Disparities Standing Committee Web Meeting

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NATIONAL QUALITY FORUM

Welcome and Introductions

Standing Committee

(co-chair) **Marshall Chin, MD, MPH, FACP**, University of Chicago	**Nancy Garrett, PhD,** Hennepin County Medical Center
(co-chair) **Ninez Ponce, MPP, PhD,** UCLA Center for Health Policy Research	**Romana Hasnain-Wynia, PhD,** Patient Centered Outcomes Research Institute
Philip Alberti, PhD, Association of American Medical Colleges	**Lisa Iezzoni, MD, MSc,** Harvard Medical School
Susannah Bernheim, MD, MHS, Yale New Haven Health System Center for Outcomes Research and Evaluation	**David Nerenz, PhD,** Henry Ford Health System
Michelle Cabrera, SEIU California	**Yolanda Ogbolu, PhD, CRNP-Neonatal,** University of Maryland Baltimore, School of Nursing
Juan Emilio Carrillo, MD, MPH, Weill Cornell Medical College	**Bob Rauner, MD, MPH, FAAFP,** Partnership for a Healthy Lincoln
Lisa Cooper, MD, MPH, FACP, Johns Hopkins University School of Medicine	**Eduardo Sanchez, MD, MPH, FAAFP,** American Heart Association
Ronald Copeland, MD, FACS, Kaiser Permanente	**Sarah Hudson Scholle, MPH, DrPH,** National Committee for Quality Assurance
José Escarce, MD, PhD, UCLA David Geffen School of Medicine	**Thomas Sequist, MD, MPH,** Partners Healthcare System
Traci Ferguson, MD, MBA, CPE, WellCare Health Plans, Inc.	**Christie Teigland, PhD,** Inovalon, Inc.
Kevin Fiscella, MD, University of Rochester	**Mara Youdelman, JD, LLM,** National Health Law Program

Disparities Committee Charge

1. Develop a roadmap for how measurement and associated policy levers can be used to proactively eliminate disparities

2. Review implementation of the revised NQF policy regarding risk adjustment for SDS factors and evaluate the SDS trial period.

3. Provide a cross-cutting emphasis on healthcare disparities across all of NQF's work.

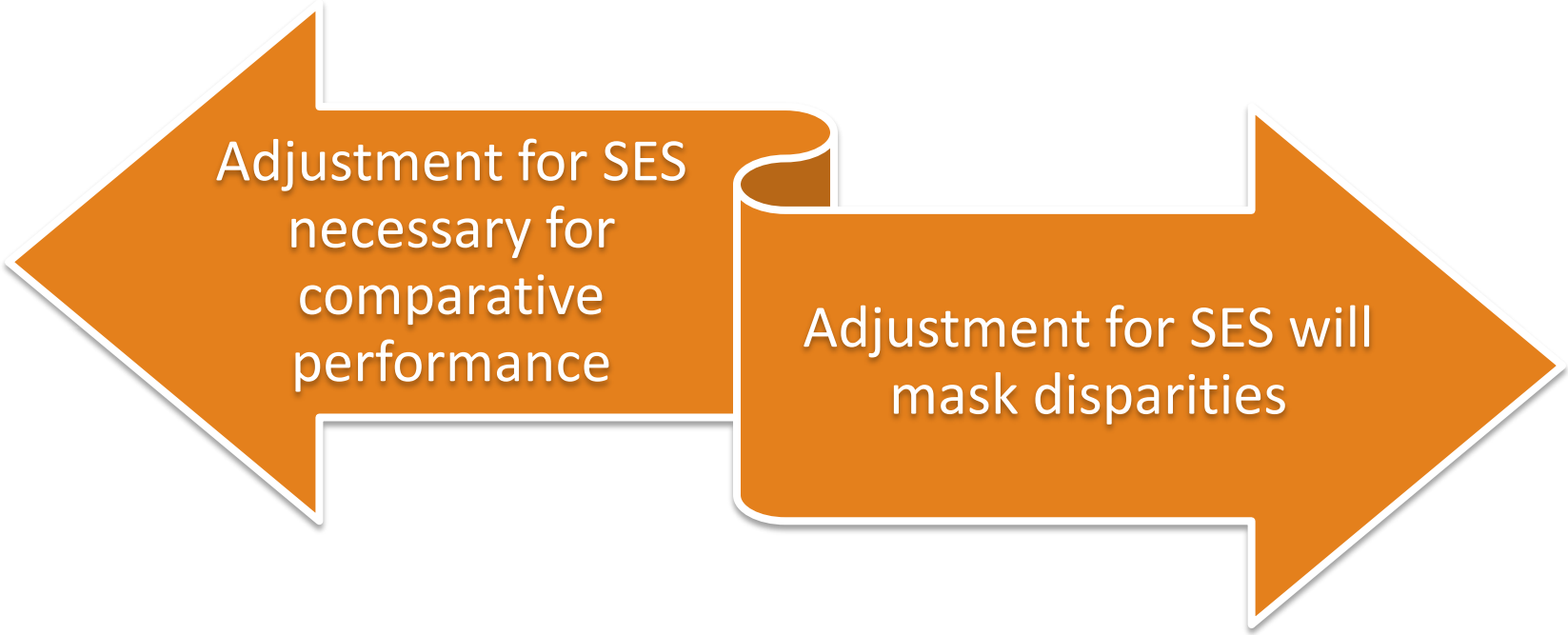
Agenda for the Call

- Review SDS trial progress to date
- Understand the measure developer perspective
- Provide guidance on SDS data availability and variable selection

Update on the NQF SDS Trial

Helen Burstin, MD, MPH, Chief Scientific Officer, NQF

SES Adjustment: At Least Two Divergent Views



NQF Policy Change

- The NQF Board approved a **two-year trial period** prior to a permanent change in NQF policy.
- Under the new policy, adjustment of measures for SDS factors is no longer prohibited.
- During the trial period, if SDS adjustment is determined to be appropriate for a given measure, NQF will endorse one measure with specifications to compute:
  - SDS-adjusted measure
  - Non-SDS version of the measure (clinically adjusted only) to allow for stratification of the measure

NQF Policy Change: Trial Period (cont.)

