not permanent but can emerge and abate but greatly impact health care access and health outcomes (e.g., food insecurity, housing instability, transportation barriers, social isolation, etc.). Underscoring these challenges is the need to address issues of trust about the sharing of potentially sensitive data and to ensure that individuals maintain agency in providing their demographic information. We encourage stakeholders to work with consumers to promote understanding of why this data is being collected, how it will be used, and the need to remove policy and operational barriers to data collection. Finally, we support the recommendation to make the consideration and analysis of social risk factors a permanent component of the NQF endorsement process. Allowing consideration of all potential factors that could influence the results of a measure will ensure the accuracy of NQF endorsed measures. The trial period has shown the value of these discussions and the importance of continuing to allow the consideration of social risk factors.	assistants, case managers, social workers, community health workers, or other providers), and incentivize providers for reporting data in measure reporting, health programming, and VBP models." We believe paying for reporting is the first step to the right direction.
Deborah Paone, SNP Alliance	**Question 1 comment:** The SNP Alliance is a national leadership nonprofit organization of health plan organizations, representing 2 million enrolled beneficiaries. Special needs plans (SNPs) are specifically authorized and designed to meet special care needs of Medicare beneficiary groups with high care and condition complexity with additional requirements beyond general Medicare Advantage plans. We have advocated for years for attention to social risk issues in quality measure development, testing, and use in performance evaluation. We've surveyed SNPs and offer an issue brief found at: snpa-briefing-paper-on-sdoh-paone-final-6172019.pdf (snpalliance.org). The SNP Alliance supports the recommendations of the Disparities Standing Committee in Social Risk Trial Report #2, especially: Making social risk factor analysis required as a permanent component for NQF endorsement Measure alignment—particularly across settings and programs. Clear expectations—and cohesion across NQF groups/committees.	We appreciate the commenter's support on the recommendations included in the NQF Social Risk Final Report. We share the commenters' request for a broader incorporation of social risks data in measure testing, as well as increased measure developers engaging diverse communities to clearly capture population priorities and barriers and guide the providers' selection and use of measures.

Commenter	Comment	Proposed Response
	Need for increased technical assistance and available including to users of the measure (such as by States). We also strongly recommend that: NQF require measure stewards/developers to publish information about testing results from use of the measure in diverse communities (e.g., showing measure results by income level, dual-eligible status, disability, language) so that all potential users of the measure understand when the measure should/should not be used and how it should be adjusted if it is used. We have identified important methodological and other considerations: 2017-snp-guidelines-for-measure-developers-on-sdoh-ses-vsn-31417.pdf (snpalliance.org) NQF require measure stewards to include detail about what social risk factors significantly impact measured outcome results in their specifications. If a measure is not appropriate for use with specific groups or if case-mix for social risk adjustment is recommended in terms of scoring the results—this should be described clearly. NQF encourage measure developers to work with non-majority populations to understand what measures matter, and what impeded the ability of that group to reach that outcome. For example, if outcomes from an episode of care post-procedure is the focus, what is most important to that group and what barriers do they encounter to reach that outcome. NQF require stratified measure results to be published so that like entities being measured can be compared to other like entities, so that the influence of social risk factors that are outside of the control of the entity--can be separated out. We support attention to the use of measure results to drive quality improvement in different populations.	
Phoebe Ramsey, Association of American Medical	**Question 1 comment:** The AAMC supports the recommendations to be undertaken across stakeholders. Genuine progress to eliminate health and health care inequities will require partnership and planning to define and standardize social risk factors, streamline the collection of appropriate data, and report and improve measure performance. We commend the Social Risk Trial for acknowledging that this will be an iterative	We appreciate the commenter's support on Social Risk Final Report. We share the commenter's recommendation to temporarily use demographic

