Article from

Health Watch

February 2019
Issue 88

At the Intersection of Risk Adjustment and Social Determinants of Health

By Sudha Shenoy and Gail S. Stone

Risk adjustment (RA) is the statistical process of setting capitation payments for health plans to reflect the expected costs of providing care to their members. Because of differences in health status and treatment needs, expected costs can vary significantly among plan members.

To the extent that risk-adjusted payments reflect the differences among a plan's enrollees and the eligible population, such payments can reduce competition among plans for favorable risks, mitigate the effects of adverse selection and encourage plans to enroll high-cost patients by furnishing the resources needed to provide efficient and effective treatment.

WHAT ARE SOCIAL DETERMINANTS OF HEALTH?

The social determinants of health[1] (SDH) refer to the elements of a person's social and environmental living circumstances that affect his or her health (see Figure 1).

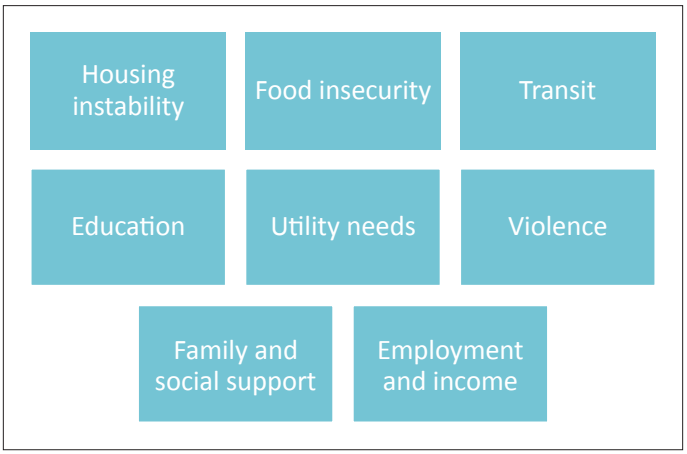
HOW DO SDH IMPACT HEALTH CARE COSTS?

SDH have an important influence on health, health care outcomes and spending. Adding SDH to an RA model will enhance the effectiveness of the prediction by considering health-influencing factors that cannot be found in claims data. Very few states and plans have adopted SDH into their RA methodologies.

INTERVIEW

We talked with Medicaid and RA experts Arlene Ash, Ph.D.; Matt Varitek, FSA, MAAA; Mike Schoeberl, FSA, MAAA; and Brandon Barber to learn more about emerging practice at the intersection of RA and Medicaid. Arlene Ash is a professor and chief, Division of Biostatistics and Health Services Research at UMass Medical School. Matt Varitek is an actuary at Arizona Health Care Cost Containment System (AHCCCS). Mike Schoeberl is a consultant at Forma Actuarial Consulting Services. Brandon Barber is a consultant at Evolent Health.

Figure 1
Social Determinants of Health



RA is a particularly hot topic in Medicaid today. Please share reasons for this increased interest.

Arlene Ash: There has been an enormous push to move Medicaid members into capitated payment contracts, such as accountable care organizations (ACOs), versus fee-for-service payment arrangements. RA is needed for these risk contracts to work well.

Brandon Barber: With the Affordable Care Act (ACA) and Medicaid expansion plans, RA may be in the forefront, but it is not necessarily a hotter topic than in the past. Medicaid is unique to each state, which has been a challenge for those in the industry to measure the impact from state to state.

Mike Schoeberl: Although RA has always been of critical interest to payers, the awareness and understanding of RA has increased among the provider community as payments have moved toward more accountable care models. Increasingly, RA is also being used in outcomes analysis and provider performance measurement. For example, the state of Minnesota has several shared-savings contracts with provider organizations, and RA has been a critical part of the target-setting and performance measurement process.

Matt Varitek: While Arizona does not apply diagnosis-based RA within its long-term care (LTC) programs, adding this component could, as in acute care, provide more fairness in provider payments. Even if the capitation rates paid to our health plans were not formally adjusted due to measuring the respective risk profile of each plan's membership, it would allow us to conduct longitudinal assessments and provide a more complete understanding of the forces affecting medical expenses.

Have you experienced any issues or concerns over your current RA methodology from either a state, client or managed care organization (MCO)/ACO perspective?

Brandon: A state's RA model requires recalibration to the state experience before it can be applied, and misinterpretations of the models are not uncommon. Transparency also needs to be improved within a state's RA program, and a plan should be able to calculate its own risk score independently. States that use pharmacy data to calculate risk scores face a challenge, since drugs-to-risk-factor mappings are not updated often enough to reflect generics and new drugs entering the market.

