Value-Based Payment Reform Academy:
Accounting for Social Risk Factors in Value Based Purchasing

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3:30-4:30PM ET

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LOGISTICS

- Lines will be on mute for the duration of today’s webinar
- Use the chat box on your screen to ask a question or leave a comment
  - Note: chat box will not be seen if you are in “full screen” mode
  - Please also exit out of “full screen” mode to participate in polling questions
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AGENDA

- Introduction
- State role call
- Incorporating Social Risk Factors into Measurement and Payment
- Collecting and Using Data to Measure Social Risk Factors-Virginia’s Health Opportunity Index
- Wrap up and evaluation
**SPEAKER BIOS**

- **Daniel Polsky**, Ph.D., Executive Director of the Leonard Davis Institute of Health Economics, is a Professor of Medicine in the Perelman School of Medicine and the Robert D. Eilers Professor of Health Care Management in the Wharton School. He currently serves on the Congressional Budget Office’s Panel of Health Advisers and he was the Senior Economist on health issues at the President’s Council of Economic Advisers in 2007-08. He received a Ph.D. in Economics from the University of Pennsylvania in May 1996 and a Master of Public Policy from the University of Michigan in 1989. His research areas include access to health care, workforce, and economic evaluation of medical and behavioral health interventions. He is a coauthor of the book “Economic Evaluation in Clinical Trials” published by Oxford University Press.

- **Justin Crow** is the Director of the Division of Social Epidemiology in the Office of Health Equity of the Virginia Department of Health. Prior to joining the Office of Health Equity, Justin served as the Deputy Director for the Virginia Healthcare Workforce Data Center and the Deputy Executive Director for the Board of Health Professions, both with the Virginia Department of Health Professions. Justin earned his Master in Public Administration from Virginia Commonwealth University and his baccalaureate degree from the University of Mary Washington.
Accounting for Social Risk Factors in Medicare Payment

Presented by NAM committee member:
Daniel Polsky
Leonard Davis Institute of Health Economics
University of Pennsylvania
Committee on Accounting for SES in Medicare Payment Programs

Don Steinwachs (Chair)          Robert Ferrer
John Z. Ayanian               Darrell J. Gaskin
Charles Baumgart               Mark D. Hayward
Melinda Buntin                James S. Jackson
Ana V. Diez Roux               Daniel Polsky
Marc N. Elliott               Meredith Rosenthal
José J. Escarce                 Anthony Shih
Accounting for Social Risk Factors in Medicare Payment

Report 1: Identifying Social risk factors:
- conceptual framework and literature review of evidence linking social risk factors to health-related measures
- Main Message: All other things being equal, the performance of a given health care system (in terms of quality, outcomes, and cost) can undoubtedly be affected by the social composition of the population it serves.

Report 2: Systems Practices for the Care of Socially At-Risk Populations
- Identified systems practices showing promise for improving care for socially at-risk populations.
- The committee found that some providers disproportionately serving socially at-risk populations achieved performance that was higher than their peer organizations and on par with highest performers among all providers.
Conceptual Framework


BOARD ON POPULATION HEALTH & PUBLIC HEALTH PRACTICE / BOARD ON HEALTH CARE SERVICES
Systems Practices

- **Commitment to Health Equity**: Value and promote health equity and hold yourself accountable.
- **Engaging Patients in their Care**: Design individualized care to promote the health of individuals in the community setting.
- **Data and Measurement**: Understand your population's health, risk factors, and patterns of care.
- **Community-Informed and Patient-Centered Care**: Involve patients and their family members in decision making and tailor care to reflect their goals, values, and capacities, as well as the social context of the community.
- **Care Continuity**: Plan care and care transitions to prepare for patients' changing clinical and social needs.
- **Comprehensive Needs Assessment**: Identify, anticipate, and respond to clinical and social needs.
- **Collaborative Partnerships**: Collaborate within and across provider teams and service sectors to deliver care.

Source: Figure 2-1
Report #3

Specify criteria (along with their strengths and weaknesses) that could potentially be used to determine whether an SES factor or other social factor should be accounted for in Medicare quality, resource use, or other measures used in Medicare payment programs.

Identify SES factors or other social factors that could be incorporated into quality, resource use, or other measures used in Medicare payment programs.

