



Addressing Social Determinants of Health: The Need for Provider- Community Collaboration

TMF Health Quality Institute

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Addressing Social Determinants of Health: The Need for Provider-Community Collaboration

Introduction

Social determinants of health (SDoH)—encompassing the social, behavioral and environmental influences over a person’s health—have become an essential consideration when developing quality improvement interventions to impact health outcomes. This whitepaper describes key SDoH and their impact on health outcomes, as well as how providers from across the care spectrum can and are addressing SDoH. This paper will also highlight innovative community SDoH interventions and approaches and propose emerging SDoH-focused frameworks for provider and community stakeholder collaboration to impact health outcomes.

Social Determinants of Health (SDoH): Impact on Health Outcomes

As early as 1992, on behalf of the World Health Organization (WHO), European researchers Dahlgren and Whitehead created a model to help identify the range of social determinants upon which health care quality interventions could be based.¹ As shown in Figure 1, the outer layer of this model includes macroeconomic, cultural and environmental conditions which impact the next layer of an individual’s living and working conditions. The living and working conditions include access to essential goods and services such as water and sanitation, agriculture and food, access to health (and social care) services, unemployment (and welfare), work conditions, housing (and living environment), education and transport. The innermost layers focus on individual lifestyle factors and social and community networks (see Figure 1).

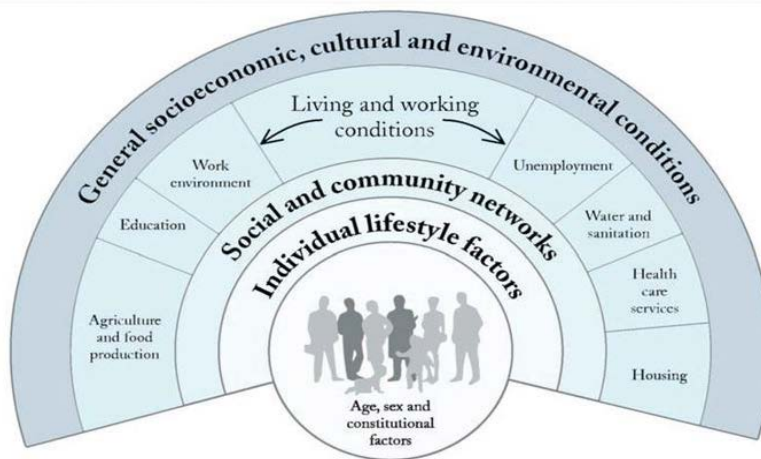


Figure 1. Whitehead-Dahlgren Model [Whitehead, M. and Dahlgren, G. 1992].

More recent literature supports the clear importance of SDoH in improving the health of populations. Studies have investigated the contributions of genetics, health care, and social, environmental and behavioral factors in promoting health and reducing premature mortality.^{2,3} These studies uniformly conclude that nonmedical factors play a substantially larger role than do medical factors in health. For instance, as depicted in Figure 2, researchers estimate that lack of access to quality medical care accounts for less than 20 percent of avoidable deaths. While genetic factors account for 20 percent of the potentially avoidable deaths and are the subject of recent work within the domain of

precision medicine initiatives, fully 60 percent of avoidable deaths can be attributed directly to social, environmental and behavioral factors.⁴ Other studies suggest that this distribution is not unique to population health studies, but is reproduced within analyses of specific diseases, including prevalent chronic conditions such as heart disease, stroke and diabetes.⁵⁻⁷

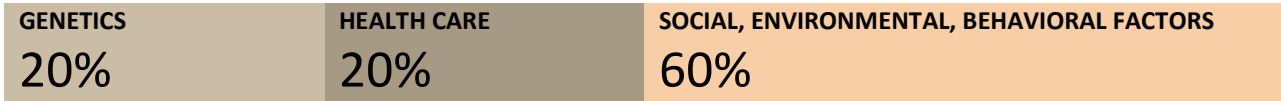


Figure 2: Factors Determining Health (Adapted from McGinnis, et al, 2002)

Impactful SDoH

As cited by the WHO, key social, environmental and behavioral factors (SDoH) influencing patient health are defined as socioeconomic status (SES), education, physical environment, employment status, social support networks, access to health care, transportation, geography and health literacy. SDoH are, essentially, the circumstances in which people are born, grow up, live, work and age—and the systems put in place to deal with illness. These circumstance are shaped by a wider set of forces—economics, social policies and politics.⁸ See Figure 3.

