



California Health Care Foundation

PRIMED

Addressing Social Factors in the Health Care Safety Net

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Safety-net health care providers and plans are under extraordinary pressure to transform how they deliver care — an effort that technology and entrepreneurs can support and accelerate.

Introduction

Spurred on by reforms included in the Affordable Care Act and other national trends, California is fundamentally transforming how it pays for the care of patients in Medi-Cal, its state Medicaid program. Rather than maximizing the *volume* of care delivered, regardless of outcome, Medi-Cal payers and providers must now optimize *value*, which couples improved health with manageable costs.

Driven by this shift, health plans and delivery systems are paying greater attention than ever to the factors beyond health care — like community, safety, education, and family stability — that influence a person’s health. If health outcomes are to improve, Medi-Cal providers and health plans must be able to understand the comprehensive needs and circumstances of their patients, and learn to coordinate with complex support systems to make sure those needs are met.

The safety net is an ideal market for innovative, collaborative solutions that empower providers to understand their patients’ medical *and* social needs. Given their growing understanding of the cost-effectiveness of prevention and their drive to contain costs, commercial markets may soon seek such solutions, too.

Social Determinants of Health

Social Environment

- ▶ Income/poverty
- ▶ Education level
- ▶ Food security and nutrition
- ▶ Primary language
- ▶ Immigration status
- ▶ Family stability
- ▶ Trauma (e.g., domestic violence or sexual abuse)
- ▶ Discrimination

Physical Environment

- ▶ Housing affordability and quality
- ▶ Neighborhood safety and livability
- ▶ Transportation access
- ▶ Community walkability

Social Determinants Take Center Stage

A combination of trends has created unprecedented urgency around addressing social determinants in the US health care system. It is critical that innovators understand these trends, and the underlying forces driving them, when designing technology for the social needs of the safety net.¹⁻⁴ (See page 4.)

The concentration of adverse social factors in low-income populations means that safety-net patients, providers, and payers are disproportionately faced with challenges related to these issues compared to commercially insured populations.

TRENDS IN ADDRESSING SOCIAL DETERMINANTS



Growing evidence of social determinants' influence on health. Social determinants are responsible for 60% of a person's health, while the remaining 40% is shaped by genetic factors and health care. Despite this, 88% of health care spending goes to medical services, and only one in five providers in the US reports feeling confident or very confident in their ability to address patients' unmet social, economic, and behavioral needs.



Evolving policy environment with increased focus on value-based care. The Affordable Care Act (ACA) led to an additional 32 million Americans, many from low-income and underserved populations, receiving health insurance. ACA provisions have paved the way for value-based care models that incentivize the delivery of higher-quality care and the reduction of excess costs. In these new payment arrangements, providers share financial risk for health outcomes and must work collaboratively with other health or social services to better address patients' environmental needs. California has launched policies and pilots incentivizing providers and payers to work more closely together in solving these problems.



Health equity challenges. Stagnant wage growth and widening income inequality has resulted in more individuals and families dealing with numerous, often compounding income-related problems that have detrimental effects on their health. This creates stark health inequalities with substantial social, economic, and human costs. Safety-net providers have a mission orientation and have long been committed to addressing these inequalities, driving an increased focus on social determinants when they establish purchasing priorities.

Source: FSG, *Policy Primer: Opportunity by the Numbers*, August 2017, www.chcf.org (PDF).

LEARN MORE

Detailed information on Medicaid pilot programs can be found in *Medicaid Pilots Open Door for Innovation in California*, another report in the *PRIMED* collection.

Clinical and Business Cases for Using Innovation to Meet Human Needs

Although safety-net payers and providers have long understood the impact of social circumstances on health outcomes, they often lack the resources to tackle them. New programs and payment models have changed that; the business case for addressing social determinants in the safety net has never been clearer.⁵

The business case for addressing social determinants in the safety net has never been clearer.

Table 1. Clinical Quality and Business Imperatives to Address Social Determinants of Health, by Safety-Net Actor⁶⁻⁸

