Social determinants of health (SDoH) are conditions in the environments in which people are born, live, learn, work, play, worship and age that affect a wide range of health, functioning and quality-of-life outcomes and risks.¹

While there is no definitive list of SDoH, they include factors around housing, food, education, transportation, safety, social support, employment and health literacy.

Social determinants of health impact all populations: employer, Medicaid and Medicare

- Health care costs are inversely related to socio-economic status.²
- 53% of members report being affected by at least one SDoH.³
- Food insecurity is a primary driver of emergency room visits.⁴
- COVID-19 outcomes can be considerably impacted by SDoH.⁵
- 91% of Medicaid plans report activities to address SDoH and 35 states require them.⁶

Our approach incorporates concepts of health literacy, health disparities, and elements of personal and social determinants of health to create health equity.

We see these concepts as highly interconnected. Health disparities and literacy can be viewed as health system issues. Health disparities primarily involve disproportionate services based on conscious and unconscious bias. Health literacy refers to personal skills and confidence in navigating the health system as well as organizational health literacy whereby communications, tools and resources need to be aligned with health literacy design principles.⁷

80% of health is determined by what happens outside of the doctor’s office.⁸

Your ZIP code is a better predictor of your health outcomes than your genetic code.⁹

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Social determinants combine with personal determinants of health (PDoH) for an individual and community context to health.\(^\text{10}\) The PDoH refers to personal resilience that is highly related to an individual’s sense of purpose, social connection and positive attitude. These factors drive overall health equity and well-being.

Underlying this conceptual framework is the idea that sustainable solutions need to be incorporated into thinking about addressing these issues.

Optum creates a transformational model of SDoH that supports the member’s entire health and well-being: Foundational + Interventional + Sustainable

### Foundational elements
Requires engagement strategy; reporting on process and outcomes

<table>
<thead>
<tr>
<th>Analytics</th>
<th>Assessment</th>
<th>Referral/Support</th>
<th>Intervention</th>
<th>Monitoring/Follow-up</th>
</tr>
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### Interventional elements
Requires shared investment, partnership and commitment with client and local entities

<table>
<thead>
<tr>
<th>Transportation</th>
<th>Housing</th>
<th>Food</th>
<th>Financial</th>
<th>Environmental</th>
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### Sustainability elements
Combines the efforts to address social needs with sustainability approaches
Our data-guided approach and rigorous focus on measurement allow Optum to customize and localize solutions by market geography and risk arrangements. Our member-level predictive model sees 20–35% of a given commercial population with the probability of at least one social risk. Members predicted to have one or more social risks have twice the emergency department utilization as those with no risks, 28% higher inpatient days per thousand and a significantly higher level of gaps in care. In an analysis of 1.4 million commercial members, those members qualifying for clinical programs without social risks have 10% higher average per member per month (PMPM) costs than those members with one or more risk.\(^{11}\)

Specific interventions to address community-based needs are also part of the foundational solution. By screening and identifying members using a predictive model and claim-based codes in a prioritized manner, Optum can then refer and connect them to the appropriate local resources. Embedded tools for screening and tracking help ensure fulfillment of these services at the member level. Referral and support leverages SDoH technology platforms with directories of local resources, ability to make and track referrals as well as provide robust reporting.

This interventional component helps address transportation, food insecurity, housing instability, financial insecurity and environmental circumstances that each member might be facing.

**Transportation access**
Transportation issues create significant barriers to accessing care, employment and elements of daily living. Transportation interventions could include subsidies, travel vouchers, public transportation passes and van pool arrangements.

**Housing security**
Housing vulnerability can be addressed by supporting local housing shelters, rent subsidies and the creation of low-cost housing stock.

**Food security**
Food insecurity is related to higher-than-average use of the emergency room and lower than average visits to primary care. Providing access to affordable nutritious food can be done via food debit cards, food pantries, food delivery services, community gardens, farmers markets and subsidized meal programs.