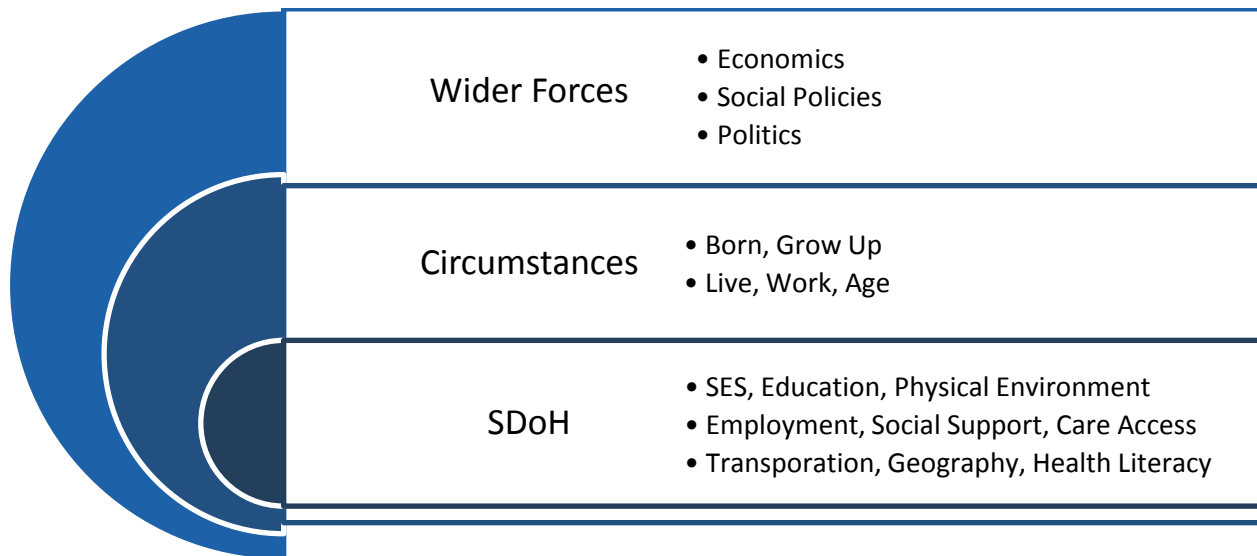


Figure 3: Impactful SDoH

With these SDoH definitions and extensive SDoH literature supporting impact on health outcomes, the Centers for Disease Control (CDC) cite five major determinants of health:

1. Biology/genetics
2. Individual behavior (e.g., alcohol use, injection drug use, unprotected sex and smoking)
3. Social environment
4. Physical environment
5. Health services⁹

Examining these definitions and broader categories of SDoH, we highlight two significant SDoH that have gained attention—housing and nutrition.

Zip Code Matters

Housing is one of the best-researched social determinants of health, and selected housing interventions for low-income people have been found to improve health outcomes and decrease health care cost.¹⁰ Existing evidence on housing and health can be understood via the existence of four pathways to achieving health outcomes (see Figure 4).



Figure 4: Four Pathways Connecting Housing and Health.¹⁰

First, evidence exists describing the health impacts of not having a stable home (the stability pathway). People who are not chronically homeless but face housing instability or not having a stable home (defined as moving frequently, falling behind on rent or couch surfing) are more likely to experience poor health in comparison to their stably housed peers. In terms of intervention, however, the health impacts of stabilizing housing, such as provision of rental and foreclosure assistance, have been associated with improved mental health outcomes.

Second, a similar level of evidence demonstrates the health impacts of environmental conditions inside the home (the safety and quality pathway). Substandard housing conditions such as water leaks, poor ventilation, dirty carpets and pest infestation have been associated with poor health outcomes, most notably those related to asthma. Additionally, exposure to high or low temperatures is correlated with adverse health events, including cardiovascular events—particularly among the elderly.

A third, smaller set of evidence describes the health impacts of the financial burdens resulting from high-cost housing (the affordability pathway). Lastly, a rapidly growing body of literature describes the health impacts of neighborhoods, including both the environmental and social characteristics of where people live (the neighborhood pathway).

Although a summary of this comprehensive housing literature is outside the scope of this paper, health care quality improvement stakeholders need to be aware that multiple aspects of housing impact health care outcomes and utilization and to understand the differential impact of each of the four

pathways. While there is a great deal of evidence regarding the impacts in both the stability and the safety and quality pathways, the affordability pathway requires additional study of how people set priorities among basic needs and make decisions in conditions of scarcity.¹⁰ Observational research about the neighborhood pathway has made a strong case that individual-level analyses of risk factors may be insufficient for predicting health outcomes. However, the question of

Path for Developing Housing Programs

1. Identify issues, opportunities and risks.
2. Build strategic partnerships.
3. Research possible interventions.
4. Consider funding implications.
5. Educate patients, providers, community.
6. Evaluate and adapt.¹¹

how to most effectively address the social dynamics of neighborhoods (including inequality, segregation and social capital deficits) is limited and ongoing.¹⁰

Nutrition and Food Insecurity

According to the United States Department of Agriculture (USDA), nearly 12 percent of U.S. households (15 million) were classified as food insecure sometime in 2017.¹² On average, these food insecure households had incomes 185 percent below the poverty threshold or \$7656 annually (2017 poverty line at \$24,858 annually for family of four).¹²

Recent studies have assessed the impact of food insecurity on health outcomes by examining the impact of food insecurity on children, adults under 65 years old, and seniors.¹³ Several studies have examined health outcomes among non-senior adults, citing food insecurity as associated with decreased nutrient intakes, mental health problems, diabetes, hypertension, and worse outcomes on health exams. A few studies, examining health outcomes among seniors, cite that food insecurity is associated with seniors' increased need for assistance with activities of daily living. Several recent studies have corroborated this evidence.¹⁴

The evidence is clear that adequate nutrition and access to food is a key SDoH to consider when addressing health outcomes. As will be seen in the following sections, food insecurity is a priority SDoH in both provider and community health care quality improvement interventions.

SDoH: Providers in the Driver's Seat

To improve patient health outcomes, many providers have begun their efforts by actively assessing and coordinating patient access to social services. For instance, in order for patients with diabetes to effectively manage their condition, they need to have access to and consume a balanced, portion-controlled diet. Potentially vulnerable patients require a safe living environment with access to a caregiver as needed; and many patients need transportation to keep follow-up medical appointments. Assessing patients for these needs can initially be somewhat awkward and challenging for many traditional providers; it is therefore essential that providers have a systematic process for assessing social needs and successfully connecting patients to community resources.

