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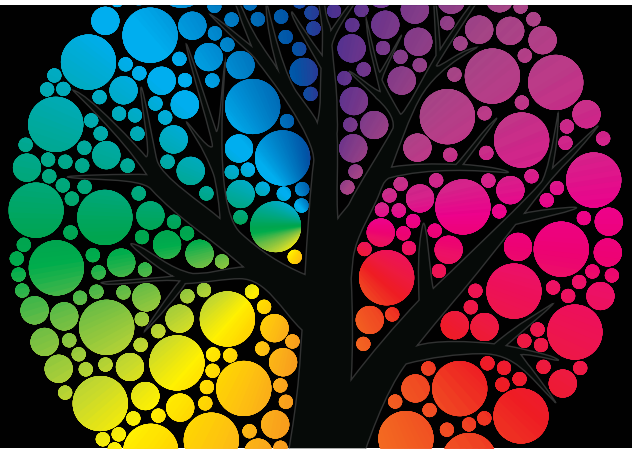
Social determinants of health: How are hospitals and health systems investing in and addressing social needs?



Executive summary

Health care stakeholders have long recognized that factors outside the health care system—the social determinants of health—influence an individual's health and well-being. Many hospitals and health systems are working to navigate the challenges of effectively linking community and clinical services to improve health outcomes in the long term. The Deloitte Center for Health Solutions conducted a nationally representative online survey of about 300 hospitals and health systems to identify their current health-related social needs activities and investments and their potential future efforts. To better understand how hospitals and health systems may be operating in the larger health care ecosystem and the challenges they face, we also interviewed representatives of hospitals, health plans, and nonprofit community organizations.

Our research shows that hospitals and health systems are investing in health-related social needs, and that leadership support is high: 80 percent of hospital respondents reported that leadership is committed to establishing and developing processes to systematically address social needs as part of clinical care. However, our findings also indicate that much activity is still ad hoc (defined in our survey as occasional and only reaching some of the target population), and gaps remain in connecting initiatives that improve health outcomes or reduce costs. Some of our key findings include:

- **Hospitals are screening patients and intervening around social needs, though some activity is fragmented and ad hoc**
  - Hospitals are screening patients—a first step in addressing social needs. Most hospitals screen for social needs (88 percent); however, some of this screening appears to be more occasional or ad-hoc (26 percent), rather than systematic or consistently screening most of the target population (62 percent).
  - Hospitals are primarily screening their inpatient (90 percent) and high-utilizer populations (83 percent). Fewer hospitals (69 percent) are screening more broadly in their communities.
  - Almost 40 percent of hospitals report having no current capabilities to measure the outcomes of their activities, although most hospitals report that demonstrating improved health and cost outcomes, and improved patient experience, are important goals underlying their strategies to address social needs.

- **The health care system's shift toward value-based care may spur more investment and activity around addressing social needs**
  - Hospitals that are further along in the journey to value-based care report the largest investments and most activity around addressing social needs. These organizations also are more likely to measure more aspects of their social needs activities including health outcomes, cost outcomes, and patient experience.

- **Hospital investments vary and sustainable funding may be a challenge**
  - Determining return-on-investment (ROI) for social needs activities requires hospitals to identify meaningful measures, such as quantifiable improvements in health outcomes and cost savings. About one-third of hospitals (35 percent) are tracking cost outcomes from their social needs investments.
  - Most hospitals do not have dedicated funds for all of the populations they want to target (72 percent), and report that finding sustainable funding to address social needs is a challenge. Most hospitals report relying on a mix of federal, state, community, and private investor funding for their social needs initiatives.
  - Investments vary by hospital type, with hospitals with a larger share of needier populations (non-profits and disproportionate share hospitals [DSH]) reporting a larger number of individuals to serve but not necessarily higher investments.

The health care stakeholders we interviewed think that addressing health-related social needs is the "right thing to do," and expect that alignment with value-based care will likely continue to spur partnerships and innovative solutions (a finding also supported in part by our survey results on value-based care).

What are health-related social needs and what is the role of various stakeholders?

Health-related social needs (sometimes called the social determinants of health) are the economic and social conditions that impact health, such as the environment in which people are born, grow, live, work, and age. They generally refer to factors that affect health outside of the health care system and that are beyond an individual's control.[1]

Health-related social needs include the following categories:

Housing instability/Homelessness: e.g. having difficulty paying rent or affording a stable place of one's own, living in overcrowded or run-down conditions

Food insecurity (hunger and nutrition): not having reliable access to enough affordable, nutritious food

Transportation: not having affordable and reliable ways to get to medical appointments or purchase healthy foods

Education: not having access to high school or other training that might help someone gain consistent employment

Utility needs: not being able to regularly pay utility bills (e.g. electricity, gas, water, phone), and/or afford necessary maintenance or repairs

Interpersonal violence: being exposed to intentional use of physical force or power, threatened or actual, that results in or has a high likelihood of resulting in injury, death, psychological harm, etc.

Family and social supports: not having relationships that provide interaction, nurturing, and help in coping with daily life

Employment and income: not having the ability to get or keep a job, or gain steady income

The health care stakeholders we interviewed expect that alignment with value-based care models will likely continue to spur partnerships and innovative solutions.

Health-related social needs have been shown to affect individuals' health outcomes to a large extent.[2] Only about 20 percent of health outcomes are determined by clinical care, yet clinical care accounts for most health care investments.[3] In the US, as well as globally, many people are not as healthy as they could be, and social needs play a big role.[4]

Social needs can also affect health outcomes—and payments—for health systems. For example, while a top-rated hospital might be highly effective at treating an acute health issue, the patient's condition could deteriorate when he returns home to an unhealthy environment. Challenges might include unstable housing situations, difficulty paying utility bills, inadequate transportation to purchase healthy foods (i.e., live in a food desert, or an area devoid of fresh produce and other healthful foods due to the lack of grocery stores and farmers' markets), food insecurity, or violence in the patient's home or personal relationships.

All of these factors and others can contribute to the patient's eventual return to the hospital for declining health, which can make it difficult for the hospitals to receive incentives and/or avoid financial penalties emanating from initiatives such as the Hospital Readmissions Reduction Program.

Even though it is not always clear what role they should play in addressing health-related social needs, many hospitals are getting involved. The Centers for Medicare and Medicaid Services (CMS) launched its Accountable Health Communities Model to provide funding, over the course of five years, to dozens of providers to act as "bridges between clinical and community services." The hope is that this model and other programs around the country will provide lessons learned and leading practices. While there is some evidence that many hospitals and health systems are starting to address social needs, the extent of these activities and investments is not well known.