- Each measure must be assessed individually to determine if SDS adjustment is appropriate.
- Not all measures should be adjusted for SDS factors (e.g., central line infection would not be adjusted)
  - Need conceptual basis (logical rationale, theory) and empirical evidence
- The recommendations apply to any level of analysis including health plans, facilities, and individual clinicians.

Measures Included in the Trial Period

- **All measures submitted to NQF after April 15, 2015 will be considered part of the trial period**
- Standing Committees may consider whether such measures are appropriately adjusted for SDS factors as part of their evaluation.
  - Newly-submitted measures (e.g., family experience with coordination of care)
  - Previously-endorsed measures undergoing maintenance
  - Measures with conditional endorsement
  - Measures undergoing ad hoc review

Consideration of SDS Adjustment

- Questions for Standing Committees to consider when reviewing SDS-adjusted measures:
  - Is there a conceptual relationship between the SDS factor and the measure focus?
  - Is the SDS factor present at the start of care?
  - Is there variation in prevalence of the SDS factor across measured entities?
  - Does empirical analysis (as provided by the measure developer) show that the SDS factor has a significant and unique effect on the outcome in question?
  - Is information on the SDS factor available and generally accessible for the measured patient population?

Trial Experience to Date: Cost and Resource Use

- **Hospital-level, risk-standardized payment associated with a 30-day episode-of-care for AMI, CHF, and Pneumonia**
  - Variables initially considered:
    - » Educational attainment/income (census data using patient zip)
    - » Medicaid status (proxy for low income and insurance coverage)
    - » Black or white race
  - Given nominal impact of the SDS variables on the risk model performance and payment outcomes, the developers chose NOT to include the SDS variables in the model
  - The Committee voted to continue endorsement of the measures without inclusion of SDS factors
  - NQF has received an appeal of this decision

Trial Experience to Date: Readmissions

- **Admissions/Readmissions: 16 measures were endorsed with the condition that they enter trial period**

  Standing Committee Review:

  - Robustness of proposed factors vs. data availability and accessibility
  - Potential for inclusion: patient characteristics that are present prior to treatment and are known or suspected confounder
  - Encouraged consideration of age, gender, measure of poverty Test community-level variables when patient-level data are not available/robust
  - Geographic proxy data should represent the actual SDS characteristics of the patient as accurately as possible (e.g., consideration of 9-digit ZIP Code)
  - Urged caution on the use of race as a proxy for patient SDS, as it is often difficult to assess the underlying concept that race is measuring

Measure Developer Perspective

Susannah Bernheim, MD, MHS

Christie Teigland, PhD

CENTER FOR OUTCOMES RESEARCH AND EVALUATION

NQF Disparities Standing Committee Meeting

Measure Developer Perspective: Data Sources and Approach to Variable Selection

Susannah Bernheim, MD, MHS

April 26, 2016

YALE NEW HAVEN HEALTH

Objectives

- Provide overview of Yale-CORE approach to identifying SDS variables used for measure testing
- Describe available data sources and SDS data elements for Medicare claims-based measures
- Review variables selected and tested in SDS Trial to date

Approach to Variable Selection

- **Sought to identify data sources assessing sociodemographic status with following characteristics:**
  - Patient-level variables, or proxies for patient-level
  - Can be linked to Medicare Fee-for-Service claims
  - Available for all, or nearly all, over 65 year-old Medicare patients
  - Currently available, i.e. could feasibly be incorporated into measures in near-term

Approach to Variable Selection

- **Identification of potential data sources informed by:**
  - Peer-reviewed literature
  - Research Data Assistance Center (ResDAC)/ Chronic Conditions Data Warehouse (CCW)
  - CMS
  - Discussions with RAND
  - Office of the Assistant Secretary for Planning and Evaluation (ASPE)
  - NQF Standing Committee members

Data Sources for Patient-level Variables

- Medicare Part A inpatient and Part B outpatient claims
- Medicare Part D data
- Medicare Enrollment Database (EDB)
- American Community Survey (Census data)

Medicare Data Sources

- **Medicare Part A inpatient and Part B outpatient claims**
  - Claims data for FFS inpatient and outpatient services
- **Medicare Part D data**
  - Coverage variables used to determine low-income subsidies for Part D are in the Medicare Part D data
    - Includes dual eligibility and low-income subsidy (LIS)
- **Medicare Enrollment Database (EDB)**
  - Medicare beneficiary demographic, benefit/coverage, and vital status information

Data Sources

- **American Community Survey (2008-2012)**
  - Survey administered annually on sample of US households by US Census
  - 5-year combined data recommended for representative data
  - Can be linked to 5-digit zip-code
  - With additional software can link 9-digit zip-code to obtain data at census block group

Medicare Data Sources

- **Availability of Patient-Level SDS variables**
  - Medicare Part A inpatient and Part B outpatient claims, Medicare Part D data, and EDB
    - Race
    - Medicare-Medicaid dual eligibility status
    - Low-income subsidy (LIS)

Medicare Data Sources

- **Patient-Level SDS variables of Income and Assets – Medicare-Medicaid dual eligibility status & Low-income subsidy (LIS)**
  - Medicaid qualification for over 65 is based on income and assets and is applied consistently across states
  - Dual eligibility status measures “poorest of poor”
  - LIS used only within Part D Program
  - All dual eligible beneficiaries qualify for the LIS and are captured by LIS variable (85% overlap)
  - LIS variable contains wider range of incomes

Medicare Data Sources

- **Patient-Level SDS variable – Race**
  - Black and white are the only race categories with both high sensitivity and specificity

Racial/Ethnic Classification	Accuracy Measures for CMS EDB	
	Sensitivity	Specificity
White	99.3	92.9
Black	98.2	99.6
Hispanic	28.6	99.9
Asian/Pacific Islander	57.4	99.8
American Indian/Alaska Native	54.3	99.9

Source: Validating Medicare's Race and Ethnicity Data. Kimberly Proctor and Carla Hodge. CMS, Office of Minority Health. (Using 2010 and 2000 Census data and 2011-2009 American Community Survey)