Commenter	Comment	Proposed Response
Colleges (AAMC)	process, and that beginning with the use of demographic data capturing gender, race, ethnicity, and culture does not mean that those factors themselves represent an individual's inherent risk. Rather, such demographic factors may be critical until it is feasible to quantify social risk factors that capture the actual risks of bias and unjust distribution of resources and opportunity that create the social and structural conditions that heighten inequities. Additionally, we agree that the next steps in this work must begin to examine the conceptual and empirical relationships between social risk and health outcomes that precede care delivery. Advancing measurement science necessary to support adoption and inclusion of social risk in risk adjustment can only be accomplished through enacting policies to support the collection of patient-level data. The AAMC agrees that this can be accomplished best by permanently formalizing the submission, analysis, and evaluation of social risk factors for all NQF measure endorsement and maintenance submissions and through evaluating and redesigning payment models to support health care equity and incentivize providers for reporting this critical data in measure reporting, health programming, and payment models. We are heartened that a new NQF Risk Adjustment Technical Expert Panel will pick up this mantel and develop clear technical guidance for measure developers about how best to conceptualize, assess and determine whether to include social and functional status factors in quality measures. We urge the NQF to review the endorsement process for instances where submissions clearly identify where social risk factors affect a measure's health outcome, yet ultimately is not included in the measure's risk adjustment model. The AAMC has observed this recently, in particular with readmissions measures under review for maintaining endorsement. We are concerned that the inclusion of social risk factors in risk adjustment models is not treated the same as clinical risk factors. We strongly believe that accurate and unbiased quality measurement requires statistical adjustment of all factors affecting performance that are not quality of care. Finally, the AAMC is committed to addressing the role that providers and researchers will have to play to eliminate inequity in health care and health outcomes. We agree that	factors to capture social risks until the measurement community identifies and/or develops suitable and quantifiable social risk data elements that evaluate experienced bias and discrimination of marginalized populations. We also agree that measures should be evaluated for conceptual and empirical relationships between social risks that precede care delivery and health outcomes in adjustment models, as well as quality of care concerns based on social risks. Please refer to the Risk Adjustment Technical Expert Panel (TEP) for additional concrete guidance on when and how to adjust for social risks.

Commenter	Comment	Proposed Response
	providers must share the responsibility of collecting, reporting, analyzing, and improving the delivery of care based on the needs of the populations and communities they serve.	
Samantha Tierney and Somosree Dutt, American College of Physicians (ACP)	**Question 1 comment:** While working in the performance measurement area, we have seen several instances where inadequate risk adjustments have had unintended consequences. Hence, we applaud NQF's Social Risk Trial initiative and appreciate the opportunity to comment on the report. The COVID-19 pandemic has further highlighted the inequities that exist in care delivery, and has underscored the importance of understanding and considering all risk factors, including social risks, in the healthcare performance improvement arena. After reviewing the report, we have some comments for the committee to consider. 1. We appreciate NQF recognizing its role in efforts to eliminate healthcare inequities by considering the inclusion of social risk factors in NQF measure submissions. However, as highlighted in both the Social Risk trial reports, there remains little guidance on the social risk concepts and variables to be used in performance measurement. This led to a lot of variability in the factors that were included by the measure developers. Some were better indicators of social risk than others. For better analysis, we need more standardized concepts. We understand that NQF recognizes this issue and we look forward to NQF providing more concrete guidance regarding standardized social risk factors, in the near term. 2. As mentioned in the report, there are a couple of readily available sources that can be used to identify and record patient-level social risks: the ICD-10 Z Codes and the Supplemental Data Elements of an eCQM. However, they are rarely being used to collect social risk information. We understand that there are several barriers to use these codes, like, having a standardized EHR-based screening tool, inadequate knowledge among providers and medical coders, and so on. Policy makers should make this a priority and incentivize physicians and groups to work towards resolving these barriers. If we can utilize these readily available data sources and further improve on them, that will help us to understand the causes of the disparities in care. We can then analyze and include these factors in risk adjustments. 3. We strongly believe that social risk factors are equally important as individual patient	We appreciate the commenter's support on Social Risk Final Report. Based on the number of measures evaluated in both trials, we agree that the measurement community seeks more support from NQF in the form of guidance, technical assistance, and resources. An NQF immediate actionable priority could be a formal cataloging of all social risk data elements considered and included in adjustment models, stratified in measure specifications, and in reported performance rates for measure submissions. We also agree that select social risk data elements are available for use by providers and developers, that policies and payment changes could improve social risks data reporting, and that the use of these data elements should be evaluated for unintended consequences of use.

