

tential. His peers may wish to reexamine some of the business models advanced in the report, which could continue rewarding innovation while satisfying growing public demands for affordability and needs-driven innovation.

Given the charged politics of debates over access to medicines, I believe Secretary General Ban was courageous to convene this panel — though the report's fate in the UN system is uncertain, given that there is a new secretary



An audio interview with Dr. Moon is available at [NEJM.org](http://NEJM.org)

general, a new U.S. president, and a new director general of the World

Health Organization in 2017. Nevertheless, the panel's greatest impact may be realized not through intergovernmental talks, but by stimulating public debate over ways of reforming the research-and-development system to better

serve the global public interest. The Netherlands' trade and health ministers recently echoed three panel recommendations, calling for transparency of pharmaceutical research-and-development costs, adequate public return on public investment, and testing of new business models.<sup>5</sup>

This report comes at a time when the public appetite for change is growing, the pharmaceutical industry's reputation is in the doldrums, and demand for a more equitable global trade system is building. It puts forth ideas that deserve a fair hearing in countries struggling to provide access to medicines for their people and in the boardrooms of companies with the vision to try new ways of delivering innovation. Business as usual is no longer an option.

Disclosure forms provided by the author are available at [NEJM.org](http://NEJM.org).

From the Global Health Centre, Graduate Institute of International and Development Studies, Geneva; and the Department of Global Health and Population, Harvard T.H. Chan School of Public Health, Boston.

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## Social Risk Factors and Equity in Medicare Payment

Melinda B. Buntin, Ph.D., and John Z. Ayanian, M.D., M.P.P.

Medicare is steadily shifting from volume-based fee-for-service payments to value-based payment models, including accountable care organizations, episode-based bundled payments, and penalties for hospitals with relatively high Medicare readmission rates.<sup>1</sup> These models typically provide financial bonuses or penalties related to the efficiency and quality of care, thereby shifting more financial risk to hospitals, medical groups, and other providers. Through a star rating system, bonuses are also provided to high-

quality health plans in the Medicare Advantage program.

A growing body of research indicates that social risk factors, including low socioeconomic position (as indicated, for example, by income or educational level), minority race or ethnic background, lower degree of acculturation, minority sexual orientation or gender identity, limited social relationships, and living alone or in a deprived neighborhood influence health outcomes.<sup>2</sup> These findings are a concern for health care providers and policymakers because

Medicare beneficiaries with such social risk factors are often concentrated among a subset of providers, particularly in inner-city or rural communities, and in some Medicare Advantage plans.

Without accounting for such risk factors, Medicare quality reporting and payment programs that financially reward or penalize health care providers according to the health outcomes of their patients will understate the quality of care provided by clinicians and organizations that disproportionately serve these populations and give

fewer resources to safety-net providers. Because these providers are more likely to serve uninsured patients and those covered by Medicaid, they are often less well funded to begin with than providers caring for greater proportions of commercially insured patients. To achieve the aims of value-based payment models to improve quality and control costs, while also enhancing health care equity and improving outcomes for disadvantaged patients, payers must strike a careful balance between adjustment of payments and quality measures and preservation of incentives to improve the care given to these patients.

In response to the Improving Medicare Post-Acute Care Transformation (IMPACT) Act of 2014, the Assistant Secretary for Planning and Evaluation (ASPE) of the Department of Health and Human Services commissioned a committee of the National Academies of Sciences, Engineering, and Medicine — on which we served — to “specify criteria that could be used in determining which socioeconomic status factors should be accounted for in Medicare quality measurement and payment systems.”<sup>2</sup>

In the final report released in January 2017,<sup>2</sup> our National Academies committee presents criteria for determining these factors and addresses methods of promoting fairness for providers while also maintaining or enhancing incentives to improve care for disadvantaged patients. The committee specified four primary goals for accounting for social risk factors in Medicare payment programs: to reduce disparities in access, quality, and outcomes; to improve quality and efficient care delivery for all

patients; to promote fair and accurate reporting; and to compensate providers fairly.

Since 2006, Medicare Advantage payments to health plans have been risk-adjusted for clinical diagnoses that affect costs and outcomes. Similarly, adjusting for social risk factors in Medicare Advantage and Medicare’s value-based payment programs would provide a clearer, more accurate picture of providers’ quality, costs, and outcomes. Moreover, failing to adjust payments in this way poses real risks. If providers are unfairly penalized for serving socially disadvantaged patients, access to care and quality of care for these patients could suffer, and health disparities could widen further.

Our committee explored these issues in detail, with a specific focus on Medicare value-based payment programs. Our deliberations were guided by a prior report from the National Quality Forum.<sup>3</sup> Our findings, along with new empirical evidence in a recent ASPE report,<sup>4</sup> define practical ways of adjusting quality measures and value-based payments for differences in social risk factors across providers, while maintaining incentives for providers to improve the quality of care for all patients.

We identified four approaches that could be used individually or in combination to account for social risk factors: stratified public reporting by social risk factors within reporting units to illuminate how providers are serving patients with these risk factors; adjustment of performance measures to standardize estimates of quality (i.e., to estimate what the quality of reporting units would be if all units cared for patients with average levels of social risk);

direct adjustment of payments to providers who disproportionately serve patients with social risk factors, thereby reducing incentives to avoid these patients; and restructuring payment incentives to reward improvement in quality or achievement of high-value care for these patients.

The committee concluded that a combination of these methods, including changes to both public reporting and payment, would best achieve desired policy goals while mitigating risks of worsening quality or disparities. For example, restructuring incentives will not illuminate disparities unless they are combined with stratified public reporting.