Medicare Data Sources

- **Patient-Level SDS variable – Other approaches to identifying race**
  - U.S. Census surname list and geocoded information to impute race/ethnicity

American Community Survey

- **Availability of Patient-Level SDS variables – Neighborhood as proxy for patient SDS**

  - Percent persons with less than a high school degree
  - Percent persons with a high school degree
  - Percent persons with some college education
  - Percent persons with a bachelor's degree or higher
  - Education index (a weighted average of variables 1-4 above)
  - Percent persons living below the poverty level
  - Percent persons employed
  - Percent persons unemployed
  - Percent occupied housing unit
  - Percent owner-occupied housing unit
  - Percent households with Supplemental
  - Security Income (SSI)
  - Percent households with public assistance income
  - Percent households with no vehicle available
  - Percent housing units with more than 1 occupant per room
  - Percent housing units with 10 or more units in structure
  - Median rental
  - Median value of owner-occupied housing unit
  - Median household income
  - Median family household income
  - Average individual income
  - Median individual income

American Community Survey

- **Availability of Patient-Level SDS variables – AHRQ SES Index (validated for Medicare)**

  - Percent persons with less than a high school degree
  - Percent persons with a high school degree
  - Percent persons with some college education
  - Percent persons with a bachelor's degree or higher
  - Education index (a weighted average of variables 1-4 above)
  - Percent persons living below the poverty level
  - Percent persons employed
  - Percent persons unemployed
  - Percent occupied housing unit
  - Percent owner-occupied housing unit
  - Percent households with Supplemental
  - Security Income (SSI)
  - Percent households with public assistance income
  - Percent households with no vehicle available
  - Percent housing units with more than 1 occupant per room
  - Percent housing units with 10 or more units in structure
  - Median rental
  - Median value of owner-occupied housing unit
  - Median household income
  - Median family household income
  - Average individual income
  - Median individual income

*Variables highlighted in red are included in the AHRQ index

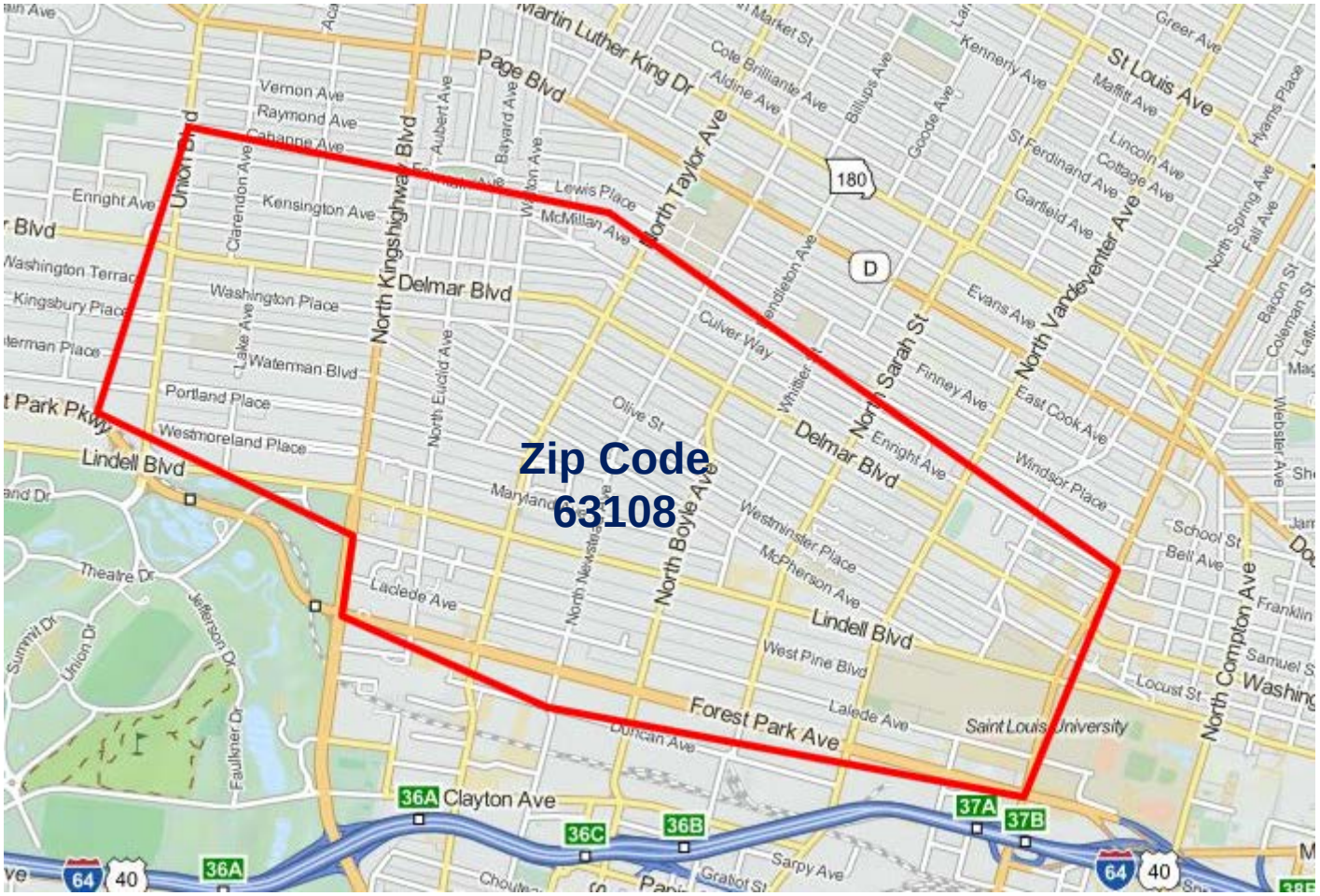
SDS Variables Used by Yale-CORE

- **Patient-Level SDS variables**
  - Race (black/non-black)
  - Medicare-Medicaid dual eligibility status
  - AHRQ SES Index
    - 5 or 9-digit zip codes in lowest quartile of index identified as "low SES“
- Did not examine in depth
  - Rurality
  - Disability
  - Other ACS Variables
  - LIS