SDoH Cost Considerations for Providers

Financial incentives in value-based and shared-risk arrangements, which place an emphasis on reducing health care costs, provide motivation for providers to help patients stay "healthy" and out of the hospital. Multiple CMS efforts, including the Comprehensive Primary Care initiative (CPC), Comprehensive Primary Care Plus (CPC+) and the Medicare Shared Savings Program (MSSP) for accountable care organizations (ACOs), have demonstrated the importance of patient risk stratification in tailoring interventions based upon patient need.¹⁵⁻¹⁷ Patient risk stratification allows providers to target early efforts at screening, delivering or offering social services to the population most likely to benefit from the interventions. This in turn improves return on investment by reducing the required outlay through use of smaller, targeted interventions with the highest potential for reducing use and total cost of care. At this time, limited reimbursement is provided for such screenings within the ambulatory environment and the coordination and management of these services has only recently begun to be compensated through chronic care management codes. As a result, providers not currently participating in a value-based model of payment that associates primary care provider compensation with total costs of care are likely to experience a negative cash flow associated with these interventions. In addition to the direct impact on practice finances, it is important to recognize the potential impact to community social services organizations. As providers begin offering or referring patients for social services, those services may either displace or escalate costs for non-profit organizations historically providing these services. Hence, provider

organizations and hospitals should coordinate their efforts with community resources/partners in order to identify these potential effects and optimize programs and services available within a given community.

Strategies for Hospitals and Health Systems

Hospitals are in a unique position to address SDoH challenges faced by many patients seen in hospital systems. In a nationally representative online survey of about 300 hospitals conducted by Deloitte Center for Health Solutions,¹⁸ many hospitals, particularly those with a large number of financial risk-sharing arrangements, are investing in programs to address SDoH. However, the funds available for such an investment varies. As a result, many hospitals are focusing primarily on developing methods to quantify SDoH intervention results, either in health outcomes improvement or return on investment (ROI), instead of trialing potential interventions themselves. Hospital and health system stakeholders understand that addressing SDoH is important. Forming partnerships that are well aligned to address social needs will continue to drive innovative SDoH solutions.

How are Health Systems Addressing Social Needs?

- *Coordinating social support for those living alone and/or in poverty*
- *Implementing violence prevention programs to reduce emergency department (ED) and hospital admissions*
- *Addressing housing instability to reduce readmissions*
- *Offering transportation services to improve follow up care*
- *Implementing strategies to address food insecurity*

Starting Down the Path: Identifying SDoH in Hospital Populations

Knowing where to start to address SDoH in a community can be a daunting task for a hospital or health system. Focusing on needs identified through a community health needs assessment (a [requirement](#) for all not-for-profit hospitals through the Affordable Care Act) can help identify which social factors are most pressing at the community level, as well as identify potential community partners. However, it is imperative to recognize the individuality of social determinants of health and to avoid the temptation to broadly apply generic interventions to specific patients. As a result, further analysis of particular sub-populations of the community that are served by the facility must be considered. While not uniformly applicable to each patient, this overarching strategy may allow for targeting interventions to prioritize particularly impactful areas of need. Based on assessment activities, key areas to begin focus may include food insecurity, housing instability and transportation.

Provider Strategies in Caring for Hard to Reach Patients

1. *Providing high risk patients with Uber/Lyft rides or bus fare and/or providing child care services*
2. *Recognizing language preferences – matching providers with appropriate language skills and/or providing materials in patient’s primary language*
3. *Extending clinic hours or identifying sites close to where patients live or work*
4. *Providing opportunities for health care service delivery beyond the clinic walls through referrals to social services or other community organizations – referring patients, and potentially advocating on their behalf may be a necessary step*

The American Hospital Association (AHA), Health Research & Educational Trust (HRET) and Association for Community Health Improvement (ACHI) provide [Social Determinants of Health guides](#), including case studies that highlight innovative strategies and programs that several hospitals and health care systems have implemented to reduce food insecurity, address housing instability and identifying transportation issues.

Hospitals Addressing Food Insecurity

Many hospitals and health systems are focused on improving food insecurity for patients, both as an inpatient and after discharge, by partnering with community organizations or other stakeholders to provide services for patients. See Figure 5 for examples of hospital interventions addressing food insecurity.

Oral Nutritional Supplementation (Inpatient)	<ul style="list-style-type: none">• Description: Includes energy- and nutrient-dense foods, complete oral nutrition supplements; enteral nutrition, and/or parenteral nutrition• Target: 20 percent to 50 percent of admitted patients either are or are at risk for malnourishment -- only 7 percent typically diagnosed during stay; malnourished hospitalized adults have 54 percent higher likelihood of 30-day readmission• Resource: Malnutrition Quality Improvement Initiative
Food Pantries	<ul style="list-style-type: none">• Description: Provides medically referred food-insecure clients with healthy meals that last three to four days• Outcomes: 1,000,000 pounds of food distributed annually; 1,000,000+ people served since 2001• Resource: Boston Medical Food Pantry
Food "Farmacies"	<ul style="list-style-type: none">• Description: Refer patients with Type 2 diabetes facing food insecurity; team establishes nutritional counseling plan; patients receive more than 20 hours of diabetes education with health coaches and food weekly to prepare meals two times a day for five days• Outcomes: 250 patients and family members impacted; significant HbA1c improvements; better able to manage diabetes with fewer complications; several participants able to reduce or eliminate diabetes medications• Resources: Geisinger's Fresh Food Farmacy