Commenter	Comment	Proposed Response
	level clinical variables and should be prioritized and included in the same manner in performance measures. If we don't account for social risk factors, we can penalize physicians who serve a major proportion of our marginalized patient population and mask these disparities in care. By using the performance measures in accountability programs without adjusting for social risks, we risk taking away resources from those physicians and patients who may need them the most. NQF will have to work with policy makers to address this concern and ensure that NQF endorsed measures are not leading to unintended consequences.	
John Shaw, Next Wave, Inc.	**Question 1 comment:** Next Wave applauds the findings and recommendations in the NQF Social Risk Trial Final Report. We have actively followed these efforts and provided input on them for many years through participation in a number of NQF initiatives. With a renewed focus on and investment in Health Equity, the report provides a strong foundation to now move forward into implementation. We offer a few suggestions to help facilitate this movement based on our experiences and NQF, CMS, and state health policy initiatives. NQF should take a **leadership** role in disseminating broadly the knowledge gained in providing technical assistance to measure developers, updates to measure endorsement criteria for social risks, and innovative data sources and approaches identified during measure evaluations. Expand recognized and listed stakeholders beyond policymakers, payers, providers, and researchers/research funders of healthcare delivery to also include **Community-based organizations** in other health related sectors, and the patients themselves and their caregivers. Much of the focus of efforts to date look at the healthcare delivery viewpoint which only impacts approximately 10% of Health. This has already begun and NQF, but more attention to these other stakeholders and incorporation of their voice and ideas holds promise to close the Health Equity gap more quickly and effectively.	We appreciate the commenter's support on Social Risk Final Report. We are pleased you have identified NQF as the leader to advance NQF's from trial work into implementation activities, including increased NQF guidance, technical assistance, and resources. We are also heartened with your recommendation to expand the circle of measure engagement to include community-based stakeholders, specifically as the report defines social risks as conditions or factors that may influence health outcomes, including socioeconomic status, race and ethnicity, gender, social relationships, residential and community context, and health literacy.

Commenter	Comment	Proposed Response
Koryn Rubin, The American Medical Association (AMA)	**Question 1 comment:** The American Medical Association (AMA) appreciates the opportunity to comment on this draft report and recommendations. The AMA has long recognized that racial and ethnic health inequities are an unjust and major public health reality in the United States and we support the work of the National Quality Forum (NQF) to ensure that performance measures used for accountability purposes are adequately adjusted both for clinical and social risk factors when appropriate. We support the key recommendations for all stakeholders and appreciate the recommendations to consistently collect these data and to permanently evaluate each measure undergoing NQF review and endorsement consideration to determine whether risk adjustment of social risk factors is warranted. Regarding the last recommendation, the AMA is disappointed that that the review process thus far has been passive and while we may have a better understanding on how some variables may impact performance scores, the pilot and its extension have not yielded useful advancements beyond some measures possibly including social risk factors. We believe that the field would be better served if this work could have identified new and emerging data sources from which social risk factors could be applied, worked with developers to understand the feasibility of data collection and use for risk adjustment, and update the measure evaluation criteria based on these findings. In addition, the purpose of the new Risk Adjustment Technical Expert Panel is not clear, particularly as it relates to the Scientific Methods Panel. It would be useful to understand what this new group will contribute beyond just adding on another layer of endorsement review. We also believe that additional education and detailed guidance on the development of conceptual models and proper methods by which the testing and analysis of clinical and social risk factors in the models should be conducted would be useful since we continue to see the same approaches and data elements used across measures and over time. Furthermore, we strongly encourage NQF to emphasize and evaluate the potential unintended consequences that the inclusion or exclusion of social risk factors or use of proxies may play when a measure is used for accountability purposes. The absence of end users' reporting any concerns or issues with a measure should not be considered	We appreciate the commenter's support on the recommendations included in the NQF Social Risk Final Report. The NQF Risk Adjustment Technical Expert Panel (TEP) was established in 2014 and initiated a project to provide a concrete guidance on when and how to adjust for social and functional risks in 2020. For more information, please refer to the Risk Adjustment Guidance project page. The NQF project team and the Risk Adjustment TEP will produce a step-by-step technical guidance and minimum standards on how to adjust measures for risk factors (clinical, social and functional). In collaboration with the Scientific Methods Panel (SMP), and we will align the evaluation criteria for reviewing risk adjustment models.

