Adjusting for Life Circumstances is Essential for Successful Healthcare Payment Reform

By Anthony Knettel, JD

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This issue brief considers the impact of environmental, social, and behavioral determinants of health on academic health centers' tripartite mission (health professions education, biomedical research, and clinical care) and their implications for the prevailing academic health center business model and its long-term financial viability. It argues that (1) current evidence-based and performance-based payment policies create a financial disincentive to care for patients disadvantaged by environmental, social, and behavioral determinants of health, and (2) creation of a "life circumstances adjustment" mechanism is essential to establishing fair and effective population-based payment policies. The issue brief offers a roadmap for creating an interim adjustment mechanism to improve payment fairness and effectiveness until data systems can be implemented that support individualized adjustments.

WHAT ARE THE ENVIRONMENTAL, SOCIAL, AND BEHAVIORAL DETERMINANTS OF HEALTH, AND WHY DO THEY MATTER?

In a seminal article in the *New England Journal of Medicine* titled "We Can Do Better—Improving the Health of the American People," Steven A. Schroeder, MD, addressed the apparent paradox of Americans' poor health status relative to other industrialized nations despite high spending on healthcare:

> The United States spends more on health care than any other nation in the world, yet it ranks poorly on nearly every measure of health status. How can this be? What explains this apparent paradox? The two-part answer is deceptively simple — first, the pathways to better health do not generally depend on better health care, and second, even in those instances in which health care is important, too many Americans do not receive it, receive it too late, or receive poor-quality care.[1]

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…emerging research suggests that a wide range of environmental, social, and behavioral determinants of health can result in very large disparities in health status and life expectancy.

Although the foundational determinants of health are communicable and non-communicable disease, a growing body of evidence argues that individual, community, and population health can be significantly affected by the environment, social circumstances, and behavioral choices. For example: low income, limited education, and lack of access to care are associated with shorter life expectancy; prevailing western dietary norms are linked to obesity and its related medical conditions; and urbanization is associated with increased stress, depression, and automotive injuries and fatalities. Indeed, emerging research suggests that a wide range of environmental, social, and behavioral determinants of health can result in very large disparities in health status and life expectancy.[2] Moreover, these factors can interact with each other to compound their impact.[3]

THE RELEVANCE OF ENVIRONMENTAL, SOCIAL, AND BEHAVIORAL DETERMINANTS OF HEALTH TO ACADEMIC HEALTH CENTERS' TRIPARTITE MISSION

Traditionally, those academic health centers that have placed high priority on addressing environmental, social, and behavioral determinants of health have often been motivated by a strong commitment to public health, social mission, and community benefit. As the full extent of the impact of these determinants on clinical treatment and outcomes becomes better understood, however, more academic health centers are focusing on their direct relevance to the patient care mission. These determinants of health are so essential to optimal patient care and treatment outcomes that the Institute of Medicine (IOM) recently issued a report recommending their inclusion in electronic health records:

> Determinants of health — like physical activity levels and living conditions — have traditionally been the concern of public health and have not been linked closely to clinical practice. However, if standardized social and behavioral data can be incorporated into patient electronic health records (EHRs), those data can provide crucial information about factors that influence health and the effectiveness of treatment. Such information is useful for diagnosis, treatment choices, policy, health care system design, and innovations to improve health outcomes and reduce health care cost.[4]

Moreover, sociodemographic factors can function as confounders in performance measures.[5] An expert panel convened by the National Quality Forum (NQF) described their relevance to clinical performance measurement:

> Increasingly, policymakers and other leaders have raised the question of whether performance measures used in accountability applications, including public reporting and pay-for-performance, should be adjusted for sociodemographic factors in order to improve the accuracy of performance results. There is a substantial body of evidence that sociodemographic factors influence a variety of patient outcomes and some processes.[6]

As expert consensus grows that environmental, social, and behavioral determinants of health have a direct impact on the clinical mission, the implications for academic health centers' education and research missions also become clearer:

- If successful treatment outcomes are dependent, in part, on health professionals' awareness of upstream environmental, social, and behavioral factors that impact and potentially undermine the efficacy of patient care, *health professions curriculum and training programs must be adapted to teach and emphasize this awareness*.
- Similarly, academic health centers, especially those involved in clinical trials and translational research, must ask *how and to what extent the accuracy and validity of their research are affected by environmental, social, and behavioral determinants of health,* and adopt appropriate strategies to account for the impact on research.