Figure 5. Hospital Food Insecurity Programs

Strategies for Primary Care

Primary care practices are well positioned to provide SDoH screening to large populations and to facilitate coordination between clinical care and social services. However, the development of EHRs as a clinical documentation tool has historically not included collection and documentation of SDoH. As a result, even with widespread EHR implementation, the collection of social health metrics remains poorly documented in any consistent or meaningful way. Adopting a standardized framework for integrating SDoH into EHR documentation and processes is an important foundational step to the optimization and expansion of these efforts within primary care. Despite currently suboptimal documentation systems within many primary care practices, significant resources and an evidence-based path for SDoH integration into care exists. This path can be considered to have four primary steps.

Tools to Get Started

- [AAFP EveryONE Project](#): Screening tools and resources to advance health equity
- [CDC Tools for Putting Social Determinants of Health into Action](#): Tools and resources for SDoH
- [University of California SIREN](#): Screening tools for SDoH
- [PROMIS](#): Patient-reported outcomes measurement system
- [Aunt BERTHA](#): Search engine/repository of social services based on zip codes

Step 1: Collect and organize SDoH data. Both population-based data imported from public data sources (e.g., the U.S. Census) and specific patient-reported data (collected by asking patients direct questions about their individual

circumstances, such as employment, education, housing) should be collected and organized to paint the best picture of how SDoH may be affecting an individual patient’s health outcomes.

Gathering patient-reported data can be done in person through the use of screening tools, or virtually through secure electronic methods. If screening is accomplished in person, asking about issues in a caring way is important, as compassion and empathy may make patients more forthcoming about their situations and concerns. Electronic screening has indicated higher rates of self-disclosure of some sensitive determinants (violence and substance abuse) than in-person screening,¹⁹ but this has some degree of generational variation. A recent study on integration of health data into an EHR indicated that an electronic collection process that did not interfere with the regular operations of the health system is key in integration. Potential means of collecting data electronically include using a patient portal, using electronic tablets in the waiting area (patients provide information after check-in, while waiting to see the provider), phone interviews or voice-activated technology.

Note: If analyzing public data sources is a challenge, a simple alternative is using the CDC’s Sources for Data on Social Determinants of Health, including the [Vulnerable Populations Footprint Tool](#), which can create maps and reports that identify geographic areas with high poverty rates and low education levels, two key SDoH.

National efforts have focused on standardizing SDoH data collection in EHRs to promote interoperability. In 2014, the Institute of Medicine convened a committee on recommended social and behavioral domains and measures for electronic health records, and defined 11 standard domains and 12 measures (see Table 1).²⁰

Table 1. Institute of Medicine Core Domains and Measures with Suggested Frequency of Assessment

Domain	Measure	Frequency
Alcohol Use	3 questions	Screen and follow up
Race and Ethnicity	2 questions	At entry
Residential Address	1 question (geocoded)	Verify every visit
Tobacco Use	2 questions	Screen and follow up
Census Tract-Median Income	1 question (geocoded)	Update on address change
Depression	2 questions	Screen and follow up
Education	2 questions	At entry
Financial Resource Strain	1 question	Screen and follow up
Intimate Partner Violence	4 questions	Screen and follow up
Physical Activity	2 questions	Screen and follow up
Social Connections & Social Isolation	4 questions	Screen and follow up
Stress	1 question	Screen and follow up

The University of California, San Francisco, Social Interventions Research and Evaluation Network (SIREN) have gathered screening tools used for identifying and addressing social needs in health care settings. [SIREN](#) includes a screening tool comparison, as well as many tools that are being widely used today. For additional reference, here is a [sample](#) of a screening tool used at UHealth based on these domains.²¹

Step 2: Integrate SDoH data into primary care

workflows. This includes incorporating information to inform individualized care at the patient level, as well as the management of panels of patients (i.e., risk stratification). Having the right data available at the right time enhances the provider’s capability to treat patients effectively. The most effective way to do this is using the EHR system to gather, manage and deliver the information. How a practice integrates SDoH data into their work flows is highly variable, depending on the EHR and the specific social areas of focus.

Step 3: Begin to identify and develop triggers. Have alerts associated with the data collected, and develop an automated algorithmic approach. This can include

elements such as referrals to social services, medical specialists, clinical decision support tools, patient engagement tools/resources and/or clinical and social services coordination.²² Using alerts and reminders in the EHR based on these triggers is an option for those with this capability. By establishing a standardized response, or at least a spectrum of potential responses, to the screening responses removes the potential for bias to temper response to the findings and may reduce the impact of social stigma associated with many drivers of SDoH.

Step 4: Successfully connect patients with the requisite social services. Research released by WellCare Health Plans and the University of South Florida (USF) College of Public Health reports health care spending is reduced by as much as 10 percent when people are successfully connected to social services that address social barriers.²³ However, ensuring patients are able to access these services may take another step. Often patients need additional help not only connecting with the services needed, but may also need a provider to advocate on their behalf. These systems may be complex and navigating the system to obtain services may require assistance. [Aunt BERTHA](#) is a resource that provides a comprehensive listing of social services available by zip code.