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	acceptable and developers must begin to evaluate the potential implications that their measurement decisions may have when a measure is used for pay-for-performance or public reporting for example. The recent study by Alberti and colleagues serves as a good example of the potential negative unintended consequences. Specifically, they found that due to the differences in the dual eligible (DE) population stratifying by DE-only within the confidential Hospital Disparities Reports are misleading and further exacerbate inequities, which is counter to the goals of quality and its related incentives to close or minimize healthcare inequities.[1] 1 We also encourage NQF to consider adding recommendations for health information technology vendors and standard setting bodies. These stakeholders play an important role in advancing and standardizing the capture of these data and it would be a mistake to not include recommendations for them in this report. Thank you for the opportunity to comment. [1]Alberti, Philip., Baker, Matt., Dual Eligible Patients Are Not The Same- How social risk may impact quality measurement's ability to reduce inequities.	
Janice Tufte, Hassanah Consulting	**Question 2 comment:** Zip codes are a good start as access to services such as food, transportation, broadband, jobs etc. is documented.	We agree with the commenter's suggestion. In fact, this report finds that one of the routinely social risk factors by developers is zip code and may be used to identify community and access social risks.
Erin O'Rourke, American Health Insurance Plans (AHIP)	**Question 3 Comment:** We recommend NQF look to the work of the Gravity Project as well was the new lists of Z codes as ways to enhance claims and EHR data with additional information on social risk factors that could be leveraged for performance measurement.	We agree with the commenter's suggestion. The NQF Risk Adjustment Technical Expert Panel (TEP) was established in 2014 and initiated a project to provide additional concrete guidance

Commenter	Comment	Proposed Response
		on when and how to adjust for social and functional risks in 2020. Its Risk Adjustment Guidance Environmental Scan Final Report provides a comprehensive list of key social risk factors that have been used by measure developers and researchers and identified future opportunities.
Deborah Paone, SNP Alliance	**Question 3 comment:** Some of the possible avenues to improve the availability and usability of social risk information include: Standardize SDOH fields, definitions, and data elements across electronic health record platforms Extend health information exchanges to reach home and community-based services providers and build capacity for interoperability across service sectors Connect SDOH assessment information in a data repository with permissions so that the individual does not have to repeatedly provide information on SDOH issues.	We appreciate the commenter's suggestions on standardizing social risks standardization, infrastructure, and data collection and sharing.
Clarke Ross, American Association on Health and Disability (AAHD)	**Question 4 Comment:** NQF Measures Adjusted for Social Risk (pages 33-36) The report includes a variety of CAHPS surveys, but not the CAHPS HCBS (Home-and-Community-Based Services). The report should state applicability of the report's approach to the CAHPS HCBS. Any expectation and desire for future analysis would be helpful to the disability and aging communities engaged in HCBS, Consistent Use of Individual Functioning Measures (pages 33-36). We are not expert at the current use and potential challenges of the individual functioning measures. We assume that the NQF Social Risk Adjustment analysis and report will use the almost identical functioning measures used by the NQF patient experience and functioning committee.	We appreciate the commenter's thoughtful recommendation to include community stakeholder engagement, specifically individuals with disabilities and the aging, as well as the use of functional and patient experience content. This report is based on a review of all measures submitted to NQF during fall 2017 and

