



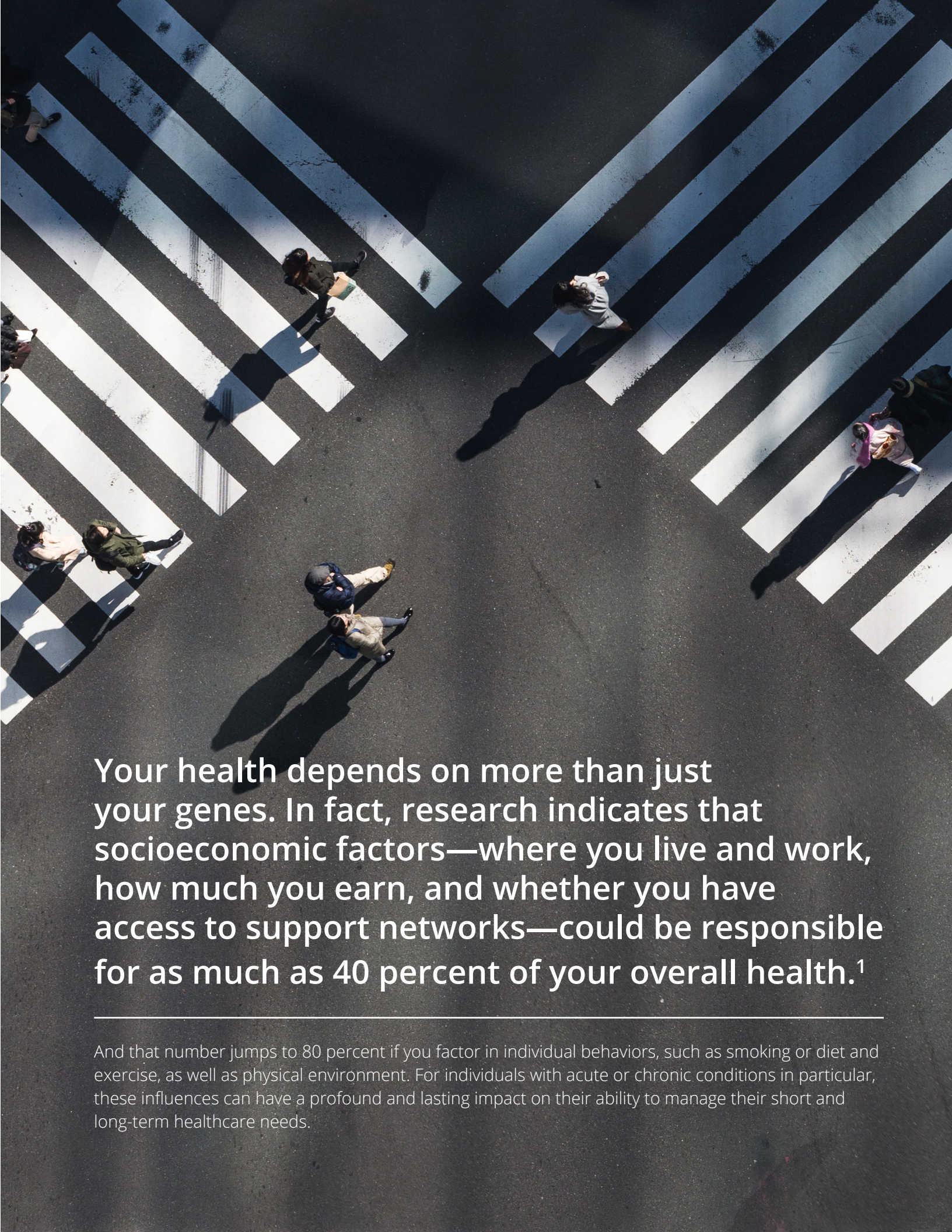
Bridging Gaps to Build Healthy Communities

Opportunities to better address social determinants to improve health

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Anthem[®]
Public Policy Institute

Quid[®]



Your health depends on more than just your genes. In fact, research indicates that socioeconomic factors—where you live and work, how much you earn, and whether you have access to support networks—could be responsible for as much as 40 percent of your overall health.¹

And that number jumps to 80 percent if you factor in individual behaviors, such as smoking or diet and exercise, as well as physical environment. For individuals with acute or chronic conditions in particular, these influences can have a profound and lasting impact on their ability to manage their short and long-term healthcare needs.