OPTIMIZING VALUE AND REDUCING DISPARITIES DEPEND ON PAYMENT POLICIES THAT TAKE ENVIRONMENTAL, SOCIAL, AND BEHAVIORAL DETERMINANTS OF HEALTH INTO ACCOUNT

The NQF expert panel succinctly summarized concerns about the impact of current U.S. policy (i.e., no adjustment of measures for sociodemographic factors) on disadvantaged patient populations:

- Providers avoiding serving disadvantaged populations to ward off being labeled a poor performer, resulting in worsened access to care for vulnerable patients;
- Funds shifting from those who serve the disadvantaged to those who serve the affluent based on performance-based incentives. Safety-net providers then have fewer resources to care for vulnerable populations and the array of additional services that they need; and
- Consumers and payers avoiding providers who serve disadvantaged populations because they are labeled poor performers, which may not accurately reflect underlying quality of care.

Most of the experts on the panel concluded that the current policy is unintentionally weakening the network of providers that serves disadvantaged populations, which could end up worsening disparities.[7] This behavioral response could get significantly stronger as awareness of the impact of environmental, social, and behavioral determinants of health on measured performance becomes more widely recognized.

The policy community has begun discussing various ways in which the differential cost of effectively treating patients disadvantaged by environmental, social, and behavioral determinants of health might be financed. One interesting approach is being funded by the Federal Reserve Bank:

> The combination of fee-for-service payments and the U.S. health care system's standing commitment to treating existing illness discourages spending on the behavioral, social, and environmental (that is, the nonmedical) conditions that contribute most to long-term health. Pay-for-success, alternatively known as social impact bonds, or SIBs, offers a possible solution. The pay-for-success model relies on an investor that is willing to fund a nonmedical intervention up front while bearing the risk that the intervention may fail to prevent disease in the future. Should the intervention succeed, however, the investor is repaid in full by a predetermined payer (such as a public health agency) and receives an additional return on its investment as a reward for taking on the risk. Pay-for-success pilots are being developed to reduce asthma-related emergencies among children, poor birth outcomes, and the progression of prediabetes to diabetes, among other applications. These efforts, supported by key policy reforms such as public agency data sharing and coordinated care, promise to increase the number of evidence-based nonmedical service providers and seed a new market that values health, not just health care.[8]

While this market-based approach holds promise, as conceived, it appears most suitable to providing financing for targeted disease-specific interventions rather than addressing environmental, social, and behavioral determinants of health in a systematic manner. Its success is highly dependent on the availability of willing investors in local markets, which suggests its utilization would vary significantly across communities.

In an earlier issue brief, the AAHC elaborated concerns regarding the business case for academic health centers addressing environmental, social, and behavioral determinants of health:

> *The business case is undermined by payment systems that do not currently provide adequate incentives to address environmental, social, and behavioral determinants of health, and it is uncertain when and how these incentives will be developed and implemented.* For example, the benchmarks and incentives at the core of the Medicare Shared Savings Program (as currently defined) do not adequately take into account that environmental, social, and behavioral determinants of health can have a significant adverse impact on health outcomes. Healthcare providers with a case mix that includes a disproportionate number of disadvantaged patients (as is often the case for academic health centers) are likely to experience poorer overall population health outcomes than would otherwise be expected based on severity of illness and quality of care provided. Without some mechanism to adjust for environmental, social, and behavioral determinants of

> health, these providers will be burdened with a competitive disadvantage qualifying for shared savings relative to providers with a more favorable case mix. This, in turn, creates an incentive to exclude providers with an unfavorable case mix (including academic health centers) from ACOs, and dilutes the effectiveness of the Shared Savings Program's incentives by rewarding favorable case mix instead of superior performance.
>
> This problem is not unique to Medicare ACOs, and should be addressed in any arrangement, public or private, that seeks to incent and reward healthcare providers based on improved population outcomes. *Thus, there is an urgent need for dialogue among health care providers and third-party payers to develop and implement a viable adjustment mechanism that can be incorporated into reimbursement policies.* [emphasis added][9]

Current policies to reduce hospital readmission rates illustrate the challenge. It is possible for academic health centers to take steps to mitigate the disparities in clinical outcomes (i.e., higher hospital readmissions) for disadvantaged patient populations. But doing so requires expenditure of additional resources, such as early intervention and more intense involvement by social workers, nurses, pharmacists, and nutrition professionals in post-discharge follow-up. These necessary interventions, which can significantly increase the cost of care, are unrecognized (and therefore unreimbursed) under current policy.