	CLINICAL IMPERATIVE	BUSINESS IMPERATIVE
Hospital Systems	<ul style="list-style-type: none"> ▶ Improve the effectiveness of clinical interventions by limiting to extent to which social risk factors either prevent a person from following their care plan or exacerbate an underlying medical condition 	<ul style="list-style-type: none"> ▶ Avoid unnecessary procedures, emergency room visits, and hospital admissions for which the hospital is not adequately reimbursed or is penalized ▶ Save staff time and expense through efficient discharge processes ▶ Enhance patient experience and satisfaction to improve competitive position
Clinics and Health Centers	<ul style="list-style-type: none"> ▶ Improve the effectiveness of clinical interventions by limiting to extent to which social risk factors either prevent a person from following their care plan or exacerbate an underlying medical condition 	<ul style="list-style-type: none"> ▶ Optimize use of limited resources, including staff time and physical space, to maximize number of patients served ▶ Maximize time spent on clinical and behavioral conditions and increase patient cycle time where possible ▶ Develop population health and whole-person care capabilities in preparation for potential alternative payments, and optimize staff capacity and promote efficient use of their time
Health Plans and Payers	<ul style="list-style-type: none"> ▶ Improve the effectiveness of clinical interventions by limiting to extent to which social risk factors either prevent a person from following their care plan or exacerbate an underlying medical condition 	<ul style="list-style-type: none"> ▶ Lower total cost of care while protecting health outcomes ▶ Improve performance on quality of care and member satisfaction measures (e.g., Healthcare Effectiveness Data and Information Set and Consumer Assessment of Healthcare Providers and Systems scores)

What New or Improved Capabilities Does the Safety Net Need?

Based on interviews with public hospitals, clinics, and health plans serving California’s safety net, Table 2 highlights three core capabilities that providers and plans need to consider when addressing patients’ human needs as part of their overall health care.

Improvements here will strengthen the health care system’s ability to improve individual patient outcomes while paving the way for more proactive population

health management, including the data collection and analyses necessary for predictive risk stratification and pre-emptive resource allocation.⁹ Within and across these core areas there is real potential for innovators to develop high-impact technological solutions.

Challenges and Solutions

Hospital systems, clinics, and health plans are at various stages in developing their capabilities related to social determinants of health. The following section offers insights from safety-net providers and health plans that showcase how their approaches are evolving to include new technology. Despite their efforts, challenges remain.

Table 2. Key Capabilities and Innovations Needed to Address Social Determinants

1. Collect data to understand patients’ social needs and circumstances



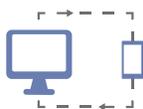
- ▶ Efficiently collect information about patients’ needs in ways that minimize impact on existing workflows.
- ▶ Provide new and more accessible ways for patients to share social needs with providers, taking into consideration language, culture, and technological literacy and access.
- ▶ Provide choices so that patients can communicate about needs via multiple channels, including directly with various members of the clinical team, through patient portals and via mobile devices.
- ▶ Integrate data seamlessly into electronic health record (EHR) systems, patient portals, and other data platforms for easy access, analysis, and action by all members of the care team. This includes multidirectional, real-time data sharing between organizations and agencies with common patients.

2. Analyze social needs and facilitate handoffs to social services



- ▶ Ensure technology offers ability to match social services with identified needs as well as to make referrals in ways that cause minimal disruption to existing workflows.
- ▶ Leverage existing resource databases (e.g., 211, local help desks) to encourage cross-sector collaboration and reduce duplication.
- ▶ Use common words to refer to social determinants to ensure all parties keep an accurate shared understanding of patient needs.
- ▶ Enable risk assessment and stratification based on social needs data to improve individual care plans and population-level resource allocation.
- ▶ Enable analysis of referral patterns for medical and social service providers to understand capacity, effectiveness, and gaps in local social service networks.

3. Ensure community-wide connectivity between clinical and social service providers



- ▶ Establish electronic communication channels that allow referring and referral agencies to track individuals’ use of health and social services and to report on their status.
- ▶ Facilitate data sharing between stakeholders.
- ▶ Create opportunities for multisite adoption of shared systems across various organizations.
- ▶ Build deep flexibility within technology itself to allow for local customization.

Collect Data to Understand Patients' Social Needs and Circumstances

INSIGHT: *Collecting data on the social factors influencing patients' health is an ongoing challenge for providers and plans.*

Providers are experimenting with diverse ways to collect information on patients' social circumstances and improve their overall health. Some providers are working to ensure that patients have multiple avenues to communicate their needs, both during and outside of the clinical appointment, so that the patient can choose what is most comfortable for them.¹⁰ Some are testing approaches where patients provide information through paper forms, kiosks, or iPads in the waiting room. Others are experimenting with different members of the care team collecting this information at different points in the visit (e.g., waiting room, during the appointment) and entering it directly into the EHR.

Regardless of the method, collecting these data from patients requires providers to add an additional step into packed primary care visits, which in turn slows down clinic flows. One safety-net provider tested more than six ways of collecting such information and found that having a care team member ask added nine minutes to the visit. This burden was so disruptive that the clinic decided it was unsustainable. After testing numerous other approaches, they decided to have patients with a higher-than-average risk score fill out a paper form while waiting to see the physician, though this approach also creates challenges.