Mike: Providers frequently believe that the RA and resulting performance measurement does not consider risk factors that are not captured through diagnostic information. When assessing performance at the provider level, you also need to consider the overall credibility of the results, since you're frequently working with smaller population segments whose results could be overly influenced by random events.

There is a growing recognition that we need a more holistic approach to health care.

Today there are more performance-based payment models than in the past and more providers' payments are tied to quality and health outcomes. Do you see a potential shift or refinement in how RA will be applied in the future?

Arlene: In addition to RA for payment, there is increasing recognition that quality measures need to be adjusted to account for expected large differences in quality outcomes, based on large differences in patient mix.

Brandon: Many states currently apply a quality withholding, which is distributed based on measures of performance such as the Healthcare Effectiveness Data and Information Set (HEDIS). The state of Tennessee is integrating quality and RA directly through payment on a medical episode basis. RA is usually applied at a member year level and not concurrent with the payment year, but now it would be applied at a member episode level. A member can have a high-risk profile, but their episodes can be managed well. Traditionally, a member with a high-risk profile and fewer claims in a given year will come out ahead from a plan perspective. The difference here is the episode needs to be triggered first and then the plan is paid based on the risk profile relevant to the episode at the same time of care.

SDH has been getting a lot of attention recently in the literature. Has your state or client considered this as a refinement to its current RA method?

Mike: Integrating SDH into performance measurement and payment models has been encouraged legislatively in Minnesota. From my perspective, most of the activity prior to and resulting from this legislation has been around data development and research. However, the state has integrated SDH into at least one provider payment model that I'm aware of.

Arlene: In 2014 MassHealth [Massachusetts' Medicaid system] contracted with the University of Massachusetts Medical School to support developing a risk model for payment that considered SDH in addition to medical risk. This SDH model is more accurate than the old model, and MassHealth has used it for payment since 2016. It is widely viewed as fairer to plans that care for vulnerable subgroups and better for managing health care.

Matt: We are supportive of the SDH concept, and this aligns with the vision of the agency. As a state agency, though, we have budget concerns and constraints, but we may consider use of SDH in the future. We need to consider how they will get applied and the impact on policy as well as implementation issues.

Brandon: SDH will grow in popularity. Their value is widely supported by data, and providers will buy into the use of SDH. We know they are clearly tied to health outcomes, and so the issue is not acceptance of the idea but rather standardizing the collection and categorizing the data.

How will SDH RA impact or potentially impact the following: Payments to providers? State budgets? Care and outcomes for beneficiaries? Accuracy of the RA process?

Arlene: Inadequate RA rewards plans for enrolling low-risk members, for whom it is easy to achieve better-than-average outcomes at lower-than-average cost. RA is needed to reward plans for better-than-*expected* outcomes and lower-than-*expected* costs. For example, in modeling emergency department visit rates for MassHealth, members with mental illness and/or substance use disorder with unstable housing used 50 percent more than average; adjusting for medical problems reduced their apparent overuse to 18 percent. However, only by adding

"housing problems" to the model could we accurately predict their entire excess emergency department (ED) use.

Brandon: SDH can be added as supplemental factors into existing RA models. This would improve the accuracy of the risk models. For example, a diabetic person with no transportation is at higher risk for major complications and subsequent costs than a diabetic person with transportation. SDH RA may not lead to change in state budgets but may modify the case mix ratio for an ACO or MCO. Budget neutrality may still be the overall expectation.

Mike: If we believe that funding should increase or decrease with the risk of a population, RA can be viewed as a means of more equitably distributing a state's Medicaid budget. If SDH can explain risks that diagnostic data does not, it is reasonable to include it as part of a methodology for equitable distribution of limited dollars.

Why do you believe that Massachusetts was able to adopt this approach more easily versus other states?

Arlene: Massachusetts is a progressive state and reducing health disparities is a priority. Leadership wanted fairer payment formulas that encourage and support care for vulnerable populations. There is much interest in SDH from other states, but big programs have inertia and competing priorities.

Matt: How one implements RA and the timing will depend on confidence in the formula or program. It will be a slow rollout for any change to the current methodology.

Brandon: States tend to be slow to adopt SDH as they have no access to quantifiable metrics. Since Massachusetts has blazed a trail, this could lead other states to consider the use of SDH.

Can you comment on the experience in the early years of the Massachusetts program? What, if any, was the effect on health plan behaviors? What, if any, was the effect on beneficiary health?

Arlene: We are eager to learn; however, the first SDH model was only implemented in October 2016. It is too early to say.