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		spring 2020. The CAHPS HCBS measure was not submitted for re-endorsement during this time period. However, according to the technical report of the HCBS CAHPS, the publicly reported results use the following factors in the case-mix adjustment: self-reported physical health, mental health, age, sex, education, residential independence, and proxy response. For additional concrete guidance on when and how to adjust for social and functional risks, please refer to the Risk Adjustment Guidance project page.
Erin O'Rourke, America's Health Insurance Plans (AHIP)	**Question 4 comment:** There are specific resources, structures, and policies that need to be put in place before performance measurement and value-based payment systems can be used to appropriately assess and incent equitable care. These include data standards for sociodemographic data and equity measures, IT infrastructure to collect and share interoperable data, financing to build this infrastructure to make this information more interoperable. It also requires additional investment support and resources to address socioeconomic barriers to health. The federal government should help invest in this infrastructure to promote the standardized collection and greater interoperability of sociodemographic data in a secure fashion. Measures that are used for public reporting or value-based purchasing should accurately and fairly reflect the quality performance of the measured entity. Solutions or adjustments to quality measures and performance reporting should be	We appreciate the commenter's support on the recommendations included in the NQF Social Risk Final Report. We agree that a standardized ecosystem infrastructure is required to evaluate social risks for endorsement, implementation purposes, and fair provider assessment and incentivization based on diverse population needs.

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	(a) meaningful, such that adjustments are significant enough to address the systematic disadvantages that are faced by providers and payers who serve vulnerable populations; (b) transparent, such that entities can project their eligibility for the proposed adjustments; and (c) should not harm those high-performing organizations and plans who have made significant investments in attaining high performance.	
John Shaw, Next Wave, Inc.	**Question 4 comment:** NQF should formalize collection and public reporting of social risk performance statistics for both measure developers and NQF itself. If performance measurement and public reporting are drivers of improvement in healthcare and health, they should also be beneficial for the measure development and endorsement enterprise itself. The Committee and other commenters have identified candidate metrics in recommendations.	We appreciate the commenter's support on Social Risk Final Report. NQF's encourages developers to report performance by social risks and recognizes the value in stratifying performance by social risks.
Janice Tufte, Hassanah Consulting	**Question 5 comment:** Utilize the outcome and reporting knowledge to better allocate $$ to address disparities	We agree that further research is needed to assess the impact of risk adjustment on measure performance, as well as resource allocation to help address measurement-driven and population-based disparities.
Erin O'Rourke, American Health Insurance Plans (AHIP)	**Question 5 comment:** The following federal policies and research would be helpful for payers to advance their own work to address social risks and their ability to support providers' efforts to address social risk, such as through value-based pay arrangements: 1) MLR: Medically related social services that address social risks should be considered as Quality Improvement Activities under in the Medical Loss Ratio calculation. 2) Capitated Rate: HHS should enumerate which medically related social services could be included in health plans' capitated rates while allowing States to choose amongst the	We appreciate the commenter's comprehensive and specific policy recommendations to incentivize social risks data reporting, as well as payment and program guidance. Although these recommendations are beyond