Because health care providers are increasingly responsible for community health, some want to provide support outside of health care appointments. One medical system implementing the Whole-Person Care pilot hired 100 community health workers to reach out to patients to assess their nonmedical needs. However, they found that identifying the right people to do community outreach and figuring out how those people could most effectively conduct outreach to those with limited connectivity to the health care system was and is a challenge.

Benefits of Technology¹¹

A 2014 randomized control trial comparing patient disclosure rates for social determinants between electronic and face-to-face methods found significantly higher rates when employing electronic formats for sensitive issues (e.g., household violence, substance use) and marginally higher rates when used for less sensitive issues (e.g., financial insecurity, neighborhood and school safety), suggesting that technology has a role to play in solving this challenge.

SPOTLIGHT

Northeast Valley Health Corporation

As Northeast Valley Health Corporation (NEVHC) begins to identify patients' social risk factors, it highlights some key challenges and opportunities. "Just assessing and referring for [social needs], even if it's just a minute, really slows us down," said NEVHC's Director of Quality and Health Education. Providers lack sufficient time to inquire about patients' social needs during a primary care visit, and patients may be uncomfortable sharing this information with providers or clinical staff they do not know or trust, especially if it's not clear why they want these personal details. NEVHC initially screened for depression using the paper version of the PHQ9 survey, which patients would fill out in the clinic waiting room. However, this approach required additional staff capacity to transfer these data into the clinic's EHR system, a time-consuming and sometimes inaccurate process that pulled staff away from other responsibilities.

To overcome this challenge, NEVHC now uses OTech, a tool that aims to make patient check-in and forms more efficient through web-based surveys offered in clinical settings. OTech integrates with NEVHC's EHR system, thereby saving the care team data entry hours while improving accuracy. OTech is also actively beta testing a product that allows patients to securely complete surveys and forms at home prior to arriving for their appointments.

Despite these savings, providers still might not have enough time to analyze and respond to data in ways that allow for real-time referrals during the primary care visit. Solutions that can support providers along those lines remain in high demand.

Analyze Social Needs and Facilitate Handoffs to Social Services

INSIGHT: *Current solutions to match patients' social needs to available resources do not effectively integrate with existing systems.*

Clinical providers face challenges when attempting to connect patients with social services. For example, they don't have efficient ways to keep track of available community resources. This information is often held, collected, and assembled by numerous people and organizations over many years, through word of mouth and experience. As most providers do not have the time or staff to keep them current, lists quickly go out of date. Innovators should consider the costs of maintaining lists like these, and whether there is a role for open source and collaborative models to build and maintain them.

The field also lacks a shared vocabulary for describing social needs and the services that might help. For example, unemployment could translate to needs described in several ways, including "food insecurity," "nutrition," or "hunger." Resources for this need might also be described in numerous ways, like "food assistance," "CalFresh Enrollment," or "food pantry." The National Association of Community Health Centers' (NACHC) Protocol for Responding to and Assessing Patients' Assets, Risks, and Experience is one effort that aims to promote standardized classification of social needs, but it is not universally used by the safety net.¹²

There are challenges in integrating existing EHR systems with new approaches to screening and referrals. Understandably, some providers are hesitant to invest in new technologies without knowing the extent to which these products will integrate into current workflows and systems.

"Referral technology has to be integrated into the work processes as much as possible. When we have to click three additional buttons to get a referral to Meals on Wheels, that is still a lot for our clinical staff."

— Safety-net public hospital director

Also, as providers seek to address social needs they must identify these social needs across panels or populations of patients. Being able to categorize patients based on their level of need and organize these data across populations and different geographies would allow providers and plans to use limited resources more effectively.

SPOTLIGHT Health Leads

Health Leads offers a volunteer-based model for assessing a person's social needs and matching them with resources and social services. Health Leads maintains an up-to-date, verified database of local social service providers. Once a patient indicates a need, Health Leads volunteers can identify a local resource and provide patients with the necessary information to access support.

While this model has shown promising results in linking patients to social supports, it is limited by technology. In many cases, current clinic workflows and job responsibilities do not account for this extra step, creating a backlog in internal processing that slows down visits and may adversely affect the patient experience. Also, Health Leads uses a web-based platform to maintain its resource database and referral system, but information about where a patient was referred to does not flow back to clinic EHR platforms. This lack of referral link to an EHR places a burden on providers and clinic staff. One hospital administrator described the painstaking process of having to assess and document social needs in their EHR, then open the Health Leads platform to identify relevant resources, and then copy the information about the referral back into the patients' EHR. Not only does this take time, but it makes it difficult for the health system to have robust data on where and to whom their patients are being referred.