To find out how mature some of these initiatives are, the Deloitte Center for Health Solutions launched a nationally-representative survey (see sidebar) to establish a baseline set of measures for hospital and health system activities, investments, and gaps in addressing health-related social needs.

Survey sample and methods

- Deloitte developed the survey with guidance from an advisory committee made up of professionals knowledgeable about hospitals' efforts to address social needs (see appendix).
- The invitation to participate in a 15-minute online survey was extended to 4,257 potential participants. The survey was fielded in March and April 2017, and the response rate was 22 percent.
- Respondents were from a variety of different hospital departments. Our outreach did not target respondents from stand-alone behavioral health or substance use disorder treatment facilities. Their titles ranged primarily from C-suite roles such as chief financial officers, chiefs of nursing staff and chief medical officers, to a mix of vice presidents, executive directors, nursing, and medical directors.
- To a lesser extent, administrators and managers of various departments responded, as well as some participants who identified themselves as physicians, social workers, or therapists. Respondents also reported being affiliated with—or leading—a large variety of departments, including quality and risk, financial affairs, patient relations, ambulatory care, and clinical operations.
- Some potential participants were screened out: e.g., respondents who were unfamiliar with addressing health-related social needs in their organization's population were excluded (23 percent).
- Sample population of 284 hospitals was nationally representative with the following exceptions:
  - Small hospitals, government (non-federal) hospitals were slightly under-represented
  - Disproportionate share hospitals (hospitals which receive funding from the federal government for treating indigent patients) were slightly under-represented.

Screening as a first step to identify—and address—social needs

Screening individuals for social needs may be the first step for many hospitals and health systems. We asked if hospitals are screening their population for health-related social needs in any capacity, and 88 percent report that they are screening at least some individuals (either patients and/or members of their community) for social needs.

Large hospitals and DSH hospitals are somewhat more likely to both screen and direct resources toward social needs activities (Figure 1). In addition, our survey results appear to show that most hospitals undertake some form of social needs activities: a majority of respondents said their hospital directs at least some resources to addressing any kind of social need (87 percent).

When asked who they are screening and to which population they are directing resources and interventions, respondents report that most activity is taking place in the inpatient population (90 percent), followed by high-utilizers of health care (83 percent).

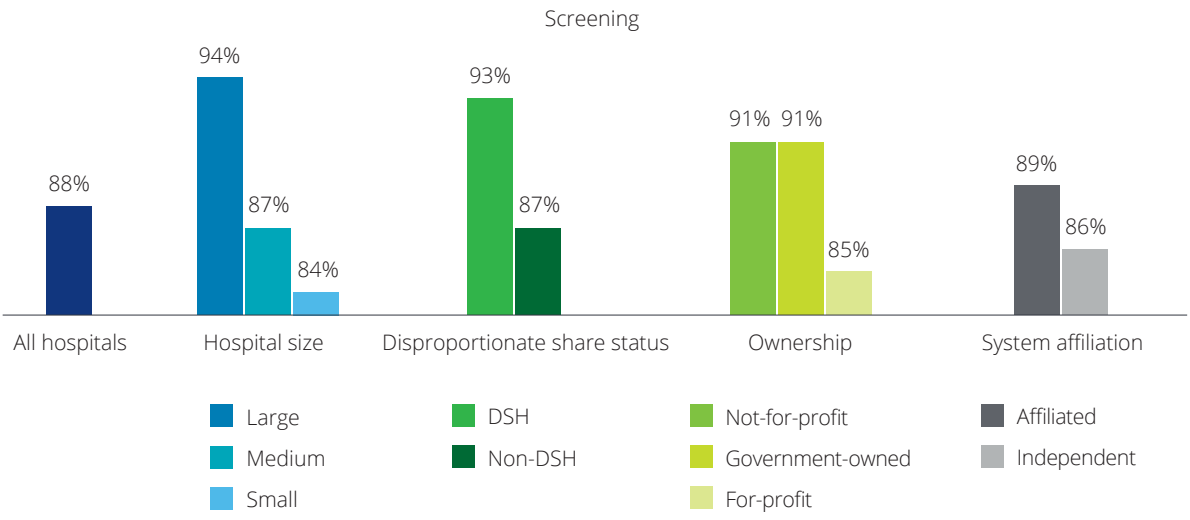
In our survey and in interviews, hospital respondents say that identifying and segmenting high utilizers or high-cost patients is of particular interest.

Many hospitals and health plans are using predictive modeling software and rely on their health-risk assessments and hospital screenings. Some interviewees note that they are interested in understanding how patients and individuals in the community want to be contacted, and how to communicate and engage with different populations.

We spoke with Lisa McClellan, Vice President of Medicaid Strategy at Centene Corporation, a health care organization that provides government-sponsored health care programs to more than 12 million members in 28 states, about consumer engagement strategies. According to Lisa, "We want to understand more of the personas of our membership, and segment outreach that way. For example, are you organized and structured? Or are you more carefree? How do you like to receive information from us? We try to understand what motivates different individuals, and tailor our outreach based on that understanding."

Figure 1. Screening for social needs by hospital type

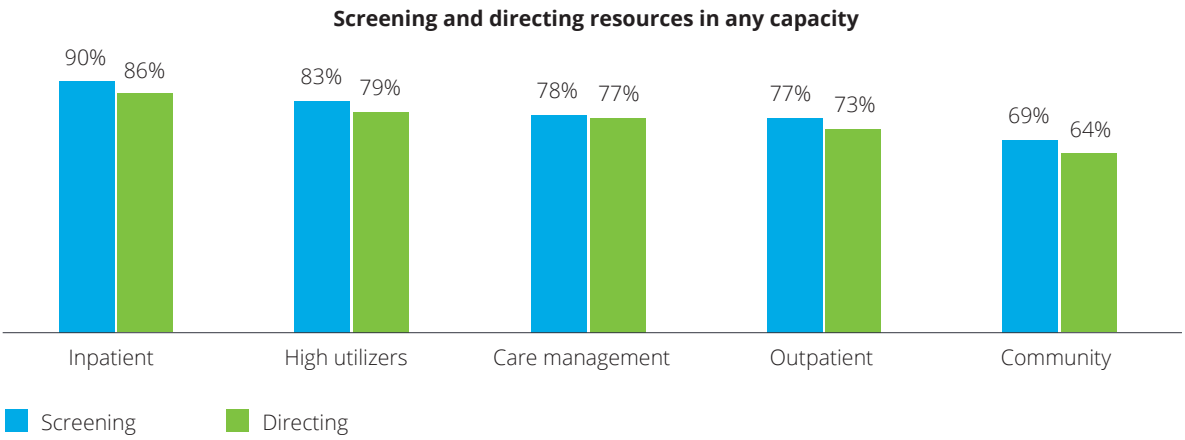
Large, not-for-profit, government-owned, system-affiliation, and disproportionate share hospitals (DSHs) are more likely to screen patients for social needs than other hospital types



Source: Deloitte Center for Health Solutions' 2017 Social Determinants of Health Hospital Survey

By contrast, many hospitals are less likely to report screening patients in the "care management" group (i.e., patients who receive care coordination or care management services). Hospitals are also less likely to screen and intervene in the broader community (69 percent), individuals who live in the area the hospital or health system serves (Figure 2).