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	enumerated list based on socioeconomic needs prevalent in the State to provide greater clarity and direction to health plans. 3) Benefit Structure: Continue Flexibility granted health plans during the pandemic to quickly adjust benefits to address emerging socioeconomic needs. 4) Sustain Current Work for ROI: CMS and CMMI should sustain both CMMI-driven and plan-developed SDOH models to ensure health plans' current work and investments are not curtailed. For example, CMMI made Special Supplemental Benefits for the Chronically Ill (SSBCI) under Medicare permanent. Similar permanence should be given to CMMI Medicaid demonstrations related to addressing social risks. 5) Develop the Evidence Base: More evidence is needed to determine which interventions work best for which populations and under which conditions to properly determine which interventions to fund, pursue, and reimburse. Similarly, more discussion should revolve around which SDOH stakeholders believe should be "medicalized" such that the health care system address and pay for addressing them versus those SDOH that should not be "medicalized". 6) Interagency Collaboration: Government Agencies should improve collaboration amongst each other (USDA, HUD, HHS, DOL, DOT) to create joint funding streams and waivers to address social risks.	the scope of this report, we believe they are important policy suggestions for federal agencies to consider.
Deborah Paone, SNP Alliance	**Question 5 comment:** The SNP Alliance has surveyed special needs health plans that are members of the SNP Alliance over the last several years and they've offered many emerging practices on addressing special populations with clinical, behavioral health, and social risk needs. See our brief at: snpa-briefing-paper-on-sdoh-paone-final-6172019.pdf (snpalliance.org). Some emerging effective practices include: Employ outreach strategies effectively and in a tailored/customized way to reach various sub-groups in a way that meets the person where he/she/they are and in a way that is most acceptable and as early as possible to identify risk factors.	We appreciate the commenter's support on Social Risk Final Report. We agree that social risks, by nature of the definition, are outside the purview of healthcare; therefore, necessitate risk evaluation in a community context to "treat" medical and non -medical

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	With the individual, create an enhanced care management approach that makes use of the SDOH risk information in addition to functional status, medical status, behavioral health status and other information to craft a plan that works. This may mean social risk issues are prioritized ahead of some medical management issues that are not as acute and may require involvement of non-traditional service organizations. Collaborate with providers and community agencies as partners working on the larger underlying social risk issues. Work with others to support ways that address limited access, such as supporting telehealth and mobile units. Work with ethnically and linguistically diverse community leaders/agencies embedded in neighborhoods to improve information sharing, education, outreach, and access to services and that help increase individual engagement and "activation" in self-care practices.	needs. For providers, a broad social risks evaluation may also include identifying community resources to counter the negative effects of social risks. For developers, NQF encourages evaluating the unintended consequences of including and not including social risk in adjustment models. Please refer to the Risk Adjustment Technical Expert Panel (TEP) for additional concrete guidance on when and how to adjust for social risks.
John Shaw, Next Wave, Inc.	**Question 5 comment:** One of the major challenges identified by the committee and other commenters is the inconsistent use of existing tools to collect social risk data like the ICD-10 Z-codes and EHR social risk fields. The use and accuracy of race, ethnicity, and language (REAL) data is also a concern. Without consistent and accurate collection of this data, it is difficult to envision success in addressing Health Equity for the foreseeable future. To help address this gap and accelerate innovation, we recommend that NQF encourage CMS and other payers to provide fiscal incentives for the effort needed. This "Pay to Report" investment strategy was shown successful in significantly overcoming "paperwork burden" resistance in state and federal payment program and quality initiatives, particularly when provided as new resources rather than re-cutting a fixed pie. These investments should be extended to service providers in other health related social sectors in local communities as well.	We appreciate the commenter's support on Social Risk Final Report. We share your concern that numerous barriers exist for under reporting and inconsistent and inaccurate reporting of social risks data. As a positive and actionable step in reducing health disparities, providers may need to be incentivized to collect and report robust, standardized, and accurate social risks data.