Identify methods that could be used in the application of SES factors and other social factors to quality, resource use, or other measures used in Medicare payment programs.
The committee’s 4 goals in accounting for social risk factors in Medicare payment programs are:

1. Reducing disparities in access, quality, and outcomes;
2. Quality improvement and efficient care delivery for all patients;
3. Fair and accurate public reporting; and
4. Compensating providers fairly.
Criteria for Selecting Social Risk Factors

Aim to guide selection of social risk factors that could be accounted for in VBP:

• To reward providers or health plans for delivering high quality and value, independent of whether they serve patients with high or low social risk factors

• To promote accuracy in reporting by minimizing the effect of factors outside the provider’s control when assessing a provider’s performance
Potential Harms of the Status Quo

- Incentives for providers and insurers to avoid serving patients with social risk factors
- Underpayment to providers who disproportionately serve socially at-risk populations
- Underinvestment in quality of care
- A single summary score limits the ability of socially at-risk patients to identify providers who might deliver the best care for patients like them
Potential Harms of Accounting for Social Risk Factors

• Reduces incentives to improve care for patients with social risk factors
• Could be unfair in terms of compensating providers who provide high quality care if method obscures differences due to poor quality
• Any method that holds providers to different standards for socially at-risk populations may create the perception that patients with social risk factors are entitled to a lower quality of care
Potential Harms of the Status Quo vs. Accounting for Social Risk Factors

**Conclusion 4:** It is possible to improve on the status quo with regard to the effect of value-based payment on patients with social risk factors. However, it is also important to minimize potential harms to these patients and to monitor the effect of any specific approach to accounting for social risk factors to ensure the absence of any unanticipated adverse effects on health disparities.
Methods to Account for Social Risk Factors in VBP

• The committee identified methods that could apply to any VBP program, not just the existing ones.
• The incentive design will interact with the method used to account for social risk factor(s) and produce certain potential benefits and risks.
• Selecting the appropriate method (or, methods) to account for social risk factors will depend on the balance of these potential positive and negative consequences.
Concluding Remarks

The committee notes that it is not within its statement of task to recommend whether social risk factors should be accounted for or how; that decision sits elsewhere. The committee hopes that the conclusions in this report help CMS and the Secretary of HHS make that important decision.
Statement of Task

The fourth report will:
• For each of the SES factors or other social factors described above, recommend existing or new sources of data on these factors and/or strategies for data collection, while also identifying challenges to obtaining appropriate data and strategies for overcoming these challenges. (October 2016)

In the fifth report:
• The committee will synthesize and interpret the 4 brief reports issued as described above into one report that will include comprehensive project findings, conclusion, and recommendations based on the 4 previous reports. (January 2017)
Technical Slides below
Criteria for Selecting Social Risk Factors

**Conclusion 1:** Three overarching considerations encompassing five criteria could be used to determine whether a social risk factor should be accounted for in performance indicators used in Medicare value-based payment programs. They are:

A. The social risk factor is related to the outcome.
   1. The social risk factor has a conceptual relationship with the outcome of interest.
   2. The social risk factor has an empirical association with the outcome of interest.
Criteria for Selecting Social Risk Factors

Conclusion 1 (continued)

B. The social risk factor precedes care delivery and is not a consequence of the quality of care.
   3. The social risk factor is present at the start of care.
   4. The social risk factor is not modifiable through provider actions.

C. The social risk factor is not something the provider can manipulate.
   5. The social risk factor is resistant to manipulation or gaming.
Conclusion 2: There are measurable social risk factors that could be accounted for in Medicare value-based payment programs in the short term. Indicators include:

- Income, education, and dual eligibility;
- Race, ethnicity, language, and nativity;
- Marital/partnership status and living alone; and
- Neighborhood deprivation, urbanicity, and housing.
**Conclusion 3:** There are some indicators of social risk factors that capture the basic underlying constructs and currently present practical challenges, but they are worth attention for potential inclusion in accounting methods in Medicare value-based payment programs in the longer term. These include:

- Wealth,
- Acculturation,
- Gender identity and sexual orientation,
- Emotional and instrumental social support, and
- Environmental measures of residential and community context.
Conclusion 5: Characteristics of a public reporting and payment system that could accomplish the [committee’s 4] goals … include:

1. **Transparency** and accountability for overall performance and performance with respect to socially at-risk members of the population;

2. **Accurate** performance measurement—with high reliability and without bias (systematic error) related to differences in populations served;

3. **Incentives** for improvement overall and for socially at-risk groups, both within reporting units (i.e., the provider setting that is being evaluated—hospitals, health plans, etc.) and between reporting units.
Methods to Account for Social Risk Factors in VBP