Figure 2. Social needs activities are more common in the inpatient and high-utilizer populations



Screening refers to any method of asking patients or individuals about their health-related social needs, such as access to healthy foods, transportation, housing stability, etc.

Directing resources or interventions refers to any type of activities, such as referrals or services or programs offered, to patients or individuals that aim to help them address these social needs.

Source: Deloitte Center for Health Solutions' 2017 Social Determinants of Health Hospital Survey

Digging deeper: Though screening is common, it is not used for all patients and may not be well-coordinated

In our interviews and literature review, even leading organizations that have some of the longest-standing investments in addressing social needs identify a lack of coordination across departments. One health system reports that nurses, social workers, and the medical-legal aid department are all screening but are using different tools and sometimes collecting the same or similar information. In some cases, the different teams are not communicating information across departments. This has led to staff asking the same patient the same questions more than once, which can be an inefficient use of hospital staff and resources as well as burdensome to the patient. The organization is addressing the situation by opening more cross-department communication channels. Still, the issue of who "owns" some of this work remains a challenge for some stakeholders.

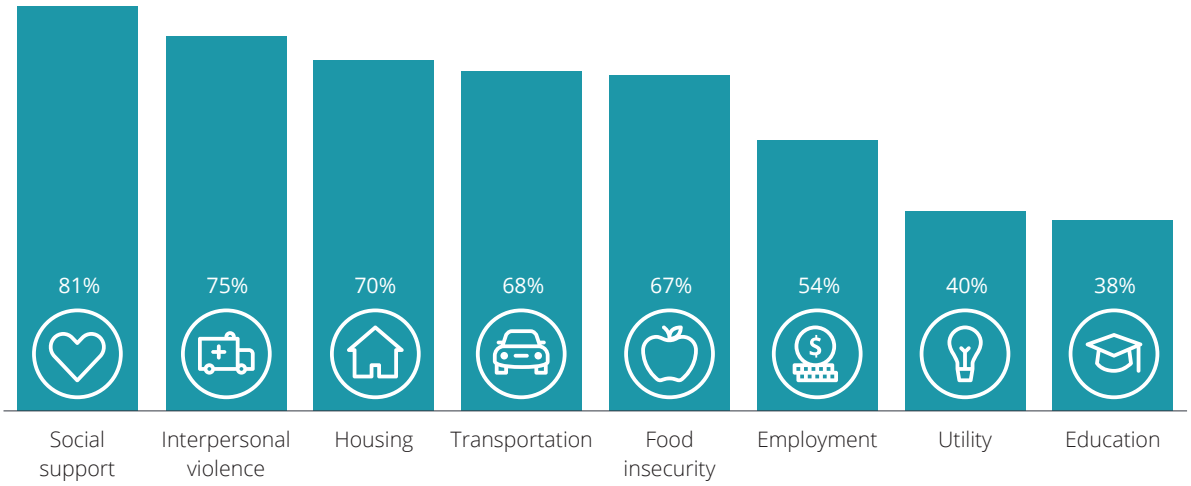
While hospitals commonly report directing resources (staff and funding) and interventions to address social needs, some of these activities appear to be more ad hoc or occasional, and limited to some patients: About half of hospital survey respondents report directing resources or interventions in a more ad hoc or occasional basis across segments of the target population. As one interviewee notes: "We are still finding out information ad hoc. We'll be doing a housing and caregiver needs assessment, asking if the patient has two stories in their house and will have trouble with stairs; only to find out the patient doesn't have stable housing."

Respondents report screening most frequently for social support, interpersonal violence, housing, transportation, and food insecurity (see Figure 3). These findings are consistent with an America's Essential Hospitals 2016 report[5] that featured results of a member survey about hospital initiatives.

Essential hospitals are those that treat a large number of vulnerable patients, or patients who are low-income and who might not have health insurance. America's Essential Hospitals respondents included 44 health systems representing 109 essential hospitals. This sample represents a subset of the Deloitte survey sample. According to the survey results:

- 57 percent of respondents were addressing food insecurity, and the same number were addressing education; and 64 percent had a formal referral system in place to address food insecurity
- 55 percent were addressing interpersonal violence, and the same number were addressing social support; 68 percent had a formal referral system in place for addressing interpersonal violence
- 52 percent were addressing housing instability; 68 percent had a formal referral system in place
- 50 percent were addressing transportation issues; 61 percent had a referral system in place
- 39 percent were addressing utility needs; 43 percent had a referral system in place
- 36 percent were addressing employment and income; 32 percent had a referral system in place.

Figure 3. Hospital screening by social needs category



Health-related social needs categories are described on page two of this report.

Source: Deloitte Center for Health Solutions' 2017 Social Determinants of Health Hospital Survey

How are health care systems addressing social needs?

Social support

Studies show that living alone, along with factors such as poverty, affect health outcomes, such as a patient's chances of being readmitted to a hospital after discharge.[6]

Geisinger Health System relies on community health assistants (CHAs) to help improve patient outcomes by addressing certain social needs, including social isolation. CHAs are often non-licensed professionals who assess patients' needs, connect with primary care and case management teams, and coordinate referrals. CHAs also spend time listening to patients, as social isolation is a critical factor in health and health care. CHAs are regarded by the health system as an important resource to reduce readmissions and help patients manage the challenges of their conditions outside the hospital.[7]

Interpersonal violence

Many victims of violence will seek medical treatment, so hospitals and health systems are uniquely positioned to address violence prevention. Research shows that hospital-based violence intervention programs can significantly reduce violence, save lives, and decrease health care costs.[8]

The Children's Hospital of Wisconsin addresses family violence through a variety of activities. Beginning in the 1980s, the hospital set up a network of child advocacy centers across the state. In the early 1990s, the hospital noticed an increasing number of teenagers repeatedly being treated for violence-related injuries in the emergency room (ER). In response, the hospital helped establish Project Ujima, a multidisciplinary collaboration between the hospital, the Medical College of Wisconsin, and the Children's Service Society of Wisconsin. Case workers identify patients' needs and provide immediate support during the hospital stay.