Commenter	Comment	Proposed Response
Janice Tufte, Hassanah Consulting	**Question 6 comment:** Support community efforts that understand the needs of the community and where resources are needed to improve the health and healthcare for their members. Important to create a realistic pipeline for educating and mentoring population representative health workers / professionals to better meet the needs of the people.	We appreciate the commenter's thoughtful suggestions on understanding the needs and effects of the community as recommended in our report: "The Disparities Standing Committee encourages measure developers to carefully conceptualize pathways or methods for considering how social risk factors affect the measure being developed. Too often a data-driven approach is used, and important potential risk factors may be omitted without due consideration. Developers are encouraged to seek NQF technical assistance for adjustment for social risk use in measure submissions."
Clarke Ross, American Association on Health and Disability (AAHD)	**Question 6 comment:** The American Association on Health and Disability (AAHD) (www.aahd.us) is a national non-profit organization of public health professionals, both practitioners and academics, with a primary concern for persons with disabilities. The AAHD mission is to advance health promotion and wellness initiatives for persons with disabilities. AAHD is specifically dedicated to integrating public health and disability into the overall public health agenda. The Lakeshore Foundation (www.lakeshore.org) mission is to enable people with physical disability and chronic health conditions to lead healthy, active, and independent lifestyles through physical activity, sport, recreation and research. Lakeshore is a U.S. Olympic and Paralympic Training Site; the UAB/Lakeshore Research Collaborative is a	We appreciate the commenter's support on the Draft Social Risk Final Report. We agree that all populations should be assessed for performance, which begins with consistent collection, analysis, and public reporting of demographic, clinical, functional, and social risk factors to detect gaps and

Commenter	Comment	Proposed Response
	world-class research program in physical activity, health promotion and disability linking Lakeshore's programs with the University of Alabama, Birmingham's research expertise. We write to express our appreciation of this work: Consistent Collection of Data on Race, Ethnicity, Education, and Language (pages 4 and 19). We appreciate and support the recognition of individuals with disabilities in the page 4 discussion of "marginalized populations." We agree and support the NQF recommendation for consistent collection, analysis, and public reporting of demographic data. For future work, we encourage NQF to consider collecting, analyzing, and public reporting the applicability of the following demographics: race, ethnicity, disability status, age, sex, sexual orientation, gender identity, primary language, rural/urban environment, and service setting. For almost the past two years, the Consortium for Citizens with Disabilities (CCD), the Disability and Aging Collaborative (DAC), and the Disability and Rehabilitation Research Coalition (DRRC) have consistently recommended consistent collection, analysis, and public reporting: The COVID-19 pandemic has reemphasized the longstanding structural inequities of our health systems. Moreover, the pandemic has exposed major holes in our data systems that prevent an effective way to even identify health disparities. Rightly, this failure has reenergized a push to improve data collection systems and build in the capabilities of those systems to collect, report, and verify data stratified by key demographic factors including by race, ethnicity, disability status, age, sex, sexual orientation, gender identity, primary language, rural/urban environment, and service setting. Data should be collected to permit intersectional analysis across multiple demographic categories, such as race and disability.	inequities. Please refer to the Risk Adjustment Technical Expert Panel (TEP) to provide additional concrete guidance on when and how to adjust for social risks. Its Risk Adjustment Guidance Environmental Scan Final Report provides a comprehensive list of key social risk factors that have been used by measure developers and researchers and identified future opportunities.

Appendix E: Disparities Standing Committee, CMS Reviewers, and NQF Staff

Disparities Standing Committee

Philip Alberti, PhD (Co-Chair)
Senior Director, Health Equity Research and Policy, Association of American Medical Colleges
Washington, District of Columbia

Nancy Garrett, PhD (Co-Chair)
Chief Analytics Officer, Hennepin County Medical Center
Minneapolis, Minnesota

Susannah Bernheim, MD, MHS
Director of Quality Measurement, Yale New Haven Health System Center for Outcomes Research and Evaluation (CORE)
New Haven, Connecticut

Michelle Cabrera
Director, Health Policy and Research, SEIU California
Washington, District of Columbia

Juan Emilio Carrillo, MD, MPH
Vice President of Community Health, New York-Presbyterian, and Associate Professor of Clinical Medicine, Weill Cornell Medical College
New York, New York

Marshall Chin, MD, MPH, FACP
Richard Parrillo Family Professor of Healthcare Ethics, University of Chicago,
Chicago, Illinois