Finding: The committee identified methods to account for social risk factors in four categories—(A) public reporting; (B) adjustment of performance measure scores; (C) direct adjustment of payments; and (D) restructuring payment incentive design—that may be required to address [the committee’s four] policy goals ....
Public Reporting Methods

1. Stratification by patient characteristics within reporting units
2. Stratification by reporting unit characteristics (e.g., comparing safety-net hospitals to peers)
Adjusting Performance Measure Scores

1. Risk adjustment for mean within-provider differences
2. Risk adjustment for within- and between-provider differences
3. Adding quality measures for performance for at-risk groups in addition to the overall measure
Direct Adjustments of Payment

1. Risk adjustment in payment formula without adjusting measured performance
2. Stratification of benchmarks used for payment
Restructuring Payment Incentive Designs

1. Paying for improvement relative to a reporting unit’s own benchmark (to a greater extent or exclusively), including “growth models”
2. Downweighting social risk factor-sensitive measures in payment
3. Adding a bonus for low disparities
Applying Methods to Account for Social Risk Factors

**Conclusion 6:** To achieve the committee’s goals … a combination of reporting and accounting in both measures and payment are needed.
Conclusion 7: Strategies to account for social risk factors for measures of cost and efficiency may differ from strategies for quality measurement, because observed lower resource use may reflect unmet need rather than the absence of waste, and thus lower cost is not always better, while higher quality is always better.
Monitoring

Conclusion 8: Any specific approach to accounting for social risk factors in Medicare quality and payment programs requires continuous monitoring with respect to the [committee’s 4] goals ....
POLLING QUESTION 1

Which of the following risk factors does your state currently track? (Select all that apply)

- Socioeconomic position
- Race/ethnic/cultural context
- Gender
- Social relationships
- Community context
- None of the above
- I’m not sure
To ask a question, please type it into the ‘chat’ box in the lower left hand corner of your screen.
In Health Matters, Place Matters - The Health Opportunity Index (HOI)

Virginia Department of Health
Office of Health Equity
America’s Health Rankings

United Health Foundation Scorecard

Overall Ranking = 21st

Source: American Health Rankings by United Health Foundation Released 12/10/15
HEALTH OUTPUT - RACIAL/ETHNIC

Diabetes deaths (per 100,000)
2013 | Virginia | Race/Ethnicity

White (Age-adjusted)
Black or African American (Age-adjusted)
American Indian or Alaska Native (Age-adjusted)
Asian or Pacific Islander (Age-adjusted)
Hispanic or Latino (Age-adjusted)
Not Hispanic or Latino (Age-adjusted)
White, non-Hispanic (Age-adjusted)
Black or African American, non-Hispanic (Age-adjusted)

INPUT - GEOGRAPHIC

**Poverty Gradient (Rural & Urban) in Virginia**

- Gap @ 200
- Gap @ 150 FPL
- Gap @ 125 FPL
- Gap @ 100 FPL
- Rural
- Urban
- Virgina

**Office of Health Equity**

**VDH VIRGINIA DEPARTMENT OF HEALTH**

Protecting You and Your Environment
Well-Being

System of Health Care

Strong Start for Children

Preventive Actions

Healthy, Connected Communities
America’s Health Rankings
United Health Foundation Scorecard
GOAL = 1st
Health Opportunity Index

Identifies areas and populations that are most vulnerable to adverse health outcomes based on the Social Determinants of Health
Geographic Level Can Mask Detail

Multilevel Spatial Analysis of Fundamental Causes & the Social Determinants of Health

Statewide by City/County

Census Tract

Census Block Group

Social Profiles, Social Networks & Social Capital
Healthy People 2020: Five Elements of SDOH
Selecting Indicators

1. Identified by Local Health Departments & Stakeholders as important.

2. Linked to health outcomes in academic literature.

3. “Actionable” (e.g., segregation vs race)

4. Consistent, quality data for all Census Tracts in Virginia.
Structure

30+ Variables

13 Indicators

4 Profiles

1 Health Opportunity Index
Health Opportunity Index

- Community Environmental Profile
- Economic Opportunity Profile
- Consumer Opportunity Profile
- Wellness Disparity Profile
Community Environmental Profile

**Air Quality Index (EPA)**
- Cancer Risk
- Respiration Risk
- On-road Pollution
- Non-road
- Non-point

**Population Churning Index**
- Inflow Mobility
- Outflow Mobility

**Population-Weighted Density**

**Walkability Index**
- Density
- Diversity (Land-use)
- Design (Connectivity)
- Distance to Transit
Economic Opportunity Profile