The program also features a community-based home visitation model to follow hospital treatment. After discharge, a community liaison visits the patient's home within two weeks to develop a service plan. This intervention helps the teenager and other family members access services including medical, behavioral health, legal, school, and social services to reduce the risk of recidivism for the youth and to help the entire family.[9]

Housing

A growing body of research shows that addressing housing instability can be a cost-effective approach to reducing readmissions and other avoidable health care services.[10] SBH Health System in New York City's Bronx borough sold part of its campus to a developer to build low-income housing. It opened an urgent care center and other outpatient facilities in the new development.

In Portland, Oregon, five hospitals and a nonprofit health plan in the state are donating more than $20 million to help build nearly 400 housing units for homeless and low-income people.[11]

Transportation

Some hospitals and medical providers are partnering with ride-hailing services to address transportation barriers. In certain cases, these rides may be covered by Medicaid and other insurance plans.

MedStar Health, a nonprofit health care system with hospitals in Maryland and the District of Columbia, began a partnership with Uber last year. It allows patients to access the ride service while on the hospital's website and set reminders for medical appointments. Medicaid patients who might not have access to the Uber app can also arrange the ride by calling the hospital's patient advocates. Hackensack UMC, a hospital in New Jersey, and Sarasota Memorial Hospital in Florida have also set up similar partnerships.[12]

Food insecurity

In summer 2017, Seattle Children's Hospital is launching a 10-week pilot of Kids Café, which brings wholesome snacks and meals to kids at community sites such as libraries, Boys & Girls Clubs, and others. Similar to the National School Lunch Program which provides free and reduced-price lunches to children from low-income families, the program is reimbursed by the federal government. Food Lifeline, a nonprofit organization in Seattle that collects 40 million pounds a year of surplus food from farmers, restaurants, grocery stores, and food manufacturers to distribute through a network of 275 food banks throughout western Washington, supplies the food and administers the program. Other community partners provide space and supervision for the children while they eat.

Employment

Unemployed individuals are more likely to self-report worse health status, may be more at risk for depression, and are at higher risk for mortality.[13] In addition, since unemployment is correlated with other social determinants of health, including food insecurity and unstable housing, addressing unemployment can be an important step to treating other significant health-related social needs.

Hennepin Health, a patient-centered care program at Hennepin County Medical Center in Minneapolis, works to address the medical and social needs—including unemployment—of low-income patients who have complex or multiple conditions. Hennepin Health has partnered with Rise, Inc., a local organization that offers patients resources to find employment. In addition, the two organizations work together to provide patients with appropriate housing, as increases in wages may displace patients from low-income housing. These efforts have decreased health care costs for program participants by 60 percent.[14]

Utility needs

Health care providers at Boston Medical Center wanted to help low-income patients who received treatment in the hospital but had to go back to apartments or housing that had no heat or electricity. There are laws to protect children, the elderly, and chronically-ill individuals from utility shutoff, but this protection requires medical documentation from the physician. Through the hospital's medical-legal partnership, attorneys worked with physicians to write protection letters that included the information necessary to demonstrate medical need.

During the program's first year, physicians wrote letters protecting 193 people from utility shutoffs. The program scaled up the following year with the opening of a new onsite legal clinic. It helps patients needing their utilities restored set up payment plans with utility companies and ensure future shutoff protection. To meet demand, the hospital integrated a form letter into the electronic medical record (EMR), resulting in 350 percent more letters helping more than 600 people, using fewer resources, the following year.[15]

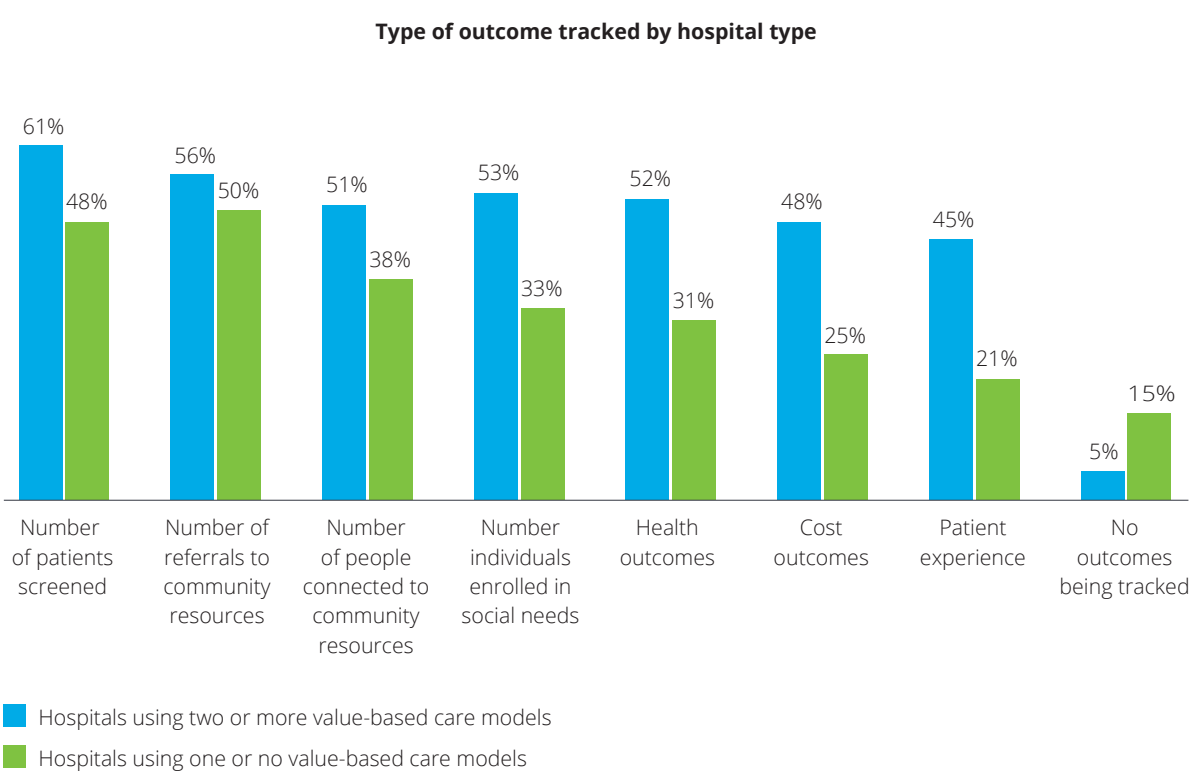
Education

WellCare Health Plans, Inc., a provider of government-sponsored health care, offers free General Educational Development (GED) testing for eligible Medicaid members. Recognizing that many social determinants factor into the health of an individual, family, and community, WellCare aims to help members remove financial barriers that may prevent them from furthering their education and employment opportunities. WellCare first offered the GED benefit to Georgia members in 2012, and has since expanded the benefit to three others states. The company is considering expanding the program.[16]