Key Implementation Decisions

1. *Determine the main electronic data collection tool to be utilized (e.g., patient portal).*
2. *Determine if you will be collecting data remotely on topics that need timely reactions, including depression, domestic abuse, or alcohol abuse.*
3. *Define the team that will be responsible for summarizing, reporting, and reacting to the data.*
4. *Evaluate liability issues before the innovation is deployed.*
5. *Discuss a successful workflow with clinic staff to define how on-site data collection could be implemented.²¹*

Six Organizations’ Lessons with SDoH Screening

A recent study shares six organizations’ experiences developing tools and specific processes used for integrating SDoH screening in primary care. Their common experiences and challenges included the following:

- The need to customize the SDoH screening tool to fit the specific patient population
- The need to determine an organization-specific work flow to integrate the tools
 - All of the tools across the six practices were accessible via paper, most were integrated into the EHR and about half were integrated into patient-facing portals
- Little patient discomfort encountered with SDoH screening
 - Although many made modifications in the screening tools in areas relating to more sensitive topics
- Concern that the care teams would not be able to address positive SDoH screenings
 - However, all reported that patients received more holistic care, lessening workloads and improving care quality

Addressing SDoH via Population Health

How Population Health Efforts Can Address SDoH

Organizations have opportunities to incorporate SDoH into population health efforts such as care management and risk stratification.²⁴ By addressing underlying SDoH such as economic, social and environmental conditions via a population health approach, providers could address health conditions across the population health management spectrum including preventing disease or conditions from occurring;⁸ identifying disease early and managing it well;²⁵ and preserving function by reducing complications.²⁶

Population-based Care Coordination Approach

Care coordination coupled with health care services has been found to be effective in improving health outcomes in selected populations and in relatively small-scale, time-limited studies. Five population-based adult interventions supported by several studies are summarized in Table 2.

Table 2. Population-SDoH-based Care Coordination Interventions

Intervention	Population/Location	Description	Main Outcomes
Connected Care Pilot ²⁷	Medicaid recipients living with serious mental illness (Pennsylvania)	Included co-location of physical and behavioral health services at four sites in the county; creation of integrated care plans supported by physical and behavioral health providers; consumer education about appropriate ER use, care managers tasked with comprehensive assessment of behavioral, physical and psychosocial needs; care managers made referrals to relevant services and specialists	12 percent decrease in mental health hospitalizations compared to control; all-cause 30-day readmission rate dropped 10 percent; ER use dropped 9 percent
Geriatric Resources for Assessment and Care of Elders (GRACE) ^{28, 29}	Low-income older adults (Indiana)	Included home-based care management by a nurse practitioner or social worker and geriatric interdisciplinary team guided by 12 care protocols for common conditions	Better health outcomes, less hospital use; cost-neutral for health care
Personalized Online Weight and Exercise Response System (POWERS) ³⁰	Adults living with physical disabilities (Chicago)	Telehealth weight management using web-based physical activity toolkit and regular coaching telephone calls within a standard weight reduction program	Better health outcomes; no cost analysis reported
HealthCare Partners; Frequent Users of Health Services Initiative ^{31,32}	High-need patients being discharged from the hospital (California, Nevada, Florida)	Multidisciplinary care teams including physicians, social workers and case managers delivering integrated care with homebound patients also assessed and followed by multidisciplinary team; provided frequent emergency department users with case management services following discharge in addition to connecting individuals to local social service organizations	Reduced hospital use and \$2 million annually in net savings for 1,000 members, respectively
Senior Care Options in Commonwealth Care Alliance ³³	Older dually eligible adults living with a disability (Massachusetts)	Offering full spectrum of medical and social services to seniors and people mentally or physically disabled; strategy is to bring high-quality personalized and round-the-clock care to people with complex medical, social and behavioral needs; able to tailor care plan and give nurse practitioners broad leeway to determine services without obtaining pre-approval	Reduced hospital use; between 2005 and 2009, rate of nursing home placements for CCA enrollees was 30 percent the rate of comparable seniors in Medicaid fee-for-service

Programs based in the health care sector that connect individuals at high risk for the use of costly health care services to established social service organizations in their communities have consistently demonstrated the potential for cost savings.³⁴ For instance, the Frequent Users of Health Services Initiative provided frequent emergency department users with case management services following discharge, in addition to connecting individuals to local social service organizations. The intervention resulted in a 30 percent decrease in emergency department use in the year following the intervention, along with reductions in charges and hospital admissions originating in the emergency department.³⁴

Together, these studies suggest that these vulnerable populations experience health gains when their care is coordinated across primary, specialty, behavioral and social services. Additionally, these studies of care coordination have demonstrated reductions in hospitalizations and emergency department visits.³⁴

A Cross-continuum Population Approach: New York State Department of Health SDoH Interventions

The New York State Department of Health (NYDOH) states that SDoH, including housing, education, poverty and nutrition, are drivers of medical utilization, cost and health outcomes. For NYDOH, a cross-continuum approach that leverages community partnerships to address SDH is critical to improving outcomes for people with complex needs, while reducing total cost of care. NYDOH has outlined SDoH interventions which build partnerships and invest in social services to achieve Value-based Payment outcomes, particularly for Community -based Organizations (CBOs).³⁵

Key SDoH areas for NYDOH interventions include economic stability, education, social, family and community context, health and health care, and neighborhood and environment. Table 3 provides a sampling of interventions in the health care SDoH area involving population health objectives and outcomes.