An Overview

Social determinants of health (SDOH) have been discussed at length among the research community, with studies demonstrating the linkages between income level and health² and others illustrating the linkages between a person's health and their diet, physical environment, and community.³ Indeed, SDOH have gained widespread recognition as critical elements of healthcare and health outcomes, with a growing number of providers, health plans, and public payers (e.g., Medicaid, Medicare) incorporating SDOH assessments and interventions into their delivery of healthcare and health benefits.

While much is known about the role of SDOH from an academic perspective, **we desired to gain a deeper understanding of how social determinants are perceived by individuals** compared to the dominant viewpoints found in academic research and the media. To do so, Anthem partnered with Quid, a software company that analyzes large volumes of text-based data, to examine news articles, academic papers, and individuals' posts and comments from patient forums focused on cancer, diabetes, and mental health conditions (see Methodology for more detail).

WHAT ARE SOCIAL DETERMINANTS OF HEALTH?

The World Health Organization defines SDOH as “the circumstances in which people are born, grow, live, work, and age, and the systems put in place to deal with illness.” SDOH can be thought about in two main groupings: structural factors and intermediary factors:⁴

STRUCTURAL FACTORS:

- **Economic Stability:** Employment status or financial health; income level; and ability to manage debt or pay medical bills.
- **Education:** Educational attainment and literacy levels.

INTERMEDIARY FACTORS:

- **Food:** Access to healthy food; food security or insecurity.
- **Healthcare System:** Access to healthcare insurance and providers; quality of care.
- **Neighborhood:** Where one lives or works; urban vs. rural; access to reliable transportation.
- **Social Support:** Social environment, including relationships with family, friends and neighbors; whether one faces discrimination.

This analysis looked for common themes across media, forum posts, and academic literature and evaluated the volume, impact,⁵ and language used to describe these six factors.