Shift to value-based care might spur social needs investments

Hospitals that are moving more toward value-based care models—such as accountable care organizations (ACOs) and bundled or capitated payments—are reporting the highest level of investments and most activity around addressing social needs. Survey respondents who say their hospital participates in more than one value-based care model are also more likely to say that their organization's mission and vision completely align with addressing health-related social needs. Additionally, these respondents are tracking more social needs measures in every category and measuring more outcomes, such as health outcomes, cost, patient experience, and number of people who used community resources after being referred (see Figure 4). This may be good news, as demonstrations happening through the Center for Medicare and Medicaid Innovation and the Medicare Access and CHIP Reauthorization Act (MACRA) are helping more hospitals and health systems move away from fee-for-service (FFS) to value-based care models.

Figure 4. Hospitals participating in value-based care models are more likely to measure all social needs activities, including health outcomes, cost outcomes, and patient experience



Value-based care models we asked about in the survey included ACOs, capitation, bundled payments, or others.

Source: Deloitte Center for Health Solutions' 2017 Social Determinants of Health Hospital Survey

Some of our interviewees cite the struggle that many health systems have as they straddle the canoe, with one foot in FFS and one in value-based care. Some respondents say that it can be challenging for hospitals and health systems to understand and track what different health plans are paying for and prioritizing. One health plan might have a large staff of nurses and health coaches that focus on care management, while another in the same market might prioritize patient follow up less often. The different strategies can be confusing for hospitals. Some state Medicaid agencies are trying to address part of this challenge by integrating their behavioral health and substance abuse treatment services within their managed care contracts, which have historically been carved out.

Health care organizations are likely to want to see ROI from addressing social needs, in terms of improved health outcomes, reduced costs, or both. When asked what would increase their organization's investments in health-related social needs activities, 48 percent of respondents select data or evidence that demonstrates improved health outcomes, and 51 percent select data or evidence that shows the initiatives reduced costs.

Determining the ROI for addressing health-related social needs typically requires that hospitals identify and track meaningful measures and have patience to realize long-term results. A report out of Northeastern University explores the business case for population health for larger providers and notes that measuring the impact of a population health intervention is a challenge.[17] Organizations need the ability to collect meaningful data, select appropriate metrics, track them, and understand which components of a given intervention are able to produce an impact. Many of our interviewees note that looking at finances over a fiscal year or other short period of time may not be optimal for realizing improved health outcomes from social needs' initiatives.

Listening to patients and communities

In one of our interviews, Jason Dinger, CEO of Ascension Care Management, a population health management organization, recounts, "So much of what we do in social determinants and population health in general comes from the supply side perspective. Health care professionals tend to identify what we think is a need, and develop a solution around it, but we don't listen enough to the patients or the people in communities we are trying to help. What do *they* want?"

As an example, Ascension found 72 children who were filling prescription asthma medications, but were still presenting to the ER with acute episodes. Their insurance was covering the cost of their medicine, but when the organization went deeper, they discovered the families were having trouble paying for the plastic spacer required to use the inhaler. When they started paying for the spacers, ER costs went down.

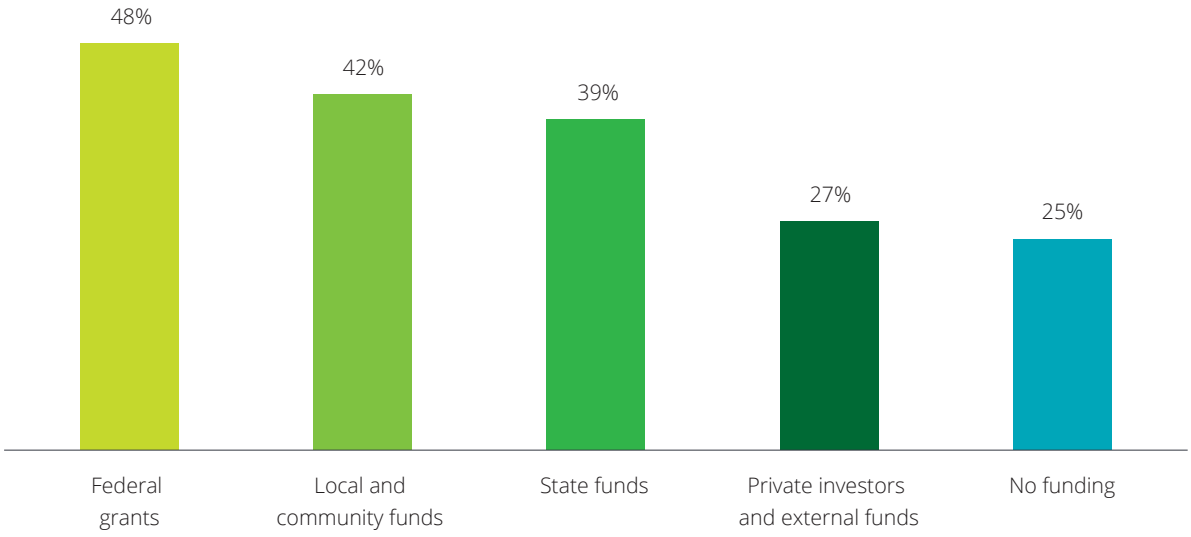
Health care organizations are likely to want to see ROI from addressing social needs, in terms of improved health outcomes, reduced costs, or both.

Sustainable funding can challenge the pursuit of social needs activities

Surveyed hospital stakeholders report a variety of funding sources for hospital social needs activities, with government funding, particularly from federal sources, being the most common (see Figure 5).

Most hospitals (72 percent) report not having dedicated funds to address social needs for all of their target populations. Our qualitative interviews confirm that sustainable sources of funding to address social needs is a challenge for many hospitals. One reason for this, interviewees say, is shifting priorities in federal and state government.

Figure 5. Distribution of funding sources



Federal grants: e.g., reinvestment of savings from 340B programs, Centers for Medicare Services/Center for Medicare and Medicaid Innovation grants, funding through State Innovation Model (SIM) grants, waiver funding, Accountable Health Community grants

State, local, and community funds: e.g., funding from state, local community partners or regional government funding

Sources of funding are not mutually exclusive. Hospitals can receive funding from multiple sources.