In response to these challenges, Health Leads has developed a cloud-based platform called REACH, which enables clinics to screen patients, identify available resources, track progress, and analyze key data. The REACH platform can integrate with existing EHR systems to ensure clinic staff are able to leverage data for improved individual care management. This system allows for the identification of trends in where and why patients are being referred, enabling improved population health management.

“Doing really great work on addressing social determinants means that a diabetic patient would be referred from the homeless shelter to the food bank and to health classes. In an ideal world, we don’t wait until they are in an acute situation to begin identifying relevant social services.”

— Safety-net public hospital administrator

Ensure Community-Wide Connectivity Between Clinical and Social Service Providers

INSIGHT: *There must be effective communication and data sharing between primary care settings and social service providers.*

Developing effective communication channels between health and social service providers is an important challenge. This type of communication is hindered by incompatible technology, privacy concerns including regulations like the Health Insurance Portability and Accountability Act (HIPAA), outdated workflows and job descriptions, and misaligned incentives between stakeholders with differing financial resources and influence within the community.

An additional challenge to functional connections is communicating whether a patient received the intended services, and documenting the resulting impact from that support. Facing budgetary constraints and frequent staff shortages, safety-net clinics and hospitals often lack the capacity to provide the necessary follow-up to close the loop on these referrals.

Health information exchange and care management platforms may be able to help medical and nonmedical providers share this information in the future. These feedback loops allow clinicians to consider patients’ social needs when developing care plans, and they also benefit social service providers by giving them an opportunity to document the impact of their work in ways that can bolster their arguments for continued support. Innovators need to consider the motivations and benefits related to each distinct audience to encourage the uptake of innovative technology.

While these loops can be beneficial to safety-net providers, the data they produce can also be overwhelming. Technology that enables providers to select the types of information they receive from social service organizations would limit data overload and increase the likelihood that clinic staff will act on information from social service providers. Improved data analysis would also enable providers to deliver population health management more effectively.

The most transformative solutions in this space will connect multiple medical and social service providers to one another. Independent medical and social services will be more successful in adopting and implementing a shared technology if they have relationships, trust, and shared goals for their community. Thus, innovators may benefit tremendously from working in concert with place-based collaborations aimed at improving health. These collaborative efforts could be instrumental in facilitating multisite adoption, which is necessary for transformative change.

SPOTLIGHT

Oakland Children’s Hospital’s Family Information and Navigation Desk

Some innovators are focusing on patient-centric communication platforms, including texting. At Oakland Children’s Hospital’s Family Information and Navigation Desk, patients text the hospital using a unique identifier code to let their care team know whether they received a service related to a need. This approach minimizes impact on already overwhelmed health care professionals and social service providers while deepening connections with patients and families in ways that build trust and strengthen relationships. Further, this system allows for population-level analysis to understand trends in social service needs, service use, and referral completion.

“There is a huge gap in the ability to screen, refer, connect, and then understand [at] a population level what is happening.”

— Pediatrician

Implications for Innovators: What Does High-Value Innovation Look Like?

Through interviews with safety-net clinics, hospitals, and health plans, several key principles for the successful design and implementation of technology solutions emerged. These principles support progress within the safety-net environment and can be applied to the development of innovations that address social needs. These key principles for designing and implementing high-value technology innovation are applied to the challenge of addressing social needs below, but are largely applicable to innovating in other ways within the safety net.

PRINCIPLES OF HIGH-VALUE INNOVATION

RATIONALE AND EXAMPLES

Optimal Fit with Patient Context



Innovative tools must meet the unique circumstances of patients in the safety net, which can include a wide array of needs, including those related to language, literacy, culture, and technology. Patients may also struggle with a variety of social needs outside of the health care setting, such as a lack of reliable transportation or access to computers or phones, that can affect their ability to get care.

Examples:

- ▶ Referrals to social service organizations must consider the unique cultural realities and norms of patients, such as cultural dietary restrictions when referring to food assistance programs.
- ▶ Technology to assess social needs must be available in patients' primary language and must allow for translation so that providers can analyze and act on these data.

Optimal Fit with Provider Context



Solutions must fit the unique circumstances of safety-net providers who have a strong mission orientation and deep connections within the communities they serve. Their care teams often include a variety of nonmedical staff, such as community health workers and peer support specialists, some of whom may have language and literacy needs unique to their environment.