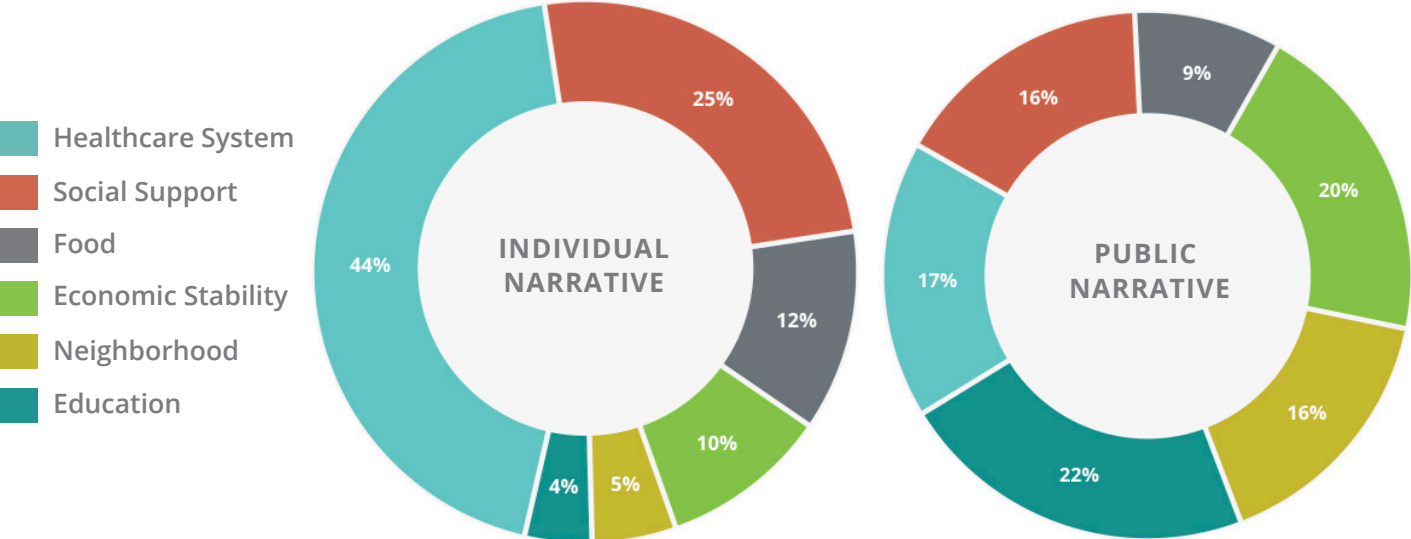


Differing Perspectives: The Public vs. Individual Narrative

Our analysis demonstrates that **individuals, researchers, and the media perceive and discuss the role of SDOH differently**. Individuals emphasize the intermediary influences that impact their health and healthcare on a daily basis—whether they have adequate support from family, for example, or can find the right provider for their condition. These factors attract far less attention

from researchers and journalists (the “public”) who tend to frame health outcomes through the lens of structural factors like education and income level perhaps, in part, because these factors are easier to measure. Among individuals, education and income together comprised less than 15 percent of the conversation in the forum posts included in this analysis.

Fig. 1: Volume of Mentions of Social Determinants of Health

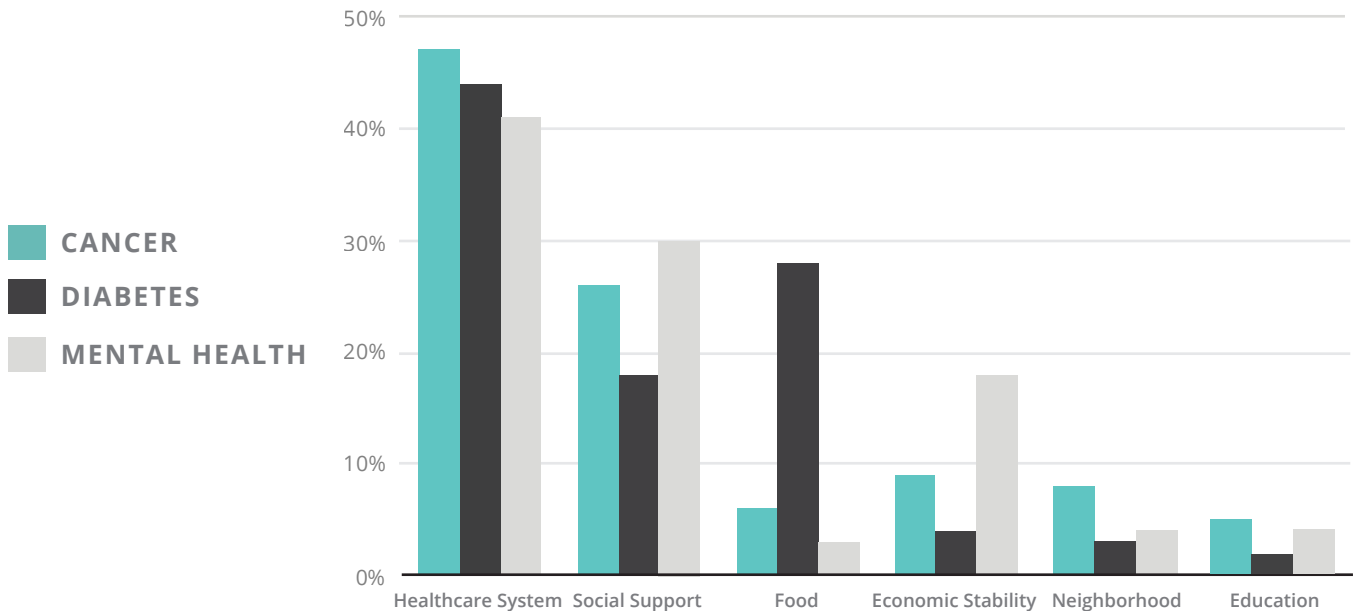


Even though nearly half of the academic papers in our sample focused on the impact of structural factors, the smaller number that focused on social support, neighborhoods, and access to food were more frequently cited by others. We also observed **higher rates of social engagement—through shares, reactions (likes), and comments—on intermediary factors** discussed in the media.