Source: Deloitte Center for Health Solutions' 2017 Social Determinants of Health Hospital Survey

We asked survey respondents a number of questions to help identify investment trends in social needs screening or interventions. Specifically, we asked them to estimate their hospital's total annual budget and how much the hospital spends per 100 patients or individuals to address social needs. Responses vary considerably. While a small percentage of hospitals report larger investments, most fall along the lower end of the long distribution tail. The median amount reported is $200 per patient or individual to address social needs per year. Note, however, that this estimate is not meant to serve as a benchmark, given the variety of hospital types and respondent roles in the survey sample.

Our survey shows that investments vary by hospital type—hospitals with a larger share of needier populations (nonprofits and DSH) report a larger number of patients in need, but not necessarily higher investments. Nonprofit hospitals appear to have a lower staff-to-patient ratio, while medium-sized hospitals, urban hospitals, and government-owned hospitals have a higher spending ratio per patient or individual than others.

Hospitals surveyed reported that the median staffing-per-patient ratio (including nurses) was one full-time employee to address social needs for every 20 patients. Our survey data shows that hospitals depend most heavily on nurses, social workers, and care managers to address social needs; they are less likely to rely on behavioral health professionals and translators. While 88 percent of respondents report that their hospital employs nurses to address health-related social needs, 71 percent employ behavioral health staff, and 50 percent employ translators. These figures indicate that most hospitals are following the more traditional clinical care model of having nurses address these needs.

One interviewee, a behavioral scientist from a large health system, notes that in most hospitals, physicians work primarily with nurses to screen and address social needs (direct them to resources or interventions). Yet, in his opinion, a social worker with training is the gold standard in screening individuals and directing them to resources and interventions, since truly understanding and addressing the social determinants of health requires a deeper understanding of that person's unique story. To address some of the workforce challenges for the future, the health system has a program to mentor school children of various cultures, so that they can help grow the pool of medical professionals and social workers, especially those who speak languages other than English.

72 percent of surveyed hospitals report not having dedicated funds to address social needs for all of their target populations.

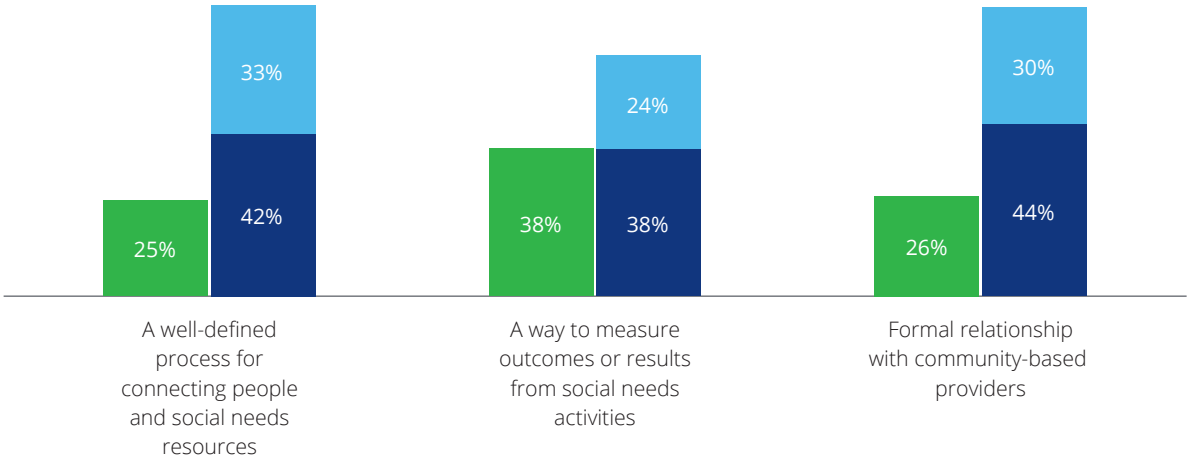
Capabilities that many hospitals are developing to address social needs include connecting people to resources, measuring outcomes, and fostering relationships with community organizations

Some hospitals are in the early stages of developing capabilities to address social needs, such as ways to collect relevant data from the community and across the health care system, methods to integrate the data and measure performance, and relationships with community organizations that are also addressing social needs in their communities (see Figure 6).

- Most hospitals report having a well-defined process for connecting people to social needs resources, though fewer have this capability for their entire population.
- Most hospitals are measuring outcomes for some of their initiatives, but 38 percent of hospitals report not having a way to measure outcomes or results from social needs activities.
- One capability that seems more advanced is developing ties to community nonprofits or organizations that address social needs.

Figure 6. Hospitals are more likely to develop capabilities for specific population segments

Availability of different capabilities to address social needs by functionality level



Percent of hospitals reporting that a given capability is:

- Not available
- Available (to some extent/for a subset of the target population)
- Fully functional/available for the entire target population

Source: Deloitte Center for Health Solutions' 2017 Social Determinants of Health Hospital Survey

Less than one-third of hospitals report integrating social needs into the EMR for most of their target population. One interviewee says that though the EMR has some valuable social needs data, much of it remains buried. Other interviewees note that this data often comes in the form of social work notes that the care team may not regularly access. Further integration of data into the EMR, and strategies for making this data more useful for the care team, may help hospitals in the future.

We asked about hospitals' capabilities to track and measure outcomes related to their social needs activities and investments (Figure 7). While more than half of the hospitals surveyed track the number of patients screened for social needs and the number of referrals to community organizations, those numbers start to decline when looking at how many hospitals report tracking the number of individuals who get connected to the community resources. Hospitals report that improving health outcomes ranks high in terms of what hospitals identify as the main goals underlying their social needs strategies, but only 40 percent are measuring health outcomes at this time. Similarly improving patient experience is also highly ranked as an underlying goal, but few hospitals measure patient experience outcomes from their social needs activities at this time (Figure 7).

