Optimizing health plan performance

Employer health plans can reduce cost by directly addressing social determinants

Andrew Hiles, F.S.A., M.A.A.A. and Alden Mathieson, MPH

It is now clear that employers, acting in their role as sponsor for their employee health plan, stand to gain financially from taking a more expansive view of worker "health." This view extends beyond the boundaries of the traditional medical insurance program and addresses the unique challenges facing lower-wage workers. These conditions are called social determinants of health. At Aetna®, we've started to quantify this opportunity. We're also working with our customers to build interventions to overcome some of the most common social and financial barriers facing workers. When we achieve this, we not only advance health equity. We also create a win-win scenario where workers enjoy opportunities for better health and more affordable health care. And plan sponsors are likely to see lower costs and an environment that promotes enhanced worker productivity.

Quantifying the savings opportunity

We reviewed our commercial health plan data for 440 million member-months over a 3-year period. Appropriate actuarial and underwriting adjustments were made to create an apples-to-apples comparison of results. Each Aetna member has an assigned Social Risk Score. These show the likelihood that social determinants are impacting their health and their interactions with the health care system.

We found that unaddressed social determinants drive higher costs. Total spend averaged 4.6% for large self-insured plans and 5.9% for smaller fully insured plans. The impact of social determinants on health plan costs will vary with characteristics of the workforce and the plan design options available for them. Employers with a large number of lower-wage workers are likely to have even greater opportunity to reduce and manage

DETERMINING SOCIAL RISK

Aetna reviewed around 350 social and financial variables that impact member health, most at the census block group level. We then organized this into 18 separate indices, all tested for their predictiveness of health outcomes. The 18 indices are combined into a composite Social Risk Score of 1 5 assigned to each member. A score of 1 means very low likelihood social determinants are impacting member health, while 5 indicates a very high likelihood. We use this score in plan sponsor reporting and to inform clinical outreach. We can see which of the 18 indices is driving a particular result. This detail is very helpful in determining the most effective member and cohort level interventions.

costs by addressing social determinants. That also applies to those with many workers who have an HSA-based high-deductible plan.

The impact of social determinants varies across the many health conditions and ways people interact with the health system. For example, we found the average impact of social determinants can be quite pronounced in some areas. Costs for hospital inpatient care are 7.5% to 10.4% higher for the group most likely to be impacted by social determinants. This is driven by higher rates of hospitalization and greater severity of conditions, which can result in longer lengths of stay. We think this is linked to the underuse of things like basic and preventive care, including screenings, by workers with high social risk. All this is associated with later stage diagnosis and treatment that has been reported among people in high-deductible plans, particularly lower-wage workers.[1] We also routinely see higher hospital readmission rates across 30, 60 and 90 days among those facing social determinants. This speaks to the efficacy of discharge processes for groups facing social and financial challenges. It also shows how hard self-care and follow-up can be in impacted communities.

Developing targeted interventions

Another important area of health services is the emergency room. The costs associated with emergency room care were consistently about 8% higher for those with high social risk compared with the lowest social risk group. This is in large part because of higher use of the emergency room rather than other sites of care. Using the NYU Emergency Department Algorithm,[2] we see higher usage among the group impacted by social determinants for "emergent not preventable" care, which is a good use of the emergency room. But we also see a high usage for "non-emergent" care, which is when another setting (like a PCP or walk-in clinic) would have provided quality care at much lower costs.

Without going too deeply into solution development, you can see how the level of detail in analytics can lead to a more tailored, effective intervention. In the case of emergency room use, it's important to know if social determinants are driving the higher use and cost for "emergent not preventable" care. This may be driven by higher rates of chronic conditions among those with high social risk. Or it could be that condition management programs are not effectively serving this population. (We could find more about this using deeper analytics). In contrast, a completely different set of interventions would be applied if the emergency room usage disparity were concentrated among "non-emergent" users. In this case, awareness and access challenges would be the first place to start looking for chances to improve.

Impact on future costs

We've found in some limited studies that workers impacted by social determinants have higher health care costs (as measured by PMPM rates). This is compared to other workers covered under the same plan. This helps standardize for industry, location, plan type, care management and network type. Also, workers with high social risk make a larger contribution to the growth in year-over-year medical trend.