Across the three patient forums, we found notable differences in the extent to which certain of these

factors were discussed. While social support was an overall important consideration, it was much more so for people with cancer or mental health conditions than for those with diabetes. Likewise, discussions around food accounted for more than a quarter of the posts on the diabetes patient forum, but only a minimal amount of the discussion among the cancer and mental health forum posts.

Fig. 2: Volume of SDOH Mentions by Patient Forum



Without a better understanding of how individuals view the role that social determinants play in their health and wellbeing, payers and providers risk missing opportunities to address gaps and engage more effectively with their members and patients.

Individuals Emphasize the Importance of Strong Social Support Systems

The analysis found that individuals view social support as a key factor in managing their health and healthcare needs, particularly when facing an illness like cancer or diabetes or a mental health condition. Social support is a dominant part of the individual narrative around SDOH, comprising 25 percent of these conversations, yet only 11 percent of academic papers addressed this factor. Posts about social support were strongly represented throughout the discussion and highly shared, suggesting this topic resonates with individuals.

Individuals' posts addressed both the positive aspects of receiving needed support as well as the negative consequences of not receiving needed help. The sentiment of just under half of the posts about social support was negative, describing, for example, relationship issues, a lack of strategies for effective communication with friends and family, and feelings of isolation.

Across the patient forums we observed differences in social support needs. Individuals with diabetes and cancer, for instance, reported having positive support from family members and their community. In contrast, **those living with mental health conditions were less likely to be receiving needed social support.** Individuals with mental health conditions disclosed that their inability to communicate their experiences to others triggered feelings of insecurity and self-doubt. They frequently worried about pushing away or "ruining" important relationships because of their conditions.

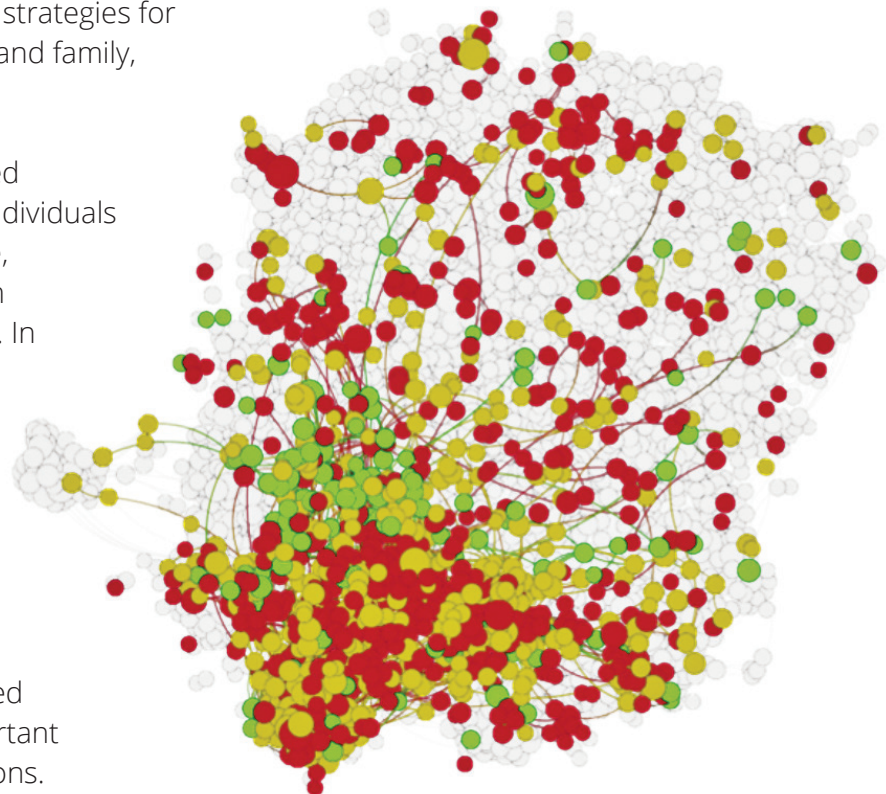
The importance of social support extends to caregivers, too. For instance, some individuals