**Financial security**
Financial insecurity is highly prevalent in the U.S., with 48% of people not having enough in savings to cover a surprise $400 expense.\(^{12}\) Financial insecurity could be considered a “super” social determinant in that it has direct links to other social vulnerabilities such as the inability to pay rent or purchase food. Financial counseling, grants and credit, employment, internship, job training programs and education can all address financial insecurity.

**Environmental security**
Environmental issues range from chemical exposures to lack of safe public space to absence of recreational opportunities to limited digital access to social isolation. Communities and employers can work to increase access to Wi-Fi internet through the creation of hot spots such as libraries, and employers can provide subsidies for high-speed internet.

**Social isolation**
Social isolation can be addressed by connecting people one-on-one through programs that connect young people to older people for regular conversations or access to social clubs and gatherings, robotic companions or live pets.
Sustainability is the last major theme to the Optum transformational SDoH approach to incorporate sustainable practices in all intervention efforts.

For example, while supporting individuals that may lack transportation, promote mass transit or individual transit (bike, scooters, ride-share) that are eco-friendly. For housing, provide access to shelter that uses solar and renewable energy. Food programs can work with local farmers, restaurants, delivery services and markets that source and package with sustainable practices. Employment and job training opportunities could prioritize sustainable industries such as renewable energy and manufacturing of ecological-oriented products. Environmental programs targeting creating safe public spaces for gathering and recreation could involve public gardens, enhancing greenspace and addressing environmental hazards while promoting recycling to improve the environment.

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**Basic steps forward: Building an SDoH strategy**

**Analysis** — The first step in the overall strategic process is conducting analysis at both the individual and community levels. Understanding the social risk prevalence in each population can provide the evidence basis for prioritizing efforts. Combining population-based prevalence with community level analysis can further help refine the strategy. Knowing the available resources in a community add more information to determine a data-oriented process to the SDoH strategy.

**Inventory** — Building on the analytic step is an inventory of programs, services and resources that are available through an employer, health plan, health system or the community. Review of these resources with respect to how they may mitigate social vulnerabilities as well as how they may contribute to improving health equity is the next step in building the strategy.

**Point solutions** — In addition to conducting the inventory, reviewing existing point solutions continues to fill out the plan. For example, are there current programs being offered to address financial hardship during natural disasters that could be modified to help people with social needs? Many organizations already offer some sort of commuter benefit promoting ride-sharing or the use of mass transit. It may be possible to enhance that benefit for those in need. Maybe there is an on-site catering service that could be leveraged to provide meals or food basics. Childcare services can be expensive and most impact those in need. Enhancing existing benefits or creating new ones may be another opportunity to address critical social vulnerabilities.

**Benefit design** — Beyond inventory and point solution review is the opportunity to review and modify the benefits design with a lens of equity and social vulnerability. Benefit design modification might come in the form of tiered health premium contributions by salary band. It might include a very low premium option or include significant seed funding in a health savings account for those members in the lower pay categories.

**Next-generation solutions** — The final recommendation is to partner with your vendors for next-generation SDoH services that include foundational and interventional elements. Target programs include health advocacy, condition management, maternal health, behavioral health and well-being. Non-clinical factors of social determinants, health disparities and health literacy have a direct impact on overall health and well-being. Moving to a socio-clinical model that addresses physical, mental and social health will move us one step closer to the next generation model of health care that takes a holistic perspective of the individual to significantly improve not only the symptoms of disease, but in many cases the root cause.
By addressing SDoH with a multi-layered, holistic, data-centered approach, Optum meets the member where they are.

The model is part of a larger effort to make the health system work better for everyone, which involves shifting the current medical model to a highly patient-centered focus of health and well-being. The approach accounts for the context in which we all live and interact, as well as clinical, behavioral and emotional factors of health.

Sources
6. Ibid.
11. OptumInsight — Advisory Services (internal study 2021).