In one study, workers with the highest social risk (those most likely impacted by social determinants) had a 45% higher PMPM. The annual medical trend for that group was +3%. The annual medical trend for the lowest social risk group (least likely to be impacted by social risk) was -5%. As we moved down the social risk scale, each group going from the 5 (highest) to 1 (lowest), the impact on medical trend decreased consistently and materially.

There is more work to do in quantifying the impact of addressing social determinants on year-over-year medical trend. But these early studies show that eliminating social and financial barriers to good health for workers will lead to sustained payoff in terms of lower medical costs — in the current year and beyond.

Other sources of savings

Work is still needed to effectively measure how improved worker health impacts productivity, and how this translates to the bottom line of an organization. However, there is evidence that "indirect costs of poor health including absenteeism, disability, or reduced work output may be several times higher than direct medical costs."[3]

Levers to build interventions

Many think that a community program is the first (or only) place to look for an intervention to address a social or financial barrier to health. This notion is a holdover from the days when social determinants were discussed only in the context of public health policy — primarily focusing on the uninsured and Medicaid. We now recognize that social determinants impact the health of millions of working people. So in the commercial health space, we can choose from a host of levers to drive effective interventions. These can go above and beyond the sometimes difficult-to-measure impact of community programs. For example, interventions to break down barriers to good health can be applied from any of these four sources:

- Directly by the **plan sponsor** using the many facets of their employer/employee relationship (flexibility of work hours, non-benefit communication channels, quality of food available at the worksite, employee contribution strategy and design of key plan design features, selection of the carrier network type and selection of advocacy services, etc.)
- By the **health plan or Pharmacy Benefit Manager** in the programs we deploy (condition management programs, Centers of Excellence, etc.), the data we collect and report (for example, plan sponsor analytics that show the impact of social determinants) and how we apply it to underlying care management algorithms (for example, triggers for clinical outreach)
- Through fee-for-service and value-based **health care providers** in our contracted networks (for example, size and configuration of network, diversity of network providers, tools to support member navigation, cultural competence of provider groups)
- And finally, with **community programs** to help address a social determinant in a local area, as they can have an impact that includes helping commercially insured workers and their families

Social risk and health equity

An unfortunate and persistent fact of the American economy is that people of color and members of other historically underrepresented groups are much more likely to be lower-paid workers.[4] Given this fact, we know that addressing social determinants of health will, in most cases, mean helping people of color and other underrepresented groups at a higher rate, and as such, improving the health equity of the program.

How we're helping

With our new social risk analytics, we help plan sponsors understand precisely where social determinants are getting in the way of effective and efficient health care. Armed with this information, we help develop targeted interventions that can lower costs for everyone. And also improve the health of workers and create a more equitable health plan.

At Aetna, we plan to use the 2021 annual review season (March–June 2022) to speak with several hundred of our large customers about the impact of social determinants of health on the performance of their employee health program. We will share customer-specific analytics on the impact of social determinants, and offer recommended actions plan sponsors can take — both within the plan and outside the traditional boundaries of the worker health program — to lower costs, improve worker health and deliver a more equitable benefit to employees.

---

[1] Wharam JF, Zhang F, Wallace J, et al. Vulnerable And less vulnerable women in high-deductible health plans experienced delayed breast cancer care. HealthAffairs. March 2019. Available at: HealthAffairs.org/doi/abs/10.1377/hlthaff.2018.05026. Accessed February 16, 2022.

[2] NYU Wagner. Faculty & research. Background/introduction. Available at: Wagner.NYU.edu/faculty/billings/nyued-background. Accessed February 16, 2022.

[3] U.S Chamber of Commerce/Partnership for Prevention. Leading by Example CEO Roundtable on the business case for worksite health promotion. Available at: HealthLinksCertified.org/uploads/files/2018_09_22_00_46_35_leadingbyexamplefullbook.pdf. Accessed February 16, 2022.

[4] Cooper D. Workers of color are far more likely to be paid poverty-level wages than white workers. Economic Policy Institute. June 21, 2018. Available at: EPI.org/blog/workers-of-color-are-far-more-likely-to-be-paid-poverty-level-wages-than-white-workers. Accessed February 16, 2022.

997501-01-01 (2/22)