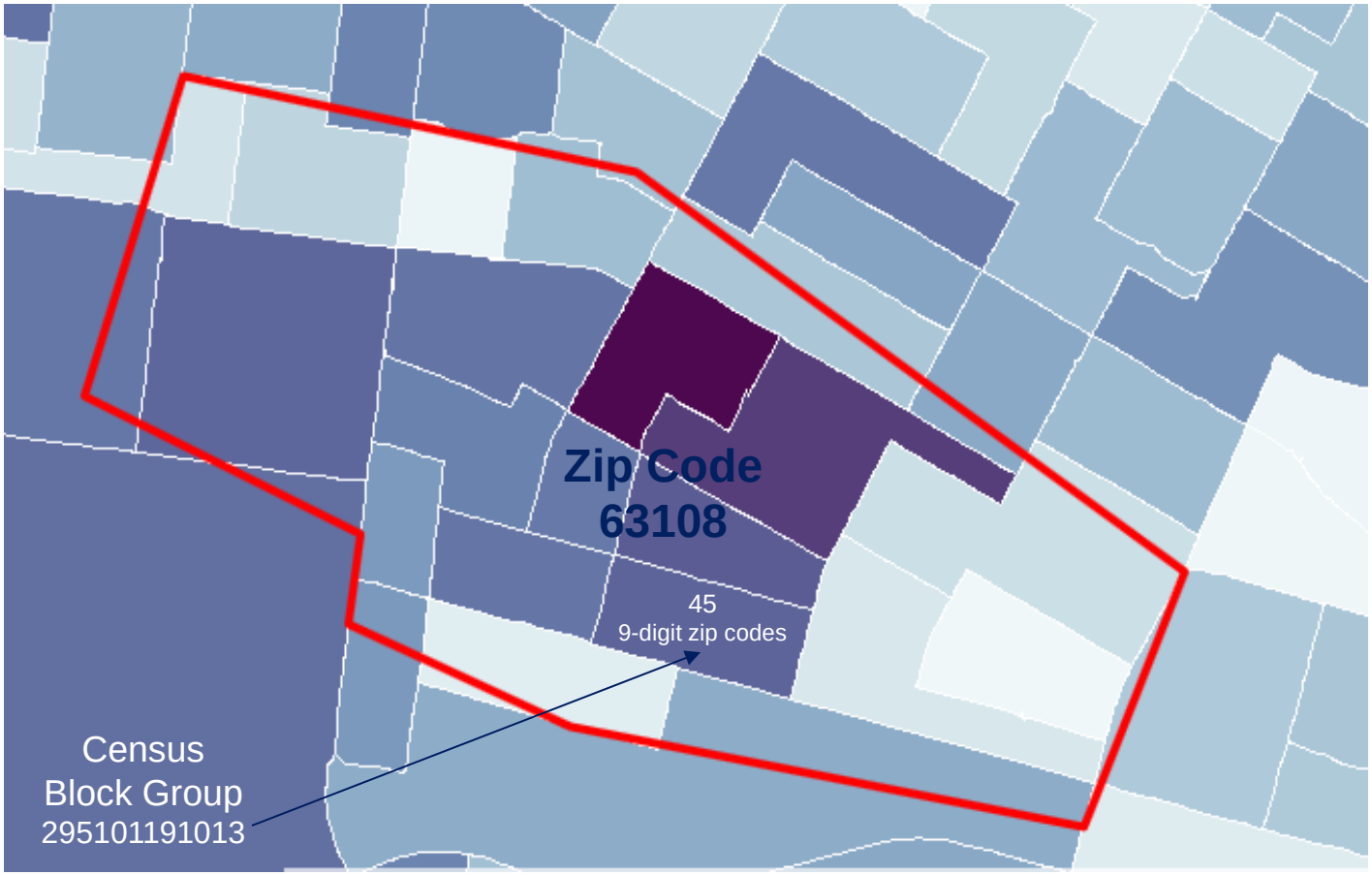
SDS Variables Used by Yale-CORE

- **Patient-Level SDS variable – AHRQ SES Index**
  - The AHRQ SES Index was recalculated using 2009-2013 ACS data at the census block group level
  - Patient 9-digit ZIP codes are mapped via vendor software to the AHRQ index at the census block group level
    - We are able to calculate an AHRQ SES Index for Census Block Groups that can be linked to 99.9% of the 9-digit zip codes in the US

Zip Code vs. Census Block Group



Zip Code vs. Census Block Group



Approach to Variable Selection

- **Availability of Hospital-Level SDS variables**
  - Medicare Part A inpatient and Part B outpatient claims, Medicare Part D data, and EDB
    - Supplemental security income (SSI)
    - Disproportionate Share Hospital (DSH) index
    - % Dual Eligible (aggregated to hospital level)
  - American Hospital Association (AHA) Survey
    - % Medicaid patients served

Community-Level Variables

- **County variables:**
  - Area Health Resources File
  - RWJ County Health rankings
- **Hospital Referral Region variables:**
  - Dartmouth Atlas
  - Aggregated ZIP code measures
- **Healthcare professional shortage areas**
- Community level variables are assumed to affect all hospitals in the community equally

Thank You!