worried about the time they had to take off from work to care for a family member and the lack of support they received from others. Relatives also expressed concern about their inability to find trustworthy and dependable caregivers in their immediate community.


Fig. 3: Sentiment of Posts on Social Support on Mental Health Forums

Colored nodes represent posts on social support; nodes in grey represent other SDOH topics. Connections between colored nodes illustrate shared language between posts.

ONLY 20% OF ALL POSTS ON SOCIAL SUPPORT BY INDIVIDUALS WITH MENTAL HEALTH CONDITIONS WERE POSITIVE.




● POSITIVE ● NEUTRAL ● NEGATIVE




People Want Help Navigating and Accessing the Health Care System

44% of the individual forum posts in this analysis included discussions around access to providers and care, particularly among individuals with mental health conditions and cancer.



These conversations were split evenly between positive experiences—having access to needed providers and receiving high quality care—and negative experiences such as struggling to find or get access to the right provider.

More specifically, individuals with mental health conditions discussed a perceived lack of convenient and accessible care during times of crisis. For individuals with cancer, conversations focused on the search for the best facilities to provide specialized care.

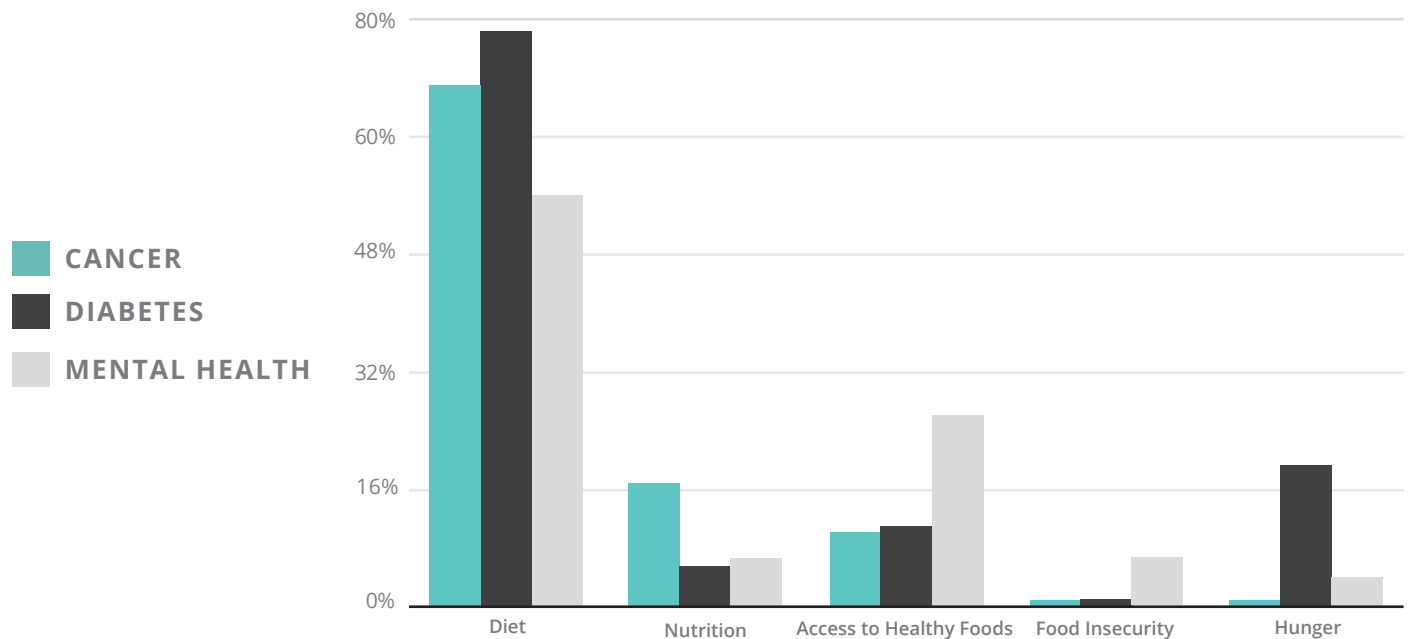


Interestingly, none of the individuals' posts raised the issue of access to culturally and linguistically appropriate care. In contrast, an average of 12 percent of the academic and media narrative on the healthcare system focused on this concern.

Closely linked with access to providers is access to reliable transportation. Reliable and available transportation was the main focus of the narrative around neighborhood and environment. Individuals face challenges with getting to and from appointments particularly in rural areas.

Individuals with Diabetes Focused on Finding Healthy Foods

Fig. 4: Volume of Individual Narrative on Food by Topic and Patient Forum



ALL GROUPS EXPRESSED CONCERN ABOUT MAINTAINING A PROPER DIET. WHEN DISCUSSING FOOD, INDIVIDUALS WITH MENTAL HEALTH CONDITIONS, IN PARTICULAR, FREQUENTLY MENTIONED HEALTHY FOOD ACCESS; THOSE WITH DIABETES WORRIED MORE ABOUT HUNGER; AND PEOPLE WITH CANCER FOCUSED ON NUTRITION.