Lisa Cooper, MD, MPH, FACP
James F. Fries Professor of Medicine and Director of the Johns Hopkins Center to Eliminate Cardiovascular Disparities, Johns Hopkins University School of Medicine
Baltimore, Maryland

Ronald Copeland, MD, FACS
Senior Vice President and Chief Diversity & Inclusion Officer, Kaiser Permanente
Oakland, California

José Escarce, MD, PhD
Professor of Medicine, David Geffen School of Medicine, University of California at Los Angeles (UCLA) and Professor of Health Policy and Management, UCLA Fielding School of Public Health
Los Angeles, California

Traci Ferguson, MD, MBA, CPE
Vice President, Clinical Services Management, WellCare Health Plans, Inc.
Tampa, Florida

Kevin Fiscella, MD
Tenured Professor Family Medicine, Public Health Science, Community Health and Oncology, University of Rochester
Rochester, New York

Romana Hasnain-Wynia, PhD
Chief Research Officer, Office of Research, Denver Health
Denver, Colorado

Lisa Iezzoni, MD, MSc
Director, Mongan Institute for Health Policy, and Professor of Medicine, Harvard Medical School
Massachusetts General Hospital
Boston, Massachusetts

David Nerenz, PhD
Director, Center for Health Policy & Health Services Research, Henry Ford Health System
Detroit, Michigan

Yolanda Ogbolu, PhD, CRNP-Neonatal
Director, Office of Global Health and Assistant Professor, University of Maryland Baltimore, School of Nursing
Baltimore, Maryland

Ninez Ponce, MPP, PhD
Professor, UCLA Fielding School of Public Health, UCLA Center for Health Policy Research
Los Angeles, California

Robert Rauner, MD, MPH, FAAFP
Director, Partnership for a Healthy Lincoln
Lincoln, Nebraska

Eduardo Sanchez, MD, MPH, FAAFP
Chief Medical Officer for Prevention, American Heart Association
Dallas, Texas

Sarah Hudson Scholle, MPH, DrPH
Vice President, Research & Analysis, National Committee for Quality Assurance
Washington, District of Columbia

Thomas Sequist, MD, MPH
Chief Quality and Safety Officer, Partners Healthcare System
Boston, Massachusetts

Christie Teigland, PhD
Vice President, Advanced Analytics, Avalere Health – An Inovalon Company
Arnold, Maryland

Mara Youdelman, JD, LLM
Managing Attorney (DC Office), National Health Law Program
Washington, District of Columbia

CMS Reviewers

LaWanda G. Burwell, ScD
Center for Clinical Standards and Quality (CCSQ)
Quality Measurement and Value-Based Incentives Group (QMVIG)
Division of Program Measurement Support (DPMS)
Contracting Officer's Representative (COR)

Sophia Chan, PhD, MA, MPH
CCSQ/QMVIG
Social Science Research Analyst, DPMS

Maria Durham, MS, MBA
CCSQ/QMVIG
Director, DPMS

Helen Dollar-Maples, RN, MSN
CCSQ/QMVIG
Deputy Director, DPMS

Meagan Khau, MHA
Office of Minority Health (OMH)
Director, Data and Policy Analytics Group

Jessica Maksut, PhD
Office of Minority Health (OMH)
Public Health Advisor

NQF Staff

Sheri Winsper, RN, MSN, MSHA
Senior Vice President, Quality Measurement

Wunmi Isijola MPH
Senior Managing Director, Quality Measurement

Nicole Williams, MPH
Director, Quality Measurement

Michele Gomez, PMP
Project Manager, Quality Measurement

Tamara Funk, MPH
Manager, Quality Measurement

Elizabeth Flashner, MHA
Manager, Quality Measurement

Ngozi Ihenacho, MPH
Analyst, Quality Measurement

Isaac Sakyi, MSGH
Senior Analyst, Quality Measurement

Sai Ma, PhD
Senior Consultant, Quality Measurement

Sharon Hibay, DNP, BS, RN
Senior Consultant, Quality Measurement