Robert Wood Johnson Foundation

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Using Social Determinants of Health Data to Improve Health Care and Health: A Learning Report

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Table of Contents

Executive Summary

Social determinants have always played a fundamental role in our health and well-being, yet until recently collecting data about, and addressing these determinants has largely been done outside of health care systems. Now, however, the time is right for the health care system to get engaged in this work. Changes in the health care landscape, including value-based reimbursement, increased health system and provider accountability, and the addition of millions of people to the health insurance rolls, have created incentives and demand for addressing social determinants of health.

About This Report

This report aims to provide the Robert Wood Johnson Foundation (RWJF) and other health foundations with a perspective on the emerging intersection of social determinants of health (SDOH), health care systems, and social and other services. These fields intersect in how and what data are collected, and in ways the data are used to improve health and well-being and promote a Culture of Health.

Some 38 people recommended by RWJF staff, and by those interviewed, and also found through research, shared their perspectives on collecting and using SDOH data. Most people interviewed are working on programs to address SDOH. Others are experts in related fields.

A Learning Compendium at the end offers additional information and resources, including funders, an annotated list of those interviewed and examples of programs.

The information in this report is current as of October 2015, but the collection and use of social determinants of health information is a fast-moving target, and changes are likely to have taken place since our interviews and analyses.

The authors would like to thank all of the interviewees who gave generously of their time and thoughts to this report, and to RWJF staff, Paul Kuehnert, Hilary Heishman, and Molly McKaughan who provided guidance and feedback throughout.

—Lori De Milto and Mary Nakashian, Consultants to RWJF

What Efforts to Collect and Use SDOH Data Are Currently Underway?

Many people, programs, and projects are trying to use SDOH information. They target a variety of patients living in diverse communities who have widely varying medical and social needs. We have categorized them into three somewhat overlapping categories, but they could be categorized in other ways.

- **Broad patient-level programs** that connect low- and modest-income patients with social supports.

- **Targeted patient-level programs** that focus on medically complicated high-cost patients.

- **Population-level approaches**, which address larger groups or categories of people.

Summary descriptions of several programs and sidebars on three of them appear in the Learning Compendium.

What Prevents the Widespread Collection and Use of SDOH Data?

People interviewed for this report pointed to four types of challenges to the collection and use of SDOH data to improve health. And many of them observed that *using* SDOH data is more challenging than collecting them.

Challenge #1: Lack of Knowledge and Consensus. In the absence of standards or tools, and without knowledge about best practices, health systems and community coalitions create home-grown initiatives. There is no systematic mechanism for sharing best practices, struggles, successes, or failures.

Challenge #2: Resource and Power Differences Between Social Services and Health Care Organizations. While health care and social services share goals, they have different perspectives. Health systems need better understanding of their communities, and social service organizations need to be open to change.

Challenge #3: Lack of Effective Multi-Sector Collaboration. These collaborations need to address not only who will collect data and how, but how it will be made available to health care providers; how they will act on collected data; and how they will link patients back to social service providers.

Challenge #4: Rigid Technology Systems. The right technologies need to be identified and developed. EHRs may not be the right tool; cloud-based technology may work better. Either way, sharing data across sectors is a major challenge.

What Does the Future Hold?

Despite the challenges, people and the literature are generally positive about moving toward widespread collection and use of SDOH data, and they are prepared to tackle some thorny issues:

- **There will be conflict among stakeholders and confusion about how best to do this work.**

- **Lack of collaboration and coordination between social services and health care, and resistance from some physicians and health systems will slow down the work.**

- **EHRs will slow down the work unless they're substantially revamped.**

- **HIPAA and related privacy and security concerns will impede cross-sector collaboration.**

- **State Medicaid agencies will need a framework for investing in the collection and use of SDOH data and measures to show whether providers are effectively addressing SDOH.**

Opportunities for Funding

The SDOH field needs guidance—standards, tools, best practices, evidence, and more—about how best to do this work.

All of the recommendations below derive from our interviews and research. We identified common perspectives and grouped the recommendations into seven categories. Within these categories, some recommendations came from one person, while others were suggested by up to 12 people. In assessing the ideas, we gave more weight to those from people who are already deeply involved in this work and those backed up by evidence in reports and journal articles.