The connection between social needs and health outcomes

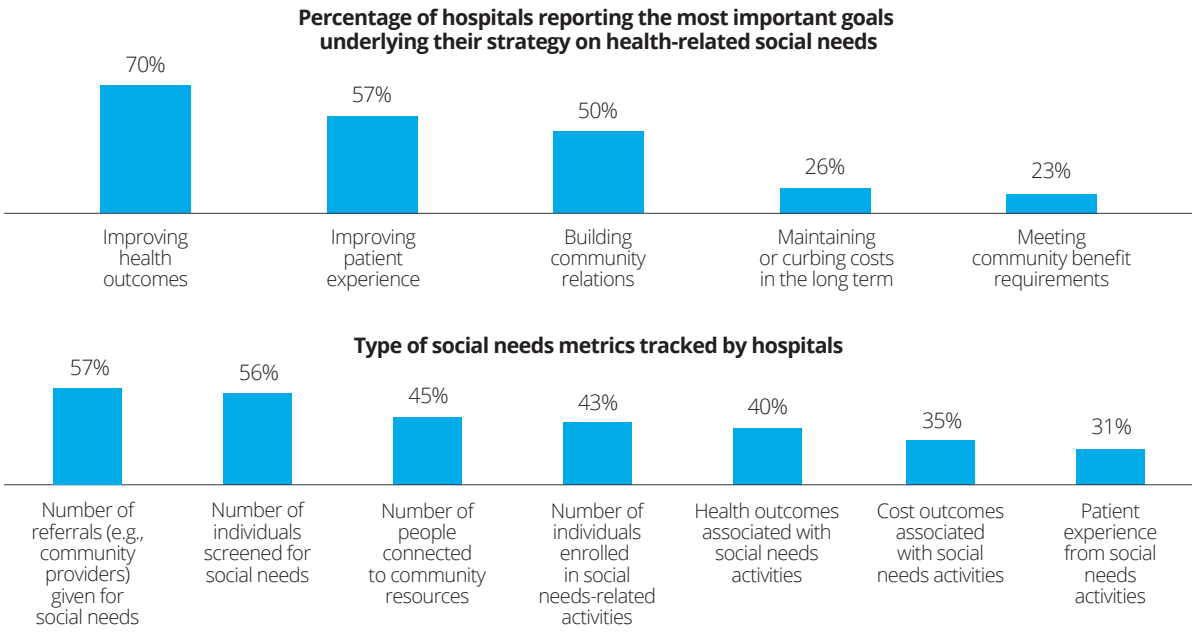
According to The Commonwealth Fund, poor asthma outcomes are often linked to living conditions, diabetes-related hospital admissions can be tied to food insecurity, and homelessness may drive greater ER use. The report also cites studies that found unemployment and low income were tied to a higher risk of hospital readmission among patients with heart failure or pneumonia.

A recent study conducted in conjunction with Health Leads found that unmet health-related social needs are associated with:[18]

- Nearly twice the rate of depression
- 60 percent higher prevalence of diabetes
- More than 50 percent higher prevalence of high cholesterol and elevated hemoglobin A1c, a signal of diabetes
- More than double the rate of ER visits
- More than double the rate of no-shows to clinic appointments

For hospitals aiming to expand initiatives to measure health outcomes, these areas may be a place to focus efforts.

Figure 7. Hospital-reported goals in addressing social needs



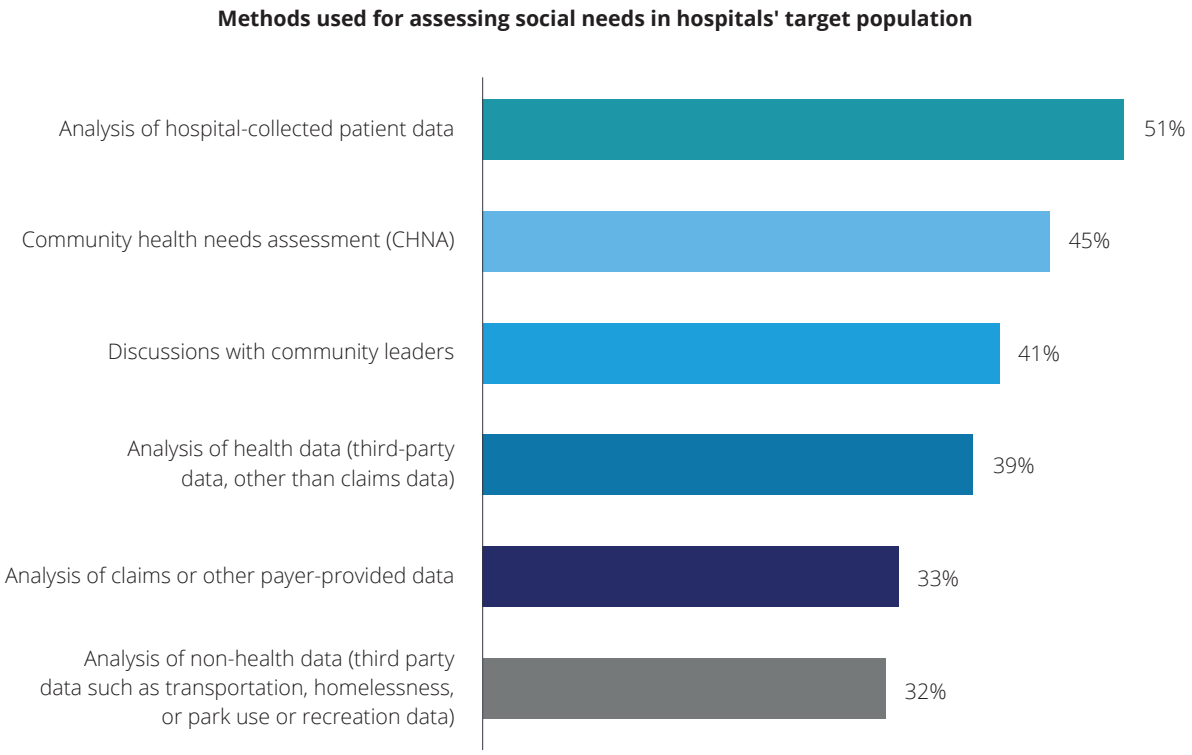
Source: Deloitte Center for Health Solutions' 2017 Social Determinants of Health Hospital Survey

Though non-health care data can tell a powerful story about social needs, traditional health data remains hospitals' primary source of information

Hospitals rely on data from multiple sources to help guide their efforts to flag populations for screening and referral to community social needs programs. Traditionally, hospitals have relied on patient information from patient intake forms or claims data. Nontraditional health data includes any relevant information gathered from sources outside the scope of existing data collection methods; for example, community-level data such as transportation usage, statistics on homelessness, or statistics on recreation or park use.

About 35 percent of respondents say they rely on such nontraditional data to help them understand the needs of their communities (Figure 8). This differs by hospital type—for-profit hospitals are more likely to use nontraditional health data. Community health needs assessments (CHNA)* are most commonly used among government-owned and non-profit hospitals.

Figure 8. Hospitals primarily use their own data to guide social needs efforts



Source: Deloitte Center for Health Solutions' 2017 Social Determinants of Health Hospital Survey

*Note: Community health needs assessments (CHNA) are required of tax-exempt hospitals as a result of the Affordable Care Act. The goal of these assessments are to improve the health of communities.