As pay-for-performance, value-based purchasing, and accountable care requirements become more prevalent, the problem will deepen:

> Safety-net hospitals and providers will fail in increasing numbers under the financial burden of new federal laws and programs aimed at reducing costs, improving quality, and increasing access – including pay-for-performance programs that do not risk-adjust outcomes measures for sociodemographic factors. If safety-net providers fail, disparities in outcomes and access will only worsen for low-income and disadvantaged patients.[10]

It is time to broaden the expectation of what a healthcare system can do to include redesigning healthcare services to achieve health equity.[11] For that to happen, however, public and private payers must be willing to financially reward health systems for building equity into healthcare delivery by design.

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A CONCEPTUAL APPROACH THAT ACCOUNTS AND ADJUSTS FOR ENVIRONMENTAL, SOCIAL, AND BEHAVIORAL DETERMINANTS OF HEALTH

Our national healthcare policy (and the healthcare system itself) is moving in the direction of increased reliance on outcomes and cost measurement tied to pay-for-performance, value-based purchasing and accountable care. One of the unintended consequences of this shift is to put health professionals and institutions, including academic health centers, at financial risk for treating patients who are detrimentally impacted by environmental, social, and behavioral determinants of health. The financial risk of treating such patients, in the absence of adjustments for life circumstances, creates an economic incentive for avoidance. While some healthcare providers have found successful strategies to minimize the number of such patients in their case mix, academic health centers and other safety-net providers, as a result of either voluntary mission or mandates, treat a disproportionate share of such patients.

In an unpublished paper shared with AAHC, Steven H. Lipstein, President and CEO of BJC Healthcare, described the need for an adjustment mechanism this way:

> Now comes the hard part. How do we make fair comparisons of outcomes performance? Current methods include "case mix" adjustments that attempt to equalize patient populations with regard to various types of medical conditions, the relative severity of those conditions, and the co-existence of other conditions that add to the degree of complexity. Absent from these methods are adjustments for the degree-of-difficulty or complexity associated with each patient's individual life circumstances, yet, in many instances, we know that life circumstances have as much to do with patient-

specific outcomes as do activities embedded with the health care delivery system.[12]

There are many ways, some obvious and some less so, that an individual's life circumstances can have an adverse impact on clinical outcomes, including:

- *Alcohol and substance abuse.* People with addictions have difficulty adhering to treatment regimens of care prescribed by medical professionals, making optimal outcomes difficult to realize.
- *Chronic lack of health insurance.* Individuals and their families who lack insurance over the long term tend to use healthcare services inefficiently and ineffectively, often seeking care in suboptimal settings. Even when they become insured (e.g., as a result of ACA), these patterns of care-seeking persist.[13]
- *Chronic lack of paid sick leave.* Many working poor families are employed in service industries that do not provide paid sick leave, much less health insurance. This imposes a double financial burden on the uninsured working poor—loss of income on top of out-of-pocket healthcare expenses—unless they seek care from hospital emergency rooms after work hours.
- *Disability.* Physical and behavioral disabilities make it more difficult for people managing acute and chronic medical conditions to achieve optimal patient outcomes.
- *Education, literacy, and English fluency.* People with limited education, literacy, and English fluency often have difficulty effectively managing their health conditions, fully complying with complicated treatment regimens, and reading medication labels or instructions provided by medical professionals at the time of discharge from the hospital, the emergency room, or the doctor's office. All of which impede achieving optimal patient outcomes.
- *Obesity and tobacco use.* Obesity and tobacco are contributing factors to many health conditions, and they also impede treatment and optimal outcomes of other conditions.
- *Poverty and household income.* Medications, out-of-hospital nursing and rehabilitation services, and other out-of-pocket medical expenses that exceed family resources undermine convalescence following a surgery or illness and impede optimal patient outcomes.
- *Geography.* Environmental exposure, access to transportation, food deserts, and lack of healthcare providers are some of the factors associated with where someone lives or works.

One way to mitigate the financial risk of treating such patients is to add to the current case mix index (CMI) a new supplemental patient classification methodology that serves as a life circumstances index (LCI). Like CMI coding, the LCI coding would be used by health professionals to assess the increased risks associated with each patient's life circumstances.

Lipstein suggests that each time a patient seeks care, the treating health professional would tabulate and update the patient's LCI codes. The LCI coding would be submitted, along with all other claims data and case mix coding, to the Centers for Medicare and Medicaid Services (CMS). Once a sufficiently large data sample has accumulated, outcomes researchers could correlate life circumstances with both patient-specific outcomes and the cost of producing those outcomes, using their findings as the basis to propose an adjustment mechanism. Eventually, the LCI codes could be expanded to non-Medicare payment systems as well.