Table 3. Health Care SDoH Interventions, Population Health and Social Impact³⁵

Health Care SDoH	Interventions	Proposed Population Health Objectives/Outcomes
Lack of access and/or engagement in community health and wellness programs	<ul style="list-style-type: none"> Community-based care coordination/coaching; community-based case management, home care, senior centers, social and adult day care Community health worker (CHW) and wellness coaching, home-based coaching, chronic disease self-management programs Dedicated care transition staff (nurses, social workers, community health workers) 	<ul style="list-style-type: none"> Improved disease prevention in overall population and increased wellness in the chronically ill Fewer cases of preventable disease Increased access to health care resulting in greater incidence of early intervention with better disease prevention in overall population Decreased opportunity for unwanted, costly health care treatment at end of life
Lack of access to culturally competent staff	<ul style="list-style-type: none"> Staff recruitment, training and development; community health workers (CHWs)/peers Culturally appropriate/sensitive services (meals, support services, etc.) that take into account religion, ethnicity/culture of origin Culturally appropriate materials including modification and adaptation of evidence-based practices so they are culturally relevant and appropriate "Cultural Assessment" in initial intake/assessment process, to be used with ensuing care delivery, complete an assessment of the cultural competency of the organization 	<ul style="list-style-type: none"> Cultivated mutual respect, trust and understanding between patients and caregivers Minimized barriers to health care and health literacy by promoting more equitable inclusion of all community members in the health care system Assist patients and families to participate in their care Promote patient and family responsibility for participating in their health care Improved patient data collection and communication of health information

Health Care SDoH	Interventions	Proposed Population Health Objectives/Outcomes
Lack of behavioral health and recovery literacy skills	<ul style="list-style-type: none"> Wellness coaching (peer support) for crisis stabilization, physical and behavioral health wellness, recovery education and support Psychoeducation for individuals and families Wellness Recovery Action Plans (person-centered planning) for improved self-management, crisis support and relapse prevention Recovery coaches for crisis stabilization and support and improved self-management 	<ul style="list-style-type: none"> Improved self-management and crisis prevention and support Increased participation in primary and behavioral health care Increased use of rehabilitation services for improved education and self-management Improved outreach, engagement, self-management, relapse and crisis prevention

Center for Medicaid and Medicare Innovation (CMMI) State Innovation Models (SIM) Addressing SDoH

Through the CMMI State Innovation Models Initiative (SIM), a number of states are engaged in multi-payer delivery and payment reforms that include a focus on population health and recognize the role of social determinants. SIM is a CMMI initiative that provides financial and technical support to states for the development and testing of state-led, multi-payer health care payment and service delivery models that aim to improve health system performance, increase quality of care and decrease costs.³⁶

To date, the SIM initiative has awarded nearly \$950 million in grants to over half of states to design and/or test innovative payment and delivery models. As part of the second round of SIM grant awards, states are required to develop a statewide plan to improve population health. States that received Round 2 grants are pursuing a variety of approaches to identify and prioritize population health needs; link clinical, public health and community-based resources; and address social determinants of health.³⁶

- Ohio is using SIM funds, in part, to support a primary care program in which primary care providers connect patients with needed social services and community-based prevention programs. As of December 2017, 96 practices were participating in this program.
- Connecticut’s SIM model seeks to promote an Advanced Medical Home model that will address the wide array of individuals’ needs, including environmental and socioeconomic factors that contribute to their health.
- [Iowa SIM Project](#): The Iowa SIM is addressing SDoH by 1) development and/or enhancement of referral networks that address social needs for individuals having or at risk of having diabetes; 2) expanding use of the Assess My Health (AMH) HRA expansion to additional payers; and 3) aggregated SDoH data collected from the AMH completion will be shared with stakeholders to inform decision makers about the SDH needs across Iowa.

A number of the states with Round 2 testing grants are creating local or regional entities to identify and address population health needs and establish links to community services. For example, Washington state established nine regional “[Accountable Communities of Health](#),” which will bring together local stakeholders from multiple sectors to determine priorities for and implement regional health improvement projects. Delaware plans to implement ten “Healthy Neighborhoods” across the state that will focus on priorities such as healthy lifestyles, maternal and child health, mental health and addiction, and chronic disease prevention and management. Idaho is creating seven “Regional Health Collaboratives” through the state’s public health districts that will support local primary care practices in Patient-Centered Medical Home transformation and create formal referral and feedback protocols to link medical and social services providers.

Accountable Health Communities Model

The CMMI Accountable Health Communities Model addresses SDoH needs through enhanced clinical-community linkages. With 31 organizations currently participating, the model is designed to promote clinical-community collaboration through the following:

- Screening of community-dwelling beneficiaries to identify certain unmet SDoH needs
- Referral of community-dwelling beneficiaries to increase awareness of community services
- Provision of navigation services to assist high-risk community-dwelling beneficiaries with accessing community services
- Encouragement of alignment between clinical and community services to ensure that community services are available and responsive to the needs of community-dwelling beneficiaries

Over a five-year period, the model will provide support to community bridge organizations to test promising service delivery approaches aimed at linking beneficiaries with community services that may address their SDoH needs (e.g., housing instability, food insecurity, utility needs, interpersonal violence and transportation needs) via an **Assistance Track**—providing community service navigation services to **assist** high-risk beneficiaries with accessing services to address health-related social needs—and an **Alignment Track**—encouraging partner alignment to ensure that community services are available and responsive to the needs of the beneficiaries.