However, our interviews reveal that some hospitals are striving to collect and use data in more nontraditional ways. For example, some hospitals are consulting with local nonprofit organizations for help in understanding the needs of their communities (74 percent of survey respondents report having relationships with community organizations to address social needs). Having regular meetings with these organizations, and piloting programs together, can be an important step in understanding how to address health-related social needs.

The challenge for many organizations is trying to figure out how best to collect information: What can be done in a hospital or physician office waiting room by a medical assistant or a lay person versus what should be done through more direct contact with the physician or nurse? Some of our interviewees note that regulations such as the Health Insurance Portability and Accountability Act of 1996 (HIPAA), as well as liability concerns, may deter some screening activities or discussions about health-related issues outside the care team.

Despite these barriers, many of our interviewees note that hospitals are starting to outsource or rely on potentially less expensive staff to ask validated questions and to help assess patients and their environment, without requiring a nurse or physician.

ICD-10-Z codes: A potential untapped social needs data source

An interviewee from a managed care company says that ICD-10-Z codes are a potential social needs data source that is used by less than one percent of providers. The ICD-10 classification scheme includes Z codes for describing factors that influence health status and contact with health services. These Z codes relate to potential hazards due to family and social circumstances impacting health status, including socioeconomic and psychosocial circumstances, problems related to education and literacy, employment and unemployment, housing and economic circumstances, and the social environment, to name a few.[19]

The National Association of Community Health Centers developed the Z codes so that providers could more thoroughly capture social determinant data. The codes have been around for two years, but generally are not widely used. In a FFS system, providers may not have the incentives to use the codes. There are also other barriers, such as certain state laws that prohibit physicians from asking certain personal questions, and managed care organizations from using certain data.[20]

There are federal and state laws that prohibit the use of some data. Organizations may be allowed to collect it, but what they are allowed to do with it is sometimes cloudy. A lot of areas have not been defined yet, so some organizations may prefer to take a more conservative approach to avoid wandering into a gray area. The interviewee noted that state and federal clarity on how providers and health insurers can collect and use data would be helpful.

The future of addressing health-related social needs

Data on some of the social needs programs and partnerships around the country indicate that some hospitals are having early successes with some initiatives in improving health outcomes and the patient experience. Through our research, we hope to help establish baseline metrics against which health care organizations can measure their efforts as they tackle this complex issue in the coming years, as well as provide recommendations for moving forward in the short and long term.

Our research shows that many hospitals and health systems are beginning to engage in activities around addressing health-related social needs and are starting to develop their capabilities, as well as invest in staff and resources in this area. However, the ability to measure results from their initiatives is likely necessary to advance the goals of improving health outcomes and reducing costs, and may require stakeholders to:

- **Break down siloes and consolidate resources.** Hospitals and health systems can work to consolidate social needs efforts, and identify and break down siloes within their organizations. This may help them better achieve scale and avoid duplicating efforts and burdening staff and patients with inefficient practices. The earlier example of the many screening tools used by different departments in one health system illustrates this challenge. The health system is addressing this through cross-department and team meetings and regular communications; other hospitals might find such an approach helpful.
- **Continue move toward value-based models to further align social needs and clinical care.** Our survey found that hospitals that are further down the path to adopting value-based care models are more likely to track outcomes compared to their peers. Many of our interviewees say that regardless of the direction of federal and state funding in the coming years, the move toward value-based care is expected to advance the health care system's ability to address health-related social needs. Hospitals and health systems are in various stages of transitioning to value-based care. The Deloitte Center for Health Solutions has published[21] findings from a convening of 31 senior leaders from across the health care industry focused on the implementation of MACRA. The findings show that senior leaders are interested in furthering collaborations with community-based organizations outside the health care system to strengthen their understanding of the gaps patients face, and help them engage more effectively with patients. The senior leaders are also interested in hiring patient advocates, navigators, social workers, and/or home health workers to assist with patient coordination and help patients navigate the system.

The ability to measure results from hospital initiatives is likely necessary to advance the goals of improving health outcomes and reducing costs.

- **Identify strategies to improve their ability to track health and cost outcomes, and adopt consistent definitions and metrics around addressing social needs.** Industry stakeholders (e.g., hospitals and health systems, health plans, federal, state, and local governments, public health professionals, employers, researchers, and technology companies) can play an important role in the ongoing research to unravel the complex interconnections of social determinants of health and health outcomes. There appears to be a discrepancy in understanding and coordinating measurement approaches around social needs. Common definitions and data sets may help accelerate the industry's ability to test, learn, and share best approaches. Hospitals are often using a mix of data to address social needs, and could benefit from data in other parts of the system (e.g., from payers, community organizations, other providers, and the government). As described in the Deloitte UK Centre for Health Solutions' paper, *Breaking the dependency cycle: How health inequalities of vulnerable families can be tackled in Western Europe,*[22] research to advance the collection and sharing of data should focus on:
  - Applying innovative analytical tools to social needs research
  - Aggregating and segmenting population data to give a real-time picture of the populations being served, as well as of the populations that should be targeted for prevention purposes
  - Continuous tracking and analysis of outcomes as well as data that can help demonstrate an ROI on social needs investments
  - Integrating data on social needs and analytics in interoperable IT across public and social services
- **Sharing leading practices and data on other organizations' activities and strategies to direct investments, and scale what is working.** Many hospitals and health system respondents say that knowing what works would motivate more activity and investment. Stakeholders could benefit from looking to existing settings for information-sharing opportunities such as research forums or venues where multiple stakeholders in the local or business community can get together to disseminate leading practices and lessons learned. Our research identified many programs that seem to be working. Leading health care organizations should actively pursue ways to introduce effective models into their organizations and assist effective programs to scale their impact.

  Forthcoming results and lessons learned from the CMS Accountable Health Communities Model, which will run for five years across 32 organizations, is expected to illuminate leading practices on linking community-based services and clinical services. All of the organizations are working with local clinical delivery sites, such as physician practices and hospitals, to help ensure that they are making referrals to community services that can address patients' social needs.

Addressing health-related social needs will likely require an ecosystem approach—with hospitals and health systems working with health plans, federal, state, and local governments, community organizations and local businesses, employers, and families—to implement initiatives that impact health and quality of life.

Opportunities to share leading practices, integrate data to help identify needs and measure outcomes, and collaborate on community initiatives will likely be critical to help stakeholders make the most of their efforts.

Appendix: Survey advisory committee members

The Deloitte Center for Health Solutions thanks the following individuals for providing guidance on the survey tool and findings:

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Endnotes

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