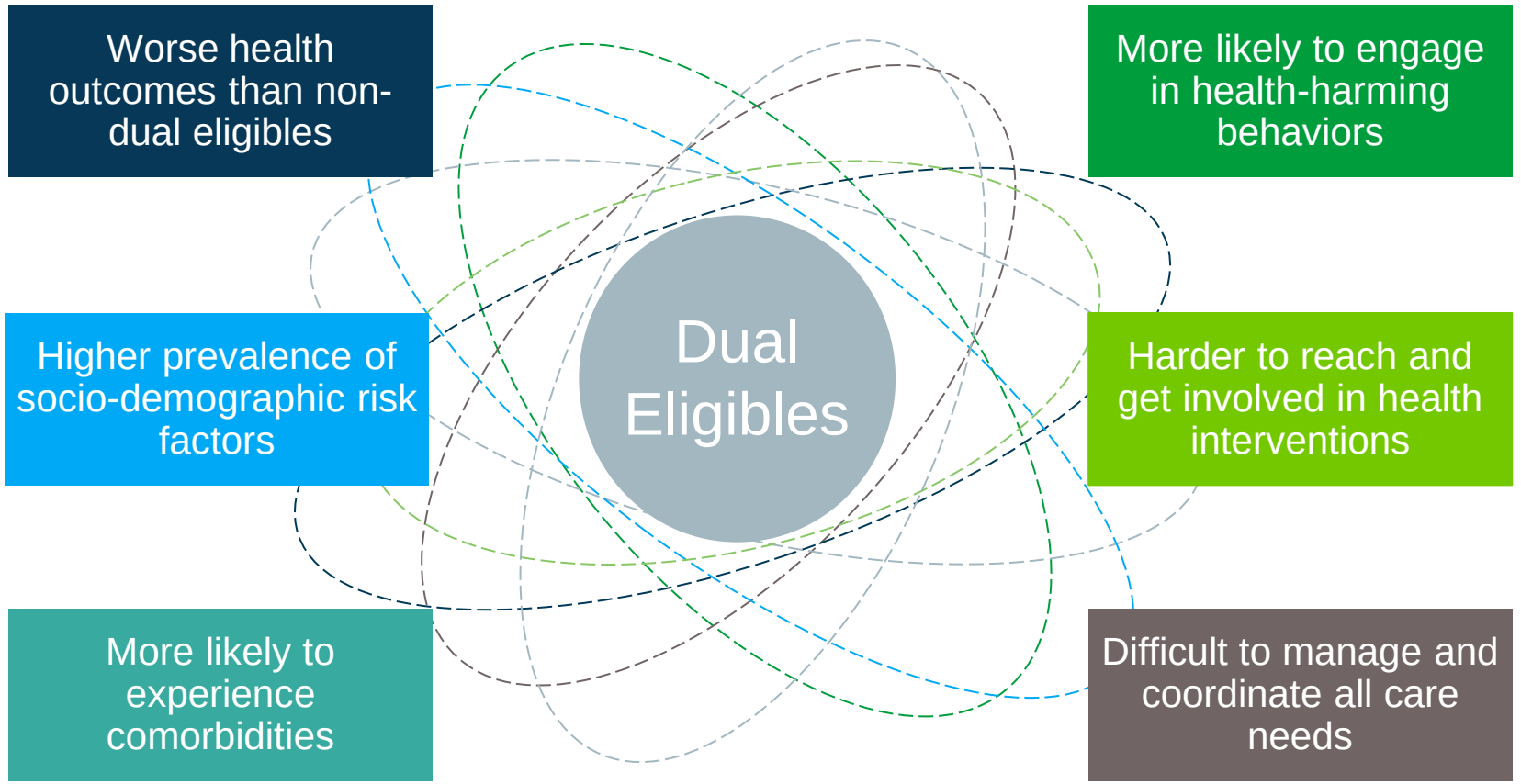
- Questions?

An Investigation of Sociodemographic Risk Adjustment of Medication Adherence Measures

Prepared for National Quality Forum Disparities Committee Meeting April 26, 2016

Christie Teigland, PhD, Vice President Advanced Analytics
Avalere Health | An Inovalon Company

Concerns About Disadvantages Faced by Plans Serving a High Proportion of Duals

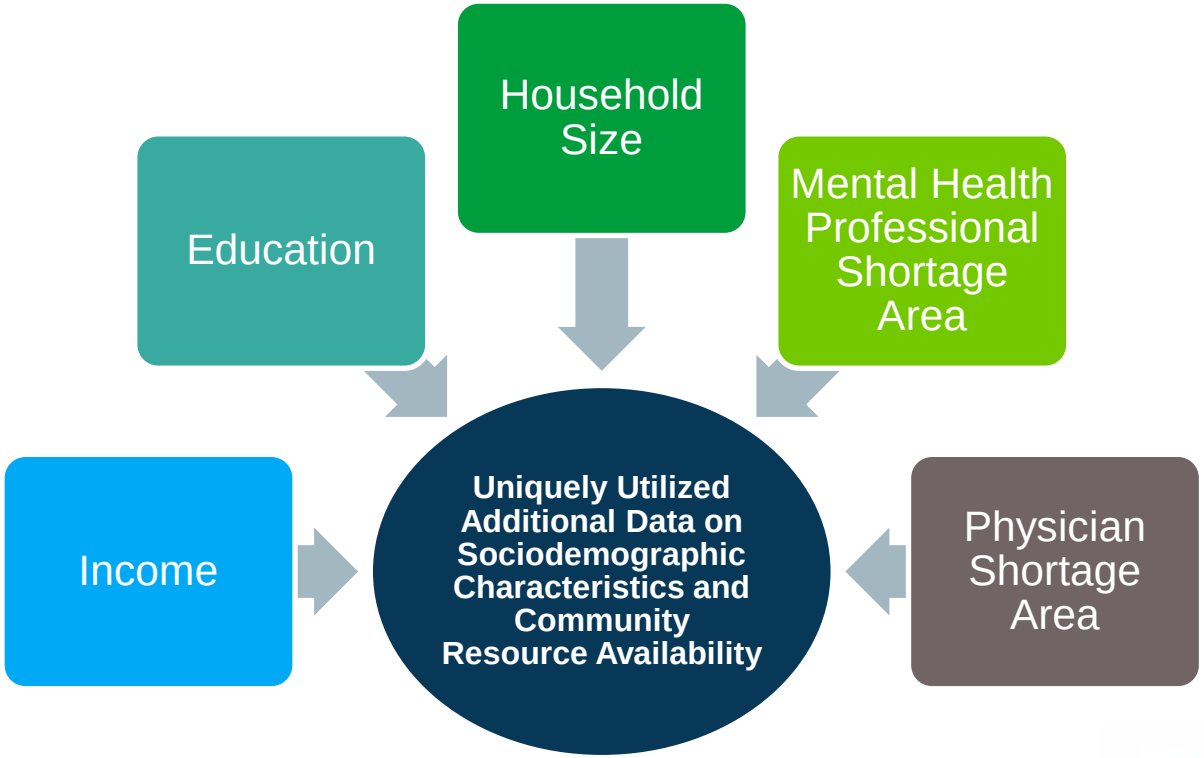


Source: Centers for Medicare & Medicaid Services. "Advance Notice of Methodological Changes for Calendar Year (CY) 2016 for Medicare Advantage (MA) Capitation Rates, Part C and Part D Payment Policies and 2016 Call Letter." February 20, 2015. Available at: http://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Downloads/Advance2016.pdf.