Employment Access Index
- Number of Jobs
- Distance to Jobs

Income Inequality Index
- Gini Coefficient

Job Participation Index
- % of Working Age Population in the Labor Force
Wellness Disparity Profile

Access to Care Index
- % Uninsured
- Primary Care Physician FTEs within 30 miles

Segregation Index
- Race/Ethnicity
- Population
- Spatial Influence Weighting
DISPARITIES & THE HOI
Monotonicity of HOI

Disability Free Life Expectancy

Low Birth Weight

Disability Free Life Expectancy by HOI Quintiles

Low Birth Weight (%)

VDH VIRGINIA DEPARTMENT OF HEALTH
Protecting You and Your Environment

Office of Health Equity
Health equity for all Virginians
USES AND APPLICATIONS
Uses of the HOI

- To show that place matters when it comes to health
- To identify the impact of social determinants of health on statewide health landscape
- To identify HOI indicators that are most influential on local health
- To learn from communities with good health despite adverse HOI indicators
- To build collaboration across all sectors to promote health equity
Population Experience

https://www.vdh.virginia.gov/omhhe/hoi/
Fairfax County

https://www.vdh.virginia.gov/omhhe/hoi/
Predictive Analytics for Low Birth Weight (Low HOI)

Network

[Diagram showing a network with nodes labeled Bias, Neuron1, Neuron2, Neuron3, Neuron4, Neuron5, Neuron6, Neuron7, Neuron8, Neuron9, RACE_4GP, TRIMESTER, MOMAGE_5GP, MOMED_3GP, LBW, and a bar chart showing predictor importance with RACE_4GP being the most important.]
Predictive Analytics for Low Birth Weight (High HOI)
Norfolk City Health District - HOI Indices
Contributions

<table>
<thead>
<tr>
<th>Variables</th>
<th>Contribution of the Variables (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Townsend Material Deprivation Index</td>
<td>19.8</td>
</tr>
<tr>
<td>Affordability Index</td>
<td>18.3</td>
</tr>
<tr>
<td>Population Density</td>
<td>17.9</td>
</tr>
<tr>
<td>Access to Employment</td>
<td>9.1</td>
</tr>
<tr>
<td>Average Years of Schooling</td>
<td>8.7</td>
</tr>
<tr>
<td>Job Participation</td>
<td>6.9</td>
</tr>
<tr>
<td>Stable Population</td>
<td>6.2</td>
</tr>
<tr>
<td>Income Inequality</td>
<td>5.2</td>
</tr>
<tr>
<td>Walkability</td>
<td>4.4</td>
</tr>
<tr>
<td>Environmental Quality</td>
<td>2.7</td>
</tr>
<tr>
<td>Access to Healthcare</td>
<td>0.4</td>
</tr>
<tr>
<td>Racial Dissimilarity</td>
<td>0.2</td>
</tr>
<tr>
<td>Food Access (LILA)</td>
<td>0.1</td>
</tr>
</tbody>
</table>

Office of Health Equity
Health equity for all Virginians

Virginia Department of Health
Protecting You and Your Environment
Virginia
Norfolk City Health District
Townsend Material Deprivation Index *
Overlaid with Percent Low Birth Weight

- Very Low Opportunity
- Low Opportunity
- Moderate Opportunity
- High Opportunity
- Very High Opportunity

Low Birth Weight (%)
- 0.0 - 4.4
- 4.5 - 7.6
- 7.7 - 10.1
- 10.2 - 14.4
- 14.5 - 22.2

* Material deprivation entails the lack of goods, services, resources, amenities and physical environment which are customary, or at least widely approved in the society under consideration.
REPLICATION
Resources Needed

- VDH Infrastructure
  - Staff
    - 1-2 Epidemiologist skilled in Geospatial techniques
    - Free advice from colleagues
  - Statistical & Geospatial software
    - ArcGIS, SPSS & Tableau
- Time: 6 months
- Data from public Federal sources.
For more information please contact:

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POLLING QUESTION 2

• What state-specific data sources do you have to measure social risk factors? (Select all that apply)
  ○ Employment Commission
  ○ State Police
  ○ Dept. of Education
  ○ Dept. of Elections
  ○ None of the above
  ○ I’m not sure
To ask a question, please type it into the ‘chat’ box in the lower left hand corner of your screen.
Thank You!

Thank you for joining this Value-Based Payment Reform Academy Group Technical Assistance Webinar!

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