Examples:

- ▶ Technology needs to offer read and write access to the entire care team, including new types of health care workers (e.g., community health workers, peer support specialists, case managers, substance use and recovery counselors).
- ▶ With increasingly diverse roles within care teams, solutions need to be accessible to those with different literacy levels and have interfaces in different languages.

Linkages and Interoperability



Solutions must be designed to complement and integrate with existing technology, particularly EHR systems. Innovators should build on existing systems, workflows, and staff expertise whenever possible. Requiring providers to switch between interfaces or duplicate work can create significant barriers to adoption, especially for under-resourced clinics and hospitals.

Examples:

- ▶ Solutions should allow for integration across systems or have the ability to document social needs and referrals within the same system.
- ▶ Partnering with major EHR vendors (EPIC, NextGen, EClinicalWorks) allows for complete integration and increases likelihood of uptake in safety-net organizations.

Accessible, Actionable Data

Solutions that collect or produce data should ensure that those data can be efficiently accessed, analyzed, and ultimately applied to improve care, workflows, or costs. Innovators must consider who will use the data and how they'll access it, as well as how they can maintain and ensure its accuracy and validity.

Examples:

- ▶ Coordination among organizations can prevent patients from being discouraged by duplicative questions.
- ▶ After screening for social needs, providers need to be able to use these data to meaningfully improve patients' circumstances (e.g., providing a facilitated referral to social service providers and communicating with social service organizations to ensure the patient received services).

Tailored Design

Solutions should be rigorously prototyped to demonstrate value in a variety of safety-net settings. Codesigning or modifying products with input from safety-net partners cannot only increase their applicability to this market, but also serve as proof of concept in other markets.

Example:

- ▶ Piloting of technology that enables improved social determinants of health capabilities must consider existing workflows and processes of health and nonhealth organizations to increase likelihood of adoption.

Facilitated Purchasing and Implementation

Pilots and demonstrations can help prove a product's value to risk-averse and resource-constrained safety-net customers. Innovators should be aware of the dynamics surrounding purchasing decisions, which are growing increasingly complex as providers become more interconnected.

Example:

- ▶ Before piloting, consider agreeing to a pre-negotiated set of milestones that once achieved, will trigger a larger systemwide rollout of the product.

The Greatest Opportunities for Innovation

Technology that will benefit safety-net providers, payers, and patients while helping to meet social needs should be able to address these questions:

- ▶ **How can innovators help providers capture the full spectrum of a patient's social needs, and analyze how they influence health?** Health care providers need simple, streamlined ways to collect information on patients' unmet social needs.
- ▶ **How can innovators create systems that allow health and social service providers to better communicate and collaborate?** To create and treat a comprehensive picture of a patient's health, including their social circumstances, cooperation and coordination must occur within and across health care and social service systems.
- ▶ **How can innovators help community providers collect and maintain social service information efficiently and avoid duplicative work?** Information on community resources is held in different systems by an array of providers, payers, clinics, and social services — and can quickly become outdated. Optimal solutions will not only centralize that information but will also ensure its accuracy.
- ▶ **How can innovators help integrate the health delivery and social service sectors to improve population health at scale?** Relative to other developed nations, the United States spends a huge amount on health care services and has comparatively low rates of social services spending, a mismatch that many argue results in relatively poor health outcomes.^{13,14}

Conclusion

The safety net — tasked with caring for our nation's most vulnerable populations, and possessing deep experience and strong insights on what works — offers a unique opportunity for innovators to test and improve solutions. Safety-net providers are more advanced than commercial markets in their ability to understand and address patients' unmet human needs. Their mission orientation aligns well with this type of work, and providers and plans in California indicate that products that address this challenge are on their list for near-term purchasing priorities.

At the same time, innovators should keep in mind that efforts to address the social determinants of health are inherently shaped by local context and individual patient needs, and there is not a single "right" solution for safety-net providers and payers. There is an unparalleled opportunity for innovators to think more proactively and strategically in designing solutions that support the safety net's unique and changing needs.

In addition, as payers in the commercial market seek to stem rising costs, they are also realizing the value of preventive measures that target the root causes of costly health outcomes. Innovators' current efforts to identify, pilot, and scale social determinant-related technology solutions in the safety net will position them well to serve the commercial market as it catches up. Proof that a solution can succeed among the resource constraints and complex populations of the safety net is potent fuel for future growth.

TALK TO US

If your company has developed an innovative solution that is addressing any of the opportunities outlined here, we want to hear from you. Email us at InnovationFund@chcf.org or tweet at us [@chcfinnovations](https://twitter.com/chcfinnovations).

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