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DEBATE-COMMENTARY

HSR Health Services Research

The hospital readmission reduction program and social risk

Value-based purchasing programs seek to incentivize clinical quality improvement by linking providers' performance on key quality measures to financial penalties and rewards. Despite mixed evidence on their effectiveness at improving quality, value-based purchasing programs have grown tremendously over the past several years, both in terms of the scope of performance measures used and the size of financial rewards or penalties tied to performance. In large part, it is the face validity of paying for quality that continues to drive the adoption of these programs in the United States.

While the goal of value-based purchasing programs is to spur quality improvement across all providers, a growing body of evidence suggests that these programs have resulted in disproportionate financial penalties for providers that care for vulnerable and low-income populations. Hospitals remain a common target for value-based purchasing programs, and concerns have centered on the impact of these programs on safety-net hospitals. At baseline, compared to nonsafety-net hospitals, safety-net hospitals perform less well on a variety of performance measures: they have meaningfully lower levels of adherence to certain process-of-care measures[1] and poorer scores on patient experience measures.[2] Then, when value-based purchasing imposes financial penalties on poorly performing providers, safety-net hospitals are more likely to be a target of those penalties. This has been well documented under Medicare's Hospital Readmissions Reduction Program (HRRP)[3]—a value-based purchasing program that seeks to reduce high readmission rates. Safety-net hospitals are both more likely to be penalized for higher-than-expected readmission rates and face larger financial consequences than other hospitals when they are penalized.[4,5]

The consequences of these penalties are real and far-reaching. For safety-net hospitals, penalizing or withholding payments may cause further harm to their already thin financial margins.[6] This may make it even more difficult to invest in the quality improvement efforts needed to avoid penalties or reap rewards in the first place. In this way, penalties could negatively impact hospital quality, increase the likelihood of future penalties, and create a cycle of poverty for safety-net hospitals. Value-based purchasing programs may inadvertently consign patients to the hospitals with poorest outcomes and little chance of improvement. Further, it may create incentives for hospitals to cherry-pick patients with better social and economic circumstances, thus reducing access to care for the most vulnerable populations. For these reasons, finding strategies to support safety-net hospitals while holding them to high quality standards has emerged as a critical policy priority.

It is unsurprising that safety-net hospitals fare poorly when exposed to value-based purchasing programs given myriad challenges faced by both the hospitals themselves and the communities they serve. The poorer performance and resultant penalties faced by safety-net hospitals can be partially attributed to the socioeconomic circumstances faced by their patient populations. These hospitals serve large portions of the uninsured and racial/ethnic minority populations in the United States, and tend to care for sicker patients who suffer from a greater number of comorbidities.[7,8] Poor and uninsured adults are more likely to have less than a high school education, be unemployed, and live in poverty—all of which are risk factors for worse health outcomes.[9,10] Patient socioeconomic status also directly influences other factors that determine whether a patient can successfully remain at home following hospitalization—the social determinants of health including degree of health literacy, availability of informal caregivers, and the social capital needed to maintain health and recover from acute health events can all affect a patient's risk for hospital readmission. One approach to improving the health of underserved patients is to direct resources toward community-based spending. Indeed, the Affordable Care Act has placed renewed emphasis on efforts to ensure that tax-exempt hospitals invest in their communities,[11] which may reduce rates of preventable hospitalizations and readmissions.[12]

While directly addressing the social determinants of health could result in long-lasting and important gains in the health of vulnerable populations, a more immediate fix would address the challenges faced by safety-net hospitals in a financial incentive system that seems stacked against them. One such challenge is that patients of low socioeconomic status have worse outcomes on standard quality metrics independent of clinical risk, resulting in worse performance at safety-net hospitals.[3,13] This suggests that a solution might lay in better risk adjustment of these metrics.

A feasible approach is to incorporate social risk adjustment into value-based purchasing programs, however doing so is controversial. While advocates of incorporating social risk argue that risk adjustment would level the playing field between safety-net and nonsafety-net hospitals, critics argue that accounting for social risk accepts substandard quality at safety-net hospitals, thus blunting the incentive for improvement and tacitly endorsing disparities in quality of care for vulnerable populations. Despite this controversy, recent reports from both the National Quality Forum[14] and the National Academies of Sciences, Engineering, and Medicine[15] have endorsed frameworks for including social factors in risk adjustment.

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To date, penalties in the HRRP program have not done so, though this is set to change in 2019 under the 21st Century Cures Act.

In their study in this issue of *Health Services Research*, Joynt Maddox and colleagues make a major contribution to this debate and provide a roadmap for how future risk adjustment in value-based purchasing policies may affect safety-net hospitals. The authors incorporate key dimensions of social risk into HRRP models and compare differences in risk of readmission between safety-net hospitals and nonsafety-net hospitals after accounting for these factors. They also estimate the expected difference in financial penalties between HRRP models that account for social risk and those that do not. Joynt Maddox and colleagues confirm that safety-net hospitals do, indeed, have higher readmission rates for the specific conditions incented under HRRP—acute myocardial infarction, congestive heart failure, and pneumonia. They show that these differences are greatly attenuated after accounting for social risk. Moreover, nearly half of safety-net hospitals would see their associated penalty decline, translating into millions of dollars in penalties spared for these generally financially strapped institutions.

The study by Joynt Maddox and colleagues is novel for its inclusion of multiple dimensions of social risk, including housing instability, disability, and a range of neighborhood characteristics captured by the well-validated Area Deprivation Index.[16] Given that social risk is often the result of a complex interplay between different societal structures, the incorporation of both individual and community-level variables is particularly important. For example, earlier work found no differences in readmission rates after adjusting for social risk.[17] However, that study included only one dimension of social risk (income). Another important contribution is that all of the social risk variables used by Joynt Maddox and colleagues were obtained from—or easily linked to—existing claims data. In this way, the authors demonstrate that meaningful and effective policy change need not wait for better data, as sufficient information to implement and test risk-adjusted incentive models may already exist.

The findings of the study conducted by Joynt Maddox suggest including socioeconomic variables in designing HRRP incentives may bolster the mission of safety-net hospitals to serve vulnerable patients, and ultimately support their ability to improve quality across the board. They align with emerging research suggesting that current HRRP incentives may harm the capacity of safety-net hospitals to do so. For example, recent evidence has shown that racial disparities at safety-net hospitals for nonreported conditions have widened under HRRP.[18] Joynt Maddox and colleagues' findings also underscore the real consequences safety-net hospitals face as a result of treating socially vulnerable patients and are consistent with other recent analyses that attempt to account for social risk in readmission models using other social determinants of health.[19]

To date, there is conflicting evidence about the extent to which HRRP reduces readmission rates[20] and recent concerns that it may harm care in other unintended ways,[21] though the final verdict is far from certain.[22] Nonetheless, the role of value-based purchasing policies in health care policy seems likely to continue to grow, as alternative payment models are increasingly adopted and health care institutions are mandated to have more skin in the game. Consequently, the magnitude of the financial incentives will, too, continue to grow. There are many unanswered questions about the best way to mitigate unintended effects from these policies, including the most appropriate performance measures to use, how best to tie them to incentives (eg, by achieving preset benchmarks vs improving performance) and how these decisions impact vulnerable patients and equity in the care they receive. However, Joynt Maddox and colleagues provide important new evidence that incorporating social risk into risk-adjustment models may help by sparing hospitals serving the most vulnerable patients dire financial straits and perhaps even allowing them to flourish in meeting their underlying mission.

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