Discussions around food appeared in nearly one third of all forum posts from individuals with diabetes. These conversations were focused on the role of food in managing their diabetes. Posters were concerned primarily with finding the right foods and dealing with hunger.

For individuals with diabetes, **posts about managing food intake and diet overlapped with concerns about social support.** Posters without a family history of diabetes wrote about the difficulties of knowing what to eat without having anyone to ask for help. Relatives sought advice about how to promote and support healthy eating habits among their loved ones.

In addition to interest in diet and nutrition, individuals posting on the mental health forum, in particular, expressed concerns about lack of access to healthy food, including not being able to obtain these foods due to costs. Some posters talked about how the symptoms of their mental health condition (e.g., depression, anxiety) can cause them not to seek out assistance such as SNAP (food stamps) that would help them access healthier foods. These types of food-related posts were highly shared online among posters on the mental health forum illustrating resonance among the population.

Individuals with Mental Health Conditions Are Particularly Concerned About Employment

The role of economic stability—employment and income—is well recognized as important to health and healthcare. This topic comprised 20 percent of the academic and media narratives.

The topic was less important among individuals overall, with only 10 percent of all forum posts discussing economic stability. However, it was far more important to individuals with mental health conditions, **with nearly 20 percent of mental health forum posts discussing employment and economic security.**

Respondents expressed concern about their ability to find and hold a job. They were also afraid of disclosing their mental health condition to

employers and the stigma that may result from doing so. Some respondents discussed how the symptoms of their mental health conditions made it difficult for them to work or diminished their motivation for seeking a job.

While the individual narrative was dominated by issues of employment—finding and holding a job—the academic literature was focused more on income and its predictor of health status and health outcomes.