Opportunity 1: Make the Work Easier by Using a Population-Focused Approach (noted by 12 people interviewed)

Key Recommendations

- **Develop and disseminate easy-to-use tools to assess the health of the local population**. Consider the American Board of Family Medicine's Population Health Assessment or the University of Missouri's Community Commons GIS.

- **Accelerate the work of the 40+ systems in Stakeholder Health.**

- **Facilitate the development and evaluation of efforts that engage the legal profession with medical systems.**

Opportunity #2: Give the Field a Home Base (noted by 11 people)

Key Recommendation

- **Consider a simple clearinghouse, a larger community with webinars, meetings, and opportunities for people to interact online, or something in between.** Consider technical assistance or management of research projects. Possible models are ClinicalTrials.gov, HealthBegins, or Stakeholder Health.

Opportunity #3: Provide Guidance: Standards, Metrics, Best Practices, and Tools (noted by 10 people)

Key Recommendations

- **Develop and disseminate guidelines, best practices, and training for collecting, using, and sharing SDOH data**. Include attention to HIPAA and data protection. Create guidelines to help public health departments work with health care systems around collecting and using SDOH data.

- **Invest in research**. The field is new, making the generation and dissemination of evidence particularly important. Topics can include:

  o Qualitative research or testing to help physicians learn how to collect and use SDOH data

  o The relationship between neighborhood-level and individual data

  o The return on investment of SDOH programs and financial as well as health outcomes

Opportunity #4: Show How to Do this Work: Demonstration and Evaluation Projects (noted by eight people)

Key Recommendation

- **Support demonstration and evaluation projects to provide models for collecting and acting on SDOH data and for generating evidence about what works under what circumstances.** Projects could include:

  o   Comparing workforce models such as community health workers, promotoras and others

  o   Comparing different screening and data collection methods, settings, and technologies

Opportunity #5: Advance the Capacity of Social Services to Work with Health Care Systems in Collecting and Using SDOH Data[1] (noted by five people)

Key Recommendations

- **Facilitate the development of databases/repositories of social services resources in a community**. Some branches of United Way, Health Leads, and Healthify do some of this, as well as Call 2-1-1.

- **Support the development of models to assess social services needs, gaps, and areas of duplication and support efforts to develop standards for assessing the quality of social services.**

- **Support efforts to build the capacity of social service agencies.** These could be demonstration projects that give social service leaders and staff help in building leadership and analytic capacity.

- **Support research and evaluation to build an evidence base for social services.** Strengthen social services literature through studies that document the impact of different services on health and cost.

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[1] People interviewed noted that efforts to engage health care systems in effective collaborations with social services will be limited not only by shortcomings in the social services sector, which is poorly funded and in need of reform, but also by the power and resource differential between the health care and social services delivery systems. They made some recommendations for addressing those limitations.

Opportunity #6: Facilitate Multi-Sector Collaborations to Promote Collection and Use of SDOH Data (noted by 10 people)

Recommendations

- **Support studies of multi-sector collaborations that work with SDOH data.** Include studies that identify characteristics of effective collaborations, such as meta-analyses of community collaboration initiatives. Be aware of opportunities to work with churches or other faith organizations.

- **Develop guidance for collaborations on the collection and use of SDOH data to improve health outcomes**. RWJF's County Health Rankings and Roadmaps offers one model. A new center for multi-sector collaboration or an umbrella home base for SDOH data collection are others.

Opportunity #7: Work With State Medicaid Agencies to Develop a Framework for Addressing SDOH (noted by one person)

Only one person specifically addressed Medicaid agencies, but the role of Medicaid in establishing coverage policies, paying for services, and engaging beneficiaries cuts across all of the Opportunities.

Recommendation

- **Help state Medicaid agencies develop a framework for making strategic investments in the collection and use of SDOH data.** This includes developing measures of whether Medicaid providers are effectively addressing SDOH and supporting the development of payment models tied to the risks and needs of the Medicaid population.

Using Social Determinants of Health Data to Improve Health Care and Health: A Learning Report

What's Prompting New Connections Between Social Determinants and Health Care?

"Once you have social determinants of health fully in the health care system . . . we're going to be able to provide much better care." — Manik Bhat, Chief Executive Officer, Healthify

Factors such as where we live, how much money we have, our education level, and the problems we struggle with have been clearly linked to our well-being, the quality of our lives, our health, and how long we live. This means that addressing social determinants of health (SDOH) is a key part of building a Culture of Health in America—and that it is essential to help the health care system take these determinants into account in its treatment of patients— including collaborating with social services and other systems to provide necessary services outside the purview of the health care system.