SDoH: Community Approaches

Addressing SDoH in Communities

As community involvement and provision and coordination of social and community services are important in addressing SDoH, key initiatives have been undertaken to streamline community SDoH efforts. The CDC, based on its 2008 report, outlines [seven phases](#) and related steps in addressing social determinants of health in communities (see Figure 6).

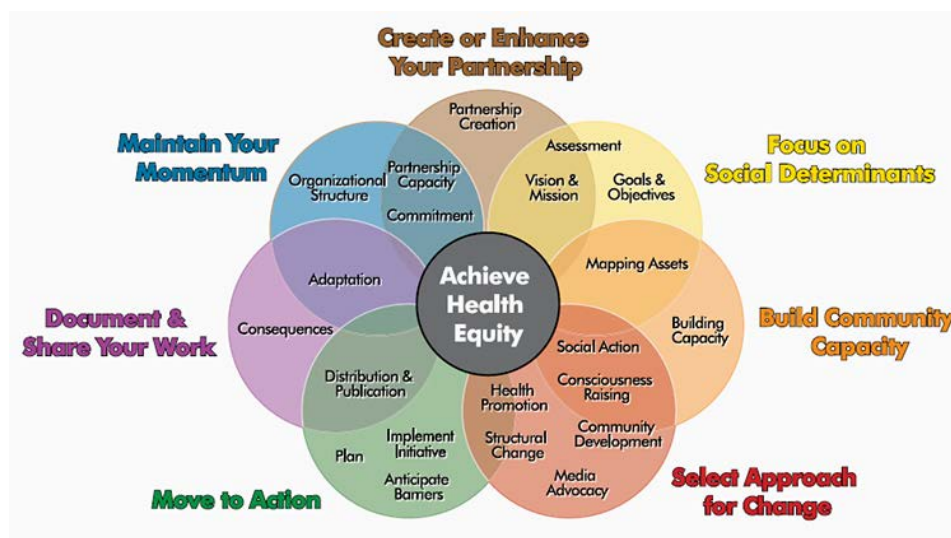


Figure 6: CDC Phases of Social Determinants of Health Initiative

Details to implementing all of these phases are outlined in the embedded link above. What is important to note is that these phases or steps are just a guide to addressing SDoH in a given community—what works well in one community might not work in another. Additionally, the order and priority of these steps can be changed as well according to community needs.

The CDC emphasizes that the formation of a partnership that incorporates people from all sectors of the community—particularly those who experience inequity in health and other areas—is key in leading to long-term social change.

Most important is maintaining and building on successes of SDoH initiatives to get to sustainability. Too many initiatives end after initial success as those involved think the problem is solved and that changes will ride on their own momentum indefinitely. This is often not the case, and sustainability must be carefully planned and included as a phase of implementation.

Community Program Approaches to SDoH

“Health in All Policies” Approach. A Health in All Policies approach identifies the ways in which decisions in multiple sectors affect health, and how improved health can support the goals of these multiple sectors. It engages diverse partners and stakeholders to work together to promote health, equity and sustainability, and simultaneously advance other goals such as promoting job creation and economic stability, transportation access and mobility, a strong agricultural system, and improved educational attainment.³⁷ States and localities are using the Health in All Policies approach through task forces and workgroups focused on bringing together leaders across agencies and the community to collaborate and prioritize a focus on health and health equity.³⁸

Place-based initiatives. As mentioned earlier in “Zip Code Matters”, the recognition of factors within neighborhoods (a person’s zip code) as a strong predictor of a person’s health⁴⁰ continues among SDoH initiative development. Many community initiatives focused on implementing cross-sector strategies to improve health in neighborhoods are targeting different sectors in neighborhoods with social, economic and environmental barriers that lead to poor health outcomes and health disparities.

Critical Elements for Community Engagement

- *Engagement stems from a deep mission-driven commitment*
- *Embracing non-traditional partnerships including those with competitors*
- *Access to cross-sector information providing better understanding of needs in the community*

Addressing nutrition and medication adherence to improve health outcomes

TMF Health Quality Institute, under contract with the Centers for Medicare & Medicaid Services, collaborated with Meals on Wheels of Tarrant County (MOWTC), funded by the United Way, to develop an innovative approach to reduce hospital readmissions among at-risk seniors by addressing SDoH. Through collaborative work with TMF’s Care Coordination Community Coalition, MOWTC developed and tested a program to improve malnutrition, medication adherence and management of chronic disease in high-risk seniors in an effort to support the patient’s transitional needs, and avoid hospital readmission.³⁹

MOWTC partnered with the Healthy Aging and Independent Living (HAIL) program, providing screening and risk stratification of patients at risk for developing diabetes, and HomeMeds, an evidence-based home medication management system that screens for common medication-related problems. By providing dietitian support via HAIL for chronic disease management, meals delivered by MOWTC and medication reconciliation by HomeMeds, all participants who completed the program did so without hospital readmissions.

The outcomes of this project support development of collaborative programs involving multiple community organizations producing a synergistic effect to improve the health of at-risk patients by addressing SDoH such as access to healthy food. Providing nutritious meals coupled with disease management education and medication reconciliation can impact health outcomes.