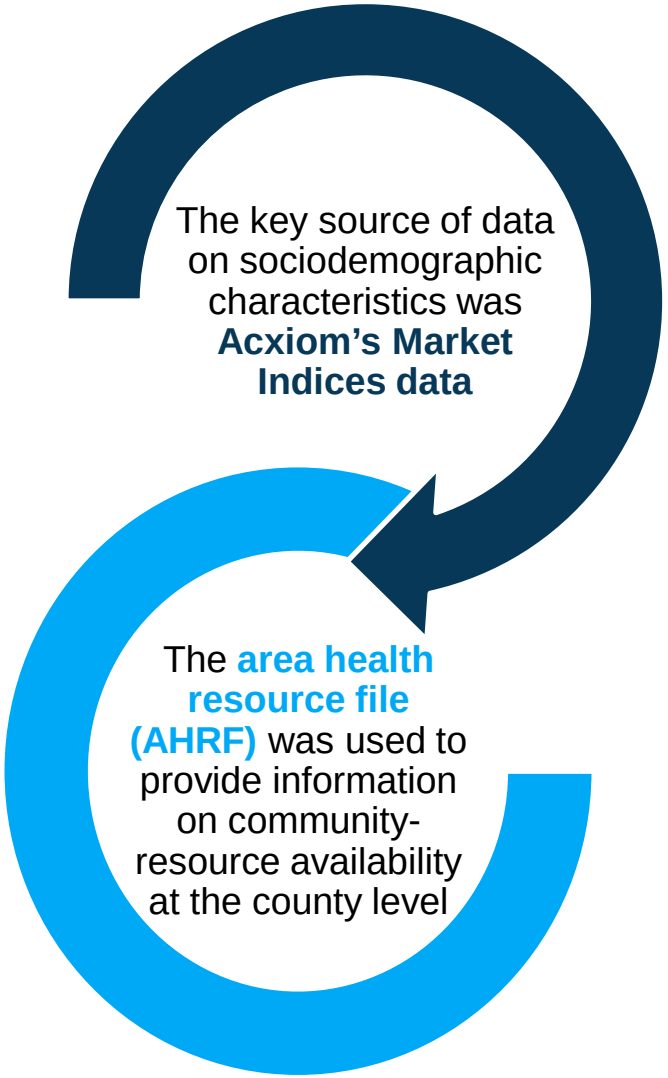
Inovalon Duals Study: Member-Level Analysis

Main Data Source: Inovalon's MORE² Registry®

- Statistically de-identified administrative claims database with data for >130 million unique individuals.
- Supplemented by Quality Measure scores *at the member level*



Measuring Effect of SDS Factors



- This is an aggregation of the U.S. Census American Community Survey (ACS) PLUS data aggregated from multiple databases (e.g., public records such as government information, self-reported data, buying activity, financial behavior)
- Data provides about **30 million discrete data points based on Zip+4 areas with an average of eight households per neighborhood**
- **A wealth of research exists demonstrating the relationship of individual person characteristics and behaviors to near neighborhood characteristics**
- Previous studies examining sociodemographic characteristics have generally utilized data available at the **Census 5-digit ZIP code level that cover only about 40,000 areas**, or **U.S. Census Bureau ACS area block group data that cover about 250,000 areas** These sources provide information averaged across multiple disparate neighborhoods, resulting in a relatively imprecise assignment of characteristics to individuals
- This file contains information such as primary care and mental health professional shortage areas, number of physicians per 10,000 people, and hospital admissions per 10,000 people

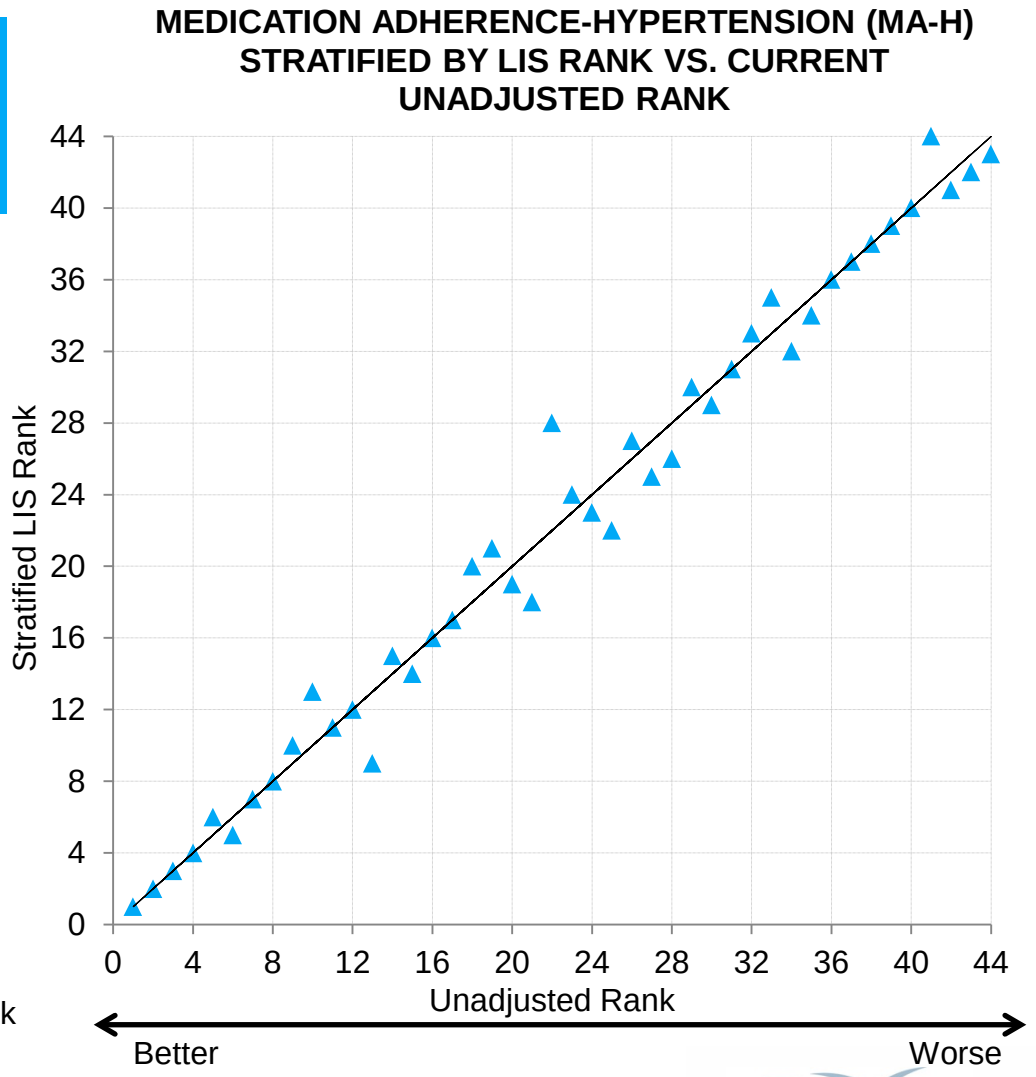
Testing for Pharmacy Quality Alliance (PQA) Medication Adherence Measure Risk Adjustment