A well-designed LCI coding procedure could be designed to be no more complicated or susceptible to abuse than other coding systems (e.g., CPT, ICD, DRG). Each patient could receive unique codes to identify whether they:

- Are living in poverty;
- Did not finish high school;
- Cannot read English at a specified grade level;
- Have a body mass index above a specified level;
- Have a history of smoking;
- Have a physical or behavioral disability;

Individuals and their families who lack insurance over the long term tend to use healthcare services inefficiently and ineffectively, often seeking care in suboptimal settings.

- Are alcohol or drug abusers; and
- Are affected by other relevant life circumstances.

With the benefit of subsequent analyses, outcomes researchers could develop coding groupers to demonstrate how the co-existence of several difficult life circumstances impact a single patient and add to both the cost and the degree of difficulty in achieving optimal patient-care outcomes.

If the health outcomes improvement goals of the Affordable Care Act (ACA), and health reform in general, are to be fully realized, policymakers need to encourage the pursuit of optimal clinical outcomes for *all* patients, including those whose life circumstances make it more difficult for healthcare professionals to achieve those clinical outcomes. Complementing existing case mix indices with a life circumstances index is one potential policy response; other risk adjustment methodologies may be possible. The specific methodology used is ultimately less important than eliminating this critical blind spot in current payment policy.

A ROADMAP FOR TRANSITIONAL STRATEGIES TO IMPLEMENT A LIFE CIRCUMSTANCES ADJUSTMENT MECHANISM

Implementation of a life circumstances index (or alternative sociodemographic risk adjustment methodology) is no small task given that electronic health records and coding systems do not currently capture the data needed to calculate such risk on an individual basis, and outcomes researchers have not yet developed coding groupers to demonstrate how the co-existence of several difficult life circumstances impact a single patient and add to both the cost and the degree of difficulty in achieving optimal patient care outcomes. *Therefore, AAHC urges policymakers to consider implementing an interim adjustment mechanism to provide approximate adjustments on a geographic/population basis while the infrastructure and research needed to make individualized adjustments is being developed.*

Online databases, such as Countyhealthrankings.org and Healthdata.org, illustrate how an interim adjustment mechanism might work. It is already possible to map differences in health status and life expectancy to the state, county, zip code, and census tract level. A similar database could be used to estimate the degree to which patients are impacted by such determinants based on where they live. While basing the adjustment on census tract would be most accurate, using zip codes might initially be easier since healthcare providers already have this information in their billing systems. The next stage in the progression of the interim adjustment mechanism would be to use data maps that are specific to particular conditions—e.g., diabetes, asthma, cardiovascular disease, etc.—whenever they are available.

The interim adjustment mechanism would serve as a research platform to refine the adjustment methodology over time and prepare for individualized adjustments once the necessary infrastructure is in place. AAHC envisions this interim adjustment to be unidirectional, increasing payment for patients with above average risk associated with their life circumstances, though payment could be adjusted up or down (in accordance with above or below average risk) if budget neutrality was required.

CONCLUSION

One of the unintended consequences of our national healthcare policy (and the healthcare system itself)—which is moving in the direction of increased reliance on outcomes and cost measurement tied to pay-for-performance, value-based purchasing, and accountable care— is that it puts health professionals and institutions, including academic health centers, at financial risk for treating patients who are detrimentally impacted by environmental, social, and behavioral determinants of health. The financial risk of treating such patients, in the absence of adjustments for life circumstances, creates an economic incentive for avoidance. While some healthcare providers have found successful strategies to minimize the number of such patients in their case mix, academic health centers and other safety-net providers, as a result

of either voluntary mission or mandates, treat a disproportionate share of such patients.

As our healthcare system becomes increasingly driven by performance and outcomes, the financial penalty for treating patients who are detrimentally impacted by environmental, social, and behavioral determinants of health will increase. To make fair and effective comparisons of performance and outcomes, "case mix" adjustments must not only equalize patient populations with regard to medical conditions, their relative severity, and co-existing conditions that increase complexity, they must also explicitly take into account life circumstances that have a direct and substantial impact on clinical outcomes.

The requisite data infrastructure does not currently exist for full implementation of an individualized life circumstances adjustment mechanism, but databases already exist that could serve as the basis for an interim mechanism using a geographic population-based approximation. This interim adjustment mechanism would increase the fairness of payment systems until the methodology for individualized adjustment could be fully implemented.

Endnotes

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