BUILD. The BUILD (Bold, Upstream, Integrated, Local and Data-driven) Health Challenge, a national initiative funded by a coalition of national and regional organizations fostering cross-sector community partnerships at the center of health, identified key motivators for organizations' interest in participating in this initiative. Many organizations in the BUILD Health Challenge noted that they are mission driven, not just bottom-line driven, and that the strategic vision and mission of many health systems include working directly with their communities to improve health outcomes. The BUILD initiative is funded by a coalition of national and regional organizations including Blue Cross and Blue Shield of North Carolina Foundation, Colorado Health Foundation, de Beaumont Foundation, Episcopal Health Foundation, Interact for Health, Kresge Foundation, Mid-Iowa Health Foundation, New Jersey Health Initiatives, Robert Wood Johnson Foundation, Telligen Community Initiative and W.K. Kellogg Foundation with an open call for additional partners.

Social Determinants of Health: Need for Provider-Community Collaboration

Even with the extensive SDoH community initiatives underway and efforts of both providers and provider organizations to address SDoH, these programs cannot have far-reaching and sustainable impact if they are implemented in silos. Provider organizations need to collaborate with community initiatives and services to streamline efforts.

As mentioned in example programs above, providers can screen and refer patients to community programs. Putting providers in the driver's seat of screening patients for social needs and referring them to appropriate and available services can greatly affect health outcomes. This provider-community service collaboration, however, needs structure and tight referral processes with patient follow-up to prevent patients from "falling through the cracks."

Data Sharing Across Collaborative Programs

A growing number of health care providers are strategically aligning with other community sectors to collect data that allows them to gain a better understanding of patients' SDOH—such as access to food, housing and employment—knowing that these factors have a profound impact on health. These collaborative efforts are challenged, however, with how to use multi-sector data to orient care around the whole person, including social needs in addition to their health care needs. These collaborators face a challenge, in part because there are no national standards or guidance for collecting SDOH data in health care settings and much of this work is happening in siloes.⁴¹

National Quality Forum (NQF) Report

NQF conducted an environmental scan and literature review that uncovered a list of SDoH indicators, screening tools, surveys and other instruments, along with emerging approaches to address food insecurity and housing instability.⁴² In looking at how providers and communities could partner on SDoH efforts, three possibilities were suggested:

1. ***SDoH Informed Health Care:*** Health care providers can use information about social needs of patients in clinical decision-making, adjusting treatment decisions based on individual circumstances. For example, a provider could take a patient's employment situation into account when recommending treatment options.
2. ***SDoH Targeted Health Care:*** Providers can ensure their patients are connected to community services to address social needs. For example, if a patient indicates they are homeless, the provider could refer them to a homeless shelter and other social service organizations.
3. ***Policy, Systems, and Environment:*** Health care organizations can use their power to address social needs at a broader community level. For example, local organizations could convene around a Community Health Needs Assessment (CHNA) or use procurement policies to support the local workforce.⁴¹

All In Data for Community Health

All In: Data for Community Health is a learning network of communities that are testing exciting new ways to systematically improve community health outcomes through multi-sector partnerships working to share data. All In

partner networks are focused on developing data systems that integrate health care and public health datasets with data from other sectors such as education, social services and housing to help community leaders acquire a more complete picture of factors that impact community health outcomes, such as SDoH. All In's philosophy is that access to integrated, multi-sector data increases their capacity to implement more effective programs, policies and system-wide changes. It also leads to better care coordination across sectors for those with complex health and social needs. Here are two examples of programs utilizing the All In approach:

- [**Altair Accountable Care for People with Disabilities**](#). Altair, with Lutheran Social Service of Minnesota as fiscal sponsor and lead member, envisions an e-health infrastructure that fully integrates primary care (including supplemental mobile health services), behavioral health and social services to improve the quality of life of people with disabilities in the Twin Cities. The project is bringing behavioral health providers into a state-certified Health Information Exchange (HIE), enabling care teams to proactively assess the behavioral health needs of people with disabilities within a Minnesota Accountable Care Organization (ACO).
- [**Baltimore Falls Prevention Reduction Initiative Engaging Neighborhoods and Data**](#). The Baltimore City Health Department (BCHD)—working with a collaborative that includes the Mayor's Office, CRISP (Maryland's HIE), community-based organizations and nonprofits, and faculty at Johns Hopkins and the University of Maryland—is leading a city-wide effort to reduce falls among residents age 65 and older. B'FRIEND is creating a real-time data surveillance system that will track fall-related emergency department visits and hospitalizations. The project is also integrating core medical data with other health, housing, environmental and social service data related to fall risks. Data analyses will be used to align community programs, direct place-based interventions, develop new interventions and inform a public health campaign

Conclusion

As many traditional health care quality improvement efforts seem to have reached either a plateau or asymptotic phase, it is clear that future efforts to achieve improved health outcomes will require careful consideration and addressing of SDoH in order to improve health outcomes and reduce health care cost. While much is being done to address SDoH at the provider, health care organization and community levels, it is critical that health care stakeholders keep in mind that every community is different, with varying SDoH needs, which demand unique approaches to integrating resources, programs and services to respond to community-specific SDoH needs. Each community must take a collaborative approach among providers, provider organizations, community programs and community services, to care for the "whole patient", especially those most vulnerable who need care and services beyond the health care setting.

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About TMF

TMF Health Quality Institute focuses on improving lives by improving the quality of health care through contracts with federal, state and local governments, as well as private organizations. For more than 40 years, TMF has helped health care clinicians and practitioners in a variety of settings improve care for their patients. For more information about TMF, go to www.tmf.org.