Our committee examined variables in government data, along with data from providers and health plans, that could be used as indicators of social risk. As the chart shows, some data are readily available to the Medicare program, such as patients’ dual eligibility for Medicare and Medicaid. Reflecting the low incomes of Medicaid recipients, this factor is a consistent indicator of worse outcomes and greater resource use in multiple Medicare payment programs.<sup>4</sup> The recently passed 21st Century Cures Act specifies that Medicare should also account for social risk in its readmissions-penalty program by comparing hospitals with similar proportions of dually eligible beneficiaries.

In addition to using dual eligibility, however, the committee argues that the federal government should develop new data sources and new methods, measures, and models to account for social risk factors in Medicare payment. All the factors listed in the chart meet key criteria defined by our com-

Social Risk Indicators	Data Availability			
	Data available for use now	Some data available for use; research needed to improve accuracy	Insufficient data available now; research needed on how to best collect data	Research needed on relationships to quality, costs, and outcomes and how to best collect data
Socioeconomic position				
Income		●		
Education level		●		
Dual eligibility for Medicare and Medicaid	●			
Wealth			●	
Race, ethnic group, and cultural context				
Race or ethnic group		●		
Language spoken		●		
Country of origin	●			
Extent of acculturation				●
Gender and sexual orientation				
Gender identity				●
Sexual orientation				●
Social relationships				
Marital or partnership status		●		
Living with others vs. alone			●	
Amount of social support			●	
Residential and community context				
Extent of neighborhood deprivation		●		
Urban vs. rural residence	●			
Adequacy of housing		●		
Other environmental factors				●

**Data Availability for Indicators of Social Risk.**

Adapted with permission from the National Academies of Sciences, Engineering, and Medicine.<sup>2</sup>

mittee: they are related to health care outcomes, are evident before health care is delivered, and are not consequences of the quality of care or easily modified by health care providers.

Specifically, at the time of Medicare enrollment, the Centers for Medicare and Medicaid Services (CMS) could collect information from new enrollees about relevant stable social risk factors, including self-reported race and ethnic background, preferred language, and educational level attained, and consider collecting such information for all current enrollees. In the past decade, leading private insurers have been collecting some of these data to serve their enrollees better through cul-

turally competent educational resources, interpreter services, and enhanced care coordination.<sup>5</sup> CMS can continue to develop methods to use such information optimally when reporting quality or rewarding value. Among social risk factors not included in claims or enrollment data, those that explain the most variation in outcomes should be considered for broad data collection and inclusion in payment and quality-reporting systems.

As methods are implemented to account for social risk factors in Medicare payment, CMS can closely monitor the effects on disadvantaged enrollees and their health care providers, in order to ensure that policy goals are

achieved. Adjustment for social risk factors should not excuse sub-optimal care for disadvantaged patients. Even under current value-based payment systems — with no explicit adjustment for social risk factors — some safety-net providers are delivering excellent and efficient care for such patients and earning performance-related bonuses.

Whereas many aspects of health care policy have become deeply partisan, there was strong bipartisan support for the IMPACT Act under which our committee's report and the ASPE report on accounting for social risk factors in Medicare payment were commissioned. In the face of broad consensus that health care must be

come more patient-centered and value-based, accounting for social risk factors in Medicare payment can help to achieve these aims by providing greater financial incentives for providers to care well for disadvantaged patients.

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From the Department of Health Policy, Vanderbilt University School of Medicine, Nashville (M.B.B.); and the Institute for Healthcare Policy and Innovation, the Division of General Medicine, Medical School, the Department of Health Management

and Policy, School of Public Health, and the Gerald R. Ford School of Public Policy, University of Michigan, Ann Arbor (J.Z.A.).

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## Should Medicare Value-Based Purchasing Take Social Risk into Account?

Karen E. Joynt, M.D., M.P.H., Nancy De Lew, M.A., Steven H. Sheingold, Ph.D., Patrick H. Conway, M.D., Kate Goodrich, M.D., and Arnold M. Epstein, M.D.

The United States is rapidly moving to a health care delivery system in which value-based payment models are the predominant way of reimbursing clinicians for care. Since caring for patients with social risk factors may cost more and make it harder to achieve high performance on quality metrics, there is long-standing concern about how these patients might fare under such systems and how the systems might affect providers who disproportionately provide care to socially at-risk populations.

In October 2014, Congress passed the Improving Medicare Post-Acute Care Transformation (IMPACT) Act, which required the Office of the Assistant Secretary for Planning and Evaluation (ASPE)

of the Department of Health and Human Services to review the evidence linking social risk factors with performance under existing federal payment systems — and to suggest strategies to remedy any deficits they found. That report was sent to Congress in December 2016.<sup>1</sup>

Because the report focuses primarily on Medicare, the analyses centered on social risk factors covered in current Medicare data, including dual enrollment in Medicare and Medicaid as a marker for low income, residence in a low-income area, race, Hispanic ethnicity, and residence in a rural area. Disability was also examined. Medicare payment programs were analyzed if they were currently operational or defined in statute and if they incorporat-

ed quality or efficiency metrics into payment decisions. These criteria led to the inclusion of nine programs: the Hospital Readmissions Reduction Program, Hospital Value-Based Purchasing Program, Hospital-Acquired Condition Reduction Program, Medicare Advantage Quality Star Rating Program, Medicare Shared Savings Program (MSSP), Physician Value-Based Payment Modifier Program, End-Stage Renal Disease Quality Incentive Program, Skilled Nursing Facility Value-Based Purchasing Program, and Home Health Value-Based Purchasing Program.

There were two main findings. First, beneficiaries with social risk factors had worse outcomes on many quality measures, regardless of the providers they