A Changed Health Care Landscape Offers Opportunities…

Social and economic circumstances play an especially key role in the health of many low- and modest-income people, and more of them now have health insurance through the Patient Protection and Affordable Care Act (ACA). The act also created incentives that reward health care systems for achieving better health at a lower cost.

And Also Creates Pressures

Population health management and value-based purchasing are now significant factors in reimbursement policies. Increasingly providers are being held accountable for the health of their patients and for health care costs, with payments linked to outcomes. Hospitals are being penalized for readmissions. More hospitals are using electronic health records (EHRs) in response to federal "Meaningful Use"[2] regulations.

At the same time, there are disincentives:

- Investing in community partnerships creates an out of pocket cost for hospitals. And if the population become healthier, it means fewer people will need hospital services, so the hospital will lose business.

- The differential in resources between the health care sector and the social service sector makes collaborations to improve health in the community or region difficult.

A National Academies of Medicine (NAM) Report Seeks to Catalyze Action

To catalyze action in addressing SDOH, the Institute of Medicine (IOM), part of NAM, identified 12 social and behavioral factors most strongly associated with health and created measures for these factors that could be incorporated into EHRs (*Capturing Social and Behavioral Domains and Measures in Electronic Health Records: Phase 2,* 2014). Four of the 12 factors (domains) are already widely assessed (race/ethnicity, tobacco use, alcohol use, and residential address). Eight are new.[3]

In April 2015, NAM issued *Vital Signs: Core Metrics for Health and Health Care Progress,* in which an IOM committee proposes a set of 15 standardized measures, with recommendations for their application at every level and across sectors—in order to "provide consistent benchmarks for health progress across the nation and improve system performance in the highest-priority areas."

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[2] "Meaningful use" refers to the use of EHRs and related technology to achieve specified objectives. Achieving meaningful use is tied to certain Medicare and Medicaid payments from the Medicare EHR Incentive Program or the Medicaid EHR Incentive Program.

[3] The new domains are educational attainment, financial resource strain, stress, physical activity, neighborhood median household income, depression, social isolation, and intimate partner violence.

A New Model to Create Change in a Complex World

"There's only so much health care can do. How do we re-conceptualize health in a way that captures all of the much deeper complexities of people's social circumstances?"— Marsha Regenstein, PhD, Director of Research and Evaluation, National Center for Medical-Legal Partnership

What Efforts to Collect and Use SDOH Data Are Currently Underway?

"There's not a one-size-fits-all. There have to be different approaches to different clinical settings, workforces, and patients." — Kelly Hall, Managing Principal, Transformative Impact, Health Leads

Providers, social service agencies, insurers, and public funding agencies have to attend to the strengths and needs of the people they serve, always taking into account their economic, racial, ethnic, gender, and cultural characteristics. People from these communities need to play important roles in designing and implementing programs.

Approaches to Collecting and Using SDOH Data

Many people, programs, and projects are trying to use SDOH information. They target a variety of patients living in diverse communities who have widely varying medical and social needs. This report mentions those that are best known and a sample of some others. For this report, we have categorized them into three somewhat overlapping categories as described below. They might also be categorized by setting, by focus, or in other ways.

- **Broad patient-level programs** that connect low- and modest-income patients with social supports. Examples include:

    o *Bay Area Regional Help Desk Consortium*, a multisector collaboration in California that screens low-income patients for social service needs and helps them secure those services.

    o *Esther Network*, a program in Sweden that integrates health and social services for older adults, focusing on continuous quality improvement and patient participation in care plans.

- o *Health Leads*, which enables healthcare providers to prescribe basic resources like food and heat, just as they do medications, and to refer patients to the Health Leads program—just as they do for any other specialty medical services

- o *Healthify*, which provides services and web technology to help managed care plans and health delivery networks find services, connect beneficiaries to resources, screen for social needs, automate referrals, and track progress in addressing social determinants

- **Targeted patient-level programs** that focus on medically complicated high-cost patients. Examples include:

  - o *Camden Coalition of Healthcare Providers*, a coalition of hospitals and primary care, behavioral health, social services, and housing providers that connect high utilizers of emergency