Opportunities Exist to Bridge Gaps for Individuals and Communities

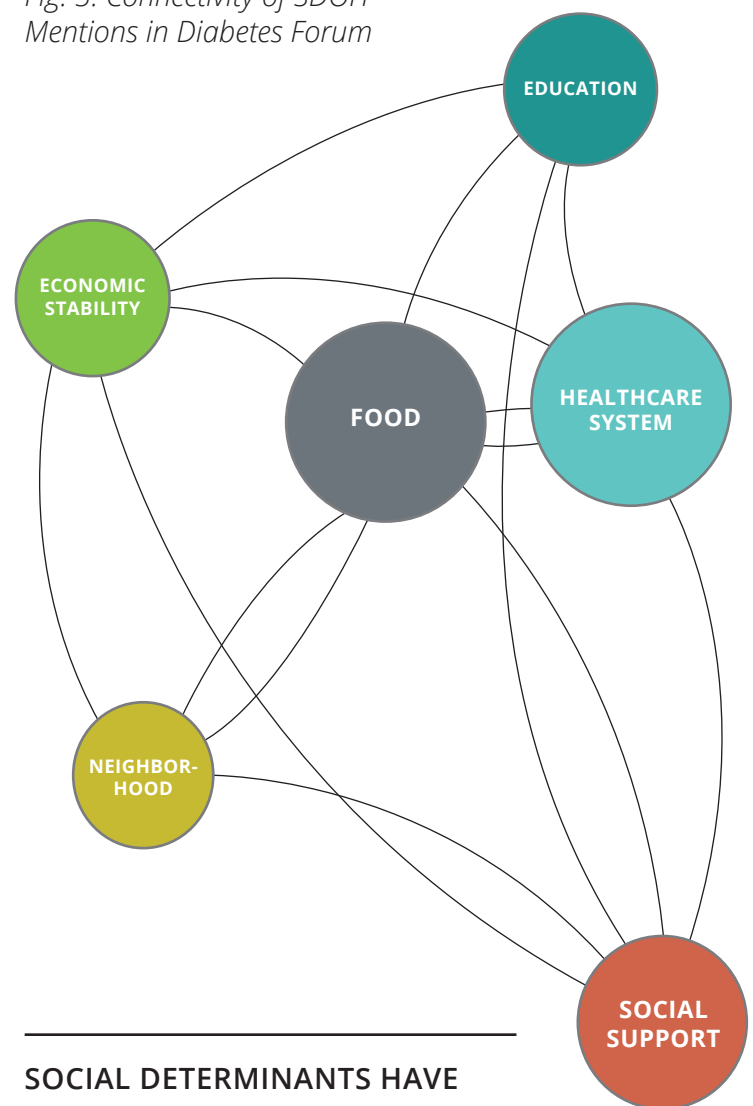
This analysis reveals stark differences between individuals' concerns with respect to the social determinants that impact their health outcomes and the primary focus of the academic literature and popular media. Individuals appear to focus on factors that may be more easily modifiable (e.g., increased social support, better access to healthy food), while the academic literature is focused on structural factors (e.g., education) that may take more time and greater resources to address. The gap between these differing perspectives **highlights opportunities to improve the health and wellbeing of individuals—in particular by addressing social connectedness and community support.**

In fact, recent research suggests that increased spending to address intermediary factors like food security and housing stability improves health. Compared to other OECD countries, the United States spends more on healthcare and far less on social services, but countries with higher social expenditures had significantly better health outcomes.⁶ Similarly, U.S. states with a higher ratio of social services to healthcare spending had lower rates of adult obesity, asthma, mental health conditions, and mortality rates associated with type 2 diabetes, lung cancer, and heart attacks.⁷

Importantly, this analysis also illustrated the interconnectedness of SDOH. For instance, one poster's discussion about challenges accessing transportation referenced a lack of social support (not knowing anyone who can help and lack of transportation makes it hard to meet others), rural issues (limited public transportation), and the challenges of a mental health condition (anxiety) in navigating

public transportation options that do exist. Likewise individuals with diabetes talked about the interplay between financial struggles and being able to afford the healthy food needed to manage their diabetes and maintain good health.

Fig. 5: Connectivity of SDOH Mentions in Diabetes Forum



SOCIAL DETERMINANTS HAVE HIGH OVERLAP (MORE THAN ONE MENTIONED IN THE SAME POST) IN DISCUSSIONS AMONG PATIENT GROUPS. NEARLY EVERY DETERMINANT IN THE DIABETES FORUM, FOR INSTANCE, HAD CONNECTIVITY WITH THE OTHER FIVE.