I understand that acquiring the needed data in an SDH program can be a big challenge. Have you experienced this, and if so, how have you worked around this?

Mike: A process needs to be in place to collect data, and depending on the state, some of the information could be scattered throughout various government departments. Similar to medical claims data, there are substantial privacy concerns with information that might indicate a need for SDH, which increases the challenges of collecting and centralizing the information. Other SDH indicators might require the development of data analysis algorithms, which can be challenging if there are no precedents or common standards.

Brandon: SDH indicators are typically not on the patient record, but some are adding these indicators creatively by working with consumer data agencies or accessing public legal data. The community needs to be educated on how to collect data. Electronic medical records vendors could create discrete data fields or questionnaires to capture these elements. ICD 9/10 codes currently exist for homelessness, but providers do not code well. Ideally, ICD-10 diagnoses for these conditions could be created, which would both minimize disruption to provider workflows and maintain the current claim-based risk-scoring approach.

Arlene: We are creative in using the imperfect resources we have. For example, we use "at least three different addresses

within a 12-month period" to infer "unstable housing"; we calculated a neighborhood stress score (NSS) by geocoding a member's address and then used census data to create a measure of how "tough" the neighborhood is. NSS and homelessness affect health costs, over and above medical risk.

Long-term services and supports (LTSS) costs are usually removed from the RA model due to not having a good measure of need for these services. Is there a current process in place to incorporate these services in the future?

Matt: SDH for LTC populations seems feasible and is needed. A housing situation such as whether heating or air conditioning is needed impacts the health situation. I am particularly interested in better understanding environmental impacts (e.g., air quality, water quality or exposure to dangerous by-products of extractive industries) and their effects on health care costs. The Medicaid LTC population is more likely to stay on the books for the remainder of their lives. Therefore, we will be able to observe the quality and cost improvements of this population versus a commercial or short-term population.

Arlene: We have used data collected for determining nursing home certifiability to predict LTSS costs for seniors who are eligible for both Medicare and Medicaid. However, such data are not available for everyone. It's on our workplan to develop a model to pay for combined medical plus LTSS costs for the managed-care-eligible population.

Any final thoughts you would like to share with *Health Watch* readers?

Matt: A concern with a state perspective is that we need to align with the legislature and budget committee as well as obtain the governor's buy-in. If one state implements something new, then this makes it easier to influence our state legislature as we can point to a state with a proven record. Having or being able to prove cost savings and improved health outcomes is beneficial for bringing on change. If Medicaid were more of a standard program like Medicare, there would be fewer issues and less variety. CMS could package the program and provide optional benefits.

There is a growing recognition that we need a more holistic approach to health care. There are forces that impact health that are not controllable by physicians. There needs to be research on all forces that impact health, and we should be prepared to make an investment in SDH.

Mike: From a risk-measurement perspective, I see SDH indicators as potentially useful add-ons to diagnostic information. From a payment perspective, it is critical to address comorbidity issues, since many SDH are not mutually exclusive and even those between diagnostic conditions and SDH indicators overlap. If the cost impact of an SDH is already captured in the members' diagnostic information, there may not be a strong rationale to consider additional adjustments.

Arlene: MassHealth's use of an SDH payment model is currently budget neutral within the Medicaid program. However, the state uses money from many other "buckets," for example, the prison and welfare systems, to address residents' needs. We should be able to pool data sets and borrow money across state agencies—and in partnership with other groups, such as those working to build more affordable housing and helping people to find jobs. We have made some progress in merging information across agencies and systems but need to do more to create value from more holistic approaches to help people "get back on their feet."

Brandon: I would like to stress the value of innovation in RA. Massachusetts has been a leader in the use of SDH in its RA methodology, while Tennessee has combined quality and RA by using episode-based payments. We should share ideas within the industry and learn together. To do this we need a forum for states to share best practices, challenges and lessons learned. ■

Sudha Shenoy, FSA, CERA, MAAA, is vice president, Actuarial Services, at Evolent Health. She can be reached at *sushenoy@evolenthealth.com*.

Gail S. Stone, FSA, MAAA, is director, Actuarial Services, at Evolent Health. She can be reached at *gstone@evolenthealth.com*.

ENDNOTE

1 Lee, Josh, and Casey Korba. Social determinants of health: how are hospitals and health systems investing in and addressing social needs? *Deloitte Center for Health Solutions,* September 13, 2018, *https://www2.deloitte.com/us/en/pages/life-sciences-and-health-care/articles/addressing-social-determinants-of-health-hospitals-survey.html* (accessed November 1, 2018).