Stratification by LIS Makes Little/No Difference in Plan Rankings

As a first step, we analyzed the impact of simply stratifying MA-H measure rates by LIS status

- Plans ranked BEST tended to stay ranked best
- Plans ranked WORST tended to stay ranked worst
- There was some movement of plans in the middle quartiles, but changes in rank were small

**Note*: Lower rank = higher adherence rate; contracts below diagonal line have better rank after stratification and contracts above line have worse rank after stratification



LIS: Low Income Subsidy

PQA Risk Adjustment Research

Adjusted Medication Adherence-Hypertension (MA-H) measure for the following characteristics:

1. **Disability + age** (must use interaction term— *disabled less likely* but *older people more likely* to be adherent—odds ratio for disabled aged 18-54 is 0.54; odds ratio for disabled aged 70+ is 0.87)
2. **Gender** (*males less likely* to be adherent)
3. **Race/ethnicity**
4. **Dual status (*non-duals less likely to be adherent* after adjusting for socioeconomic status!)**
5. **# of unique medications** (*more meds, more likely* to be adherent, consistent with literature)
6. **% of households that own home** (*higher home ownership in neighborhood, more likely* to be adherent)
7. **% of neighborhood population below POVERTY level** (*higher percent of poverty, less likely* to be adherent)
8. **Education** (*higher education more likely* to be adherent)

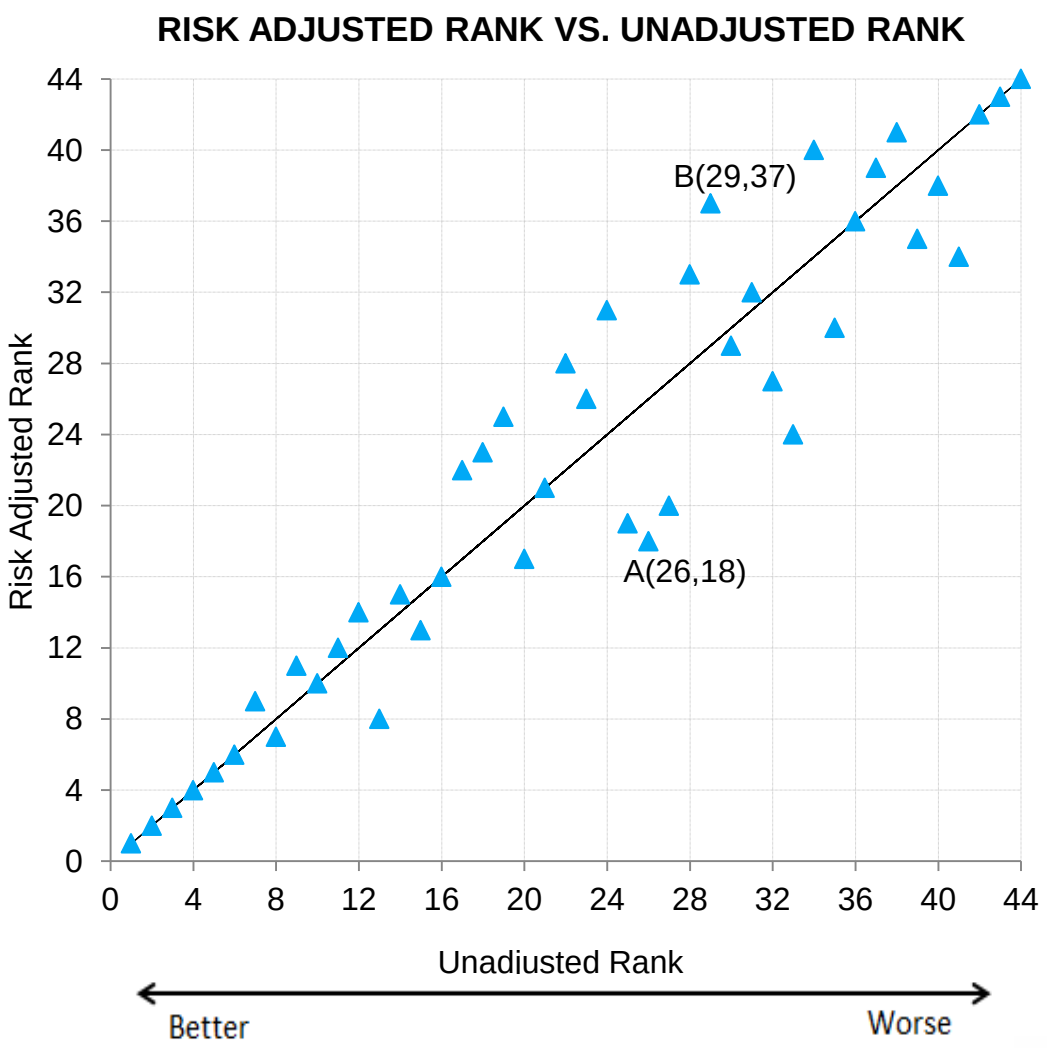
**Note that LIS is not significant in the model when dual status is included; but both dual status and socioeconomic factors are significant.*

PQA: Pharmacy Quality Alliance; MA-H: Medication Adherence; LIS: Low Income Subsidy

PQA Risk Adjustment Research (cont.)

Plans ranked BEST tended to stay ranked best and plans ranked WORST tended to stay ranked worst

- There was most movement of plans in the 3rd and 4th (bottom) quartiles
  - For example, Plan B *declined* from rank 29 to rank 37 (66th percentile to 84th percentile)
  - ***In other words, we would expect Plan B to provide a higher quality of care than they actually are providing based on the population they serve***!
  - In contrast, Plan A's rank *improved* from 59th percentile to 41st percentile
  - ***Plan A appears as though they are providing a lower quality of care than they are once we adjust for population risk factors***



PQA: Pharmacy Quality Alliance

Summary

1. Stratification of medication adherence rates by LIS status does not significantly change the percentile rank for most plans.
2. Risk adjustment does not significantly change the rankings of plans rated best under current specifications, or the rankings of plans rated the poorest.
3. *Non-dual eligible members who are poor actually have worse outcomes than duals who are poor (but have more benefits due to dual status).*
4. This underscores the importance of adjusting for income/poverty *in addition to* dual and/or LIS status.
5. There was great consistency in factors associated with lower adherence rates across all three medication adherence measures:
    - Disability + Age,
    - Race/Ethnicity,
    - Dual Status,
    - Number of Medications,
    - % Home Ownership,
    - % Near Neighborhood Below Poverty Level, and
    - Education
6. Income and Education are significant predictors even after including dual status, age-disability interaction and other variables.

Summary of Characteristics Contributing to the Observed Disparities In Star Outcomes

MA Member Characteristic	Star Measure						
	Rheumatoid Arthritis Mgmt.	Breast Cancer Screening	High Risk Meds	Medication Adherence			All Cause Readmission
				Hypertension	Diabetes	Cholesterol	
Alcohol/Drug/Substance Abuse	+	+	+	+	+	+	
Lower Home Ownership Area	+	+		+	+	+	
Disability as Original Reason for Entitlement		+	+	+	+	+	
Living in Primary Care Shortage Area		+	-	+	+	+	+
Living in High Poverty Area				+	+	+	+
Male Gender	-		+	+		-	-
Age	-	-	-	+	+	+	
Race/Ethnicity		-	-	+	+	+	
Percent of Population Never Married				+	+	+	

+ Increases disparity in rates

- Reduces disparity in rates

Avalere

Questions?

Guidance from the Committee on Variable Selection

Challenges: Input from NQF's Stakeholders

- Concerns about factors selected/analyzed to date
  - Available proxies may not be adequate
  - Inclusion of race questioned
- Call for a more prescriptive approach
  - Empirical methods
  - Variables tested

Guidance from the Risk Adjustment Expert Panel

- The Expert Panel identified potential factors that might be useful for adjustment and their pros and cons
- Socioeconomic Status:
  - **Income**: Reluctant to collect directly from patient. Need to consider standardization for national use. Potential proxies include area-level data and Medicaid/dual eligibility
  - **Education**: Not widely collected; encouraged collection. Community-based measures may be used as crude proxies
  - O**ccupation/Employment**: Existing methods of classification of occupation have limitations and little known about independent effects. Employment status is more easily obtained and potentially relevant.

Expert Panel: SDS Factors Related to SES

- **Language**: Progress has been made collecting this data using a combination of direct and indirect methods.
- **Insurance**: Presence or absence of insurance may be useful. Underinsurance is an important related measure.
- **Race and ethnicity**: Should not be used as proxies for SES, rather their effects are confounded by SES. A clear rationale is needed when adjusting measures for race.
- **Homelessness**: Not frequently collected but standardized definitions have been developed and used by Housing and Urban Development.
- **Marital Status**: Strongly associated with household income and related to caregiver availability. Frequently collected in registration process.
- **Literacy and Health Literacy**: Associated with educational attainment. Brief screening tools show promise for health literacy.

Guidance from the Risk Adjustment Expert Panel

- Use of Community Variables:
  - To characterize the patient's living environment
  - As a proxy for patient-reported data
  - To understand community factors affecting the healthcare unit

Discussion

- Does the Disparities Standing Committee have any guidance on what variables developers could examine?
- Does the Disparities Standing Committee have additional guidance on the use of race as a potential variable?

Guidance from the Committee on Data Availability

Challenges: Input from NQF's Stakeholders

- Limited availability of patient-level data
  - 9-digit ZIP Code/census block data not easily accessible
- Risk models using currently available SDS adjustors are not demonstrating an association for measures with a clear conceptual basis for SDS adjustment

Guidance from the Risk Adjustment Expert Panel

- Recognized data challenges that constrain adjustment
  - Data beyond age and sex are often not collected or standardized sufficiently for use in measurement
- Proxies may be used when patient-level data is not available

Discussion

- Is there data available that may show more meaningful results?
- What could be done when data availability may be affecting the empirical analyses of measures with a clear conceptual basis?
- How can NQF help accelerate better data collection and availability?

Opportunity for Public Comment

Next Steps

Next Steps

- Quarterly Conference Calls
  - Thursday, July 21, 2016 from 12:00-2:00 pm ET
  - Wednesday, October 19, 2016 from 2:00-4:00 pm ET

Future meetings will be scheduled based on the availability of the Committee.

Project Contact Info

- Email: Disparities@qualityforum.org
- NQF Phone: 202-783-1300
- Project page:

http://www.qualityforum.org/Disparities_Project.aspx

- SharePoint site:

http://share.qualityforum.org/Projects/Disparities/SitePages/Home.aspx

Questions?

NATIONAL QUALITY FORUM