Conclusion

Better understanding the perspective of individuals, including the barriers they encounter, can help payers and providers enhance health and healthcare. Furthermore, payers, providers, and other engaged stakeholders can:

- Invest in and expand community capacity to improve access to food, transportation, and social capital, among other resources
- Increase their ability to identify and connect individuals with local resources that offer social support and address other needs
- Integrate clinical and social data and models of care to develop targeted interventions and improve health outcomes
- Evaluate and share findings on the impact of social interventions so all stakeholders can learn from the experience
- Support policy and funding mechanisms that expand available solutions and enhance the impact of resources aimed at reducing barriers



Anthem's Public Policy Institute (PPI) was established to share data and insights to inform public policy and shape the healthcare programs of the future. The Public Policy Institute strives to be an objective and credible contributor to healthcare innovation and transformation through publication of policy-relevant data analysis, timely research, and insights from Anthem's innovative programs.

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Methodology

Quid's analysis includes data from: 2,398 media stories from 2014 through 2018, 6,113 patient forum posts from January 2009 to January 2018, and more than 4,000 academic journal articles published from January 2009 to January 2018. The patient posts included 2,233 mental health forum posts, 1,294 diabetes forum posts, and 2,586 cancer forum posts.

These articles, stories, and posts were pulled from Quid's data collection partners and forum sites, which contained the required metadata for each analysis. For each health condition, Quid pulled 50,000 posts from a single forum to ensure data consistency and robust sample size. Using a keyword search that focused on the six areas of SDOH, Quid identified a subset of articles, stories, and posts to use for the analysis.

Limitations: Because our findings rely on data collected from individuals' forum posts, the findings may underrepresent the perspective of groups who lack the resources (e.g., computer, internet), proficiency, or inclination to engage in a patient forum, such as individuals with very low income or the elderly. While the content of forum posts assures us that we have not excluded these groups entirely, because we do not have demographic data on the posters we cannot know how representative our sample is to the overall population of individuals with cancer, diabetes, or mental health conditions. Additionally, because patient forums are a form of social support, albeit virtually, individuals in our sample, having sought out these forums, may have a heightened focus on their social support needs.

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- 1 Institute for Clinical Systems Improvement (2014). Going Beyond Clinical Walls: Solving Complex Problems. Network for Regional Healthcare Improvement Organization, 1-2. Retrieved from <http://www.nrhi.org/uploads/going-beyond-clinical-walls-solving-complex-problems.pdf>.
- 2 For example: McDonough, P., et al. (1997). Income Dynamics and Adult Mortality in the United States, 1972 through 1989. *American Journal of Public Health* 87, no. 9: 1476-1483; and Kawachi, I., and Kennedy, B. (1999). Income Inequality and Health: Pathways and Mechanisms. *Health Services Research* 34, no. 1: 215-227.
- 3 For example: Adler, N., and Newman, K. (2002). Socioeconomic Disparities in Health: Pathways and Policies. *Health Affairs* 21, no. 2: 60-76; Woolf, S., and Braveman, P. (2011). Where Disparities Begin: The Role of Social and Economic Determinants—And Why Current Policies May Make Matters Worse. *Health Affairs* 30, no. 10: 1852-1859; and Gunderson, C., and Ziliak, J. (2015). Food Insecurity And Health Outcomes. *Health Affairs* 34, no. 11: 1830-1839.
- 4 Social Determinants of Health. World Health Organization. Retrieved from <http://www.who.int/gender-equity-rights/understanding/sdh-definition/en/>.
- 5 Volume is the number of unique data points (e.g., articles, papers, forum posts) that relate to a particular topic. Impact reflects how central a topic is to the overall narrative and how much the topic resonates with its intended audience (measured by citations, shares, reactions, and comments).
- 6 Bradley, E., et al. (2011). Health and Social Services Expenditures: Associations with Health Outcomes. *BMJ Quality and Safety* 20, no. 10: 826-31.
- 7 Bradley, E., et al. (2016). Variation in Health Outcomes: The Role of Spending On Social Services, Public Health, and Health Care, 2000-09. *Health Affairs* 35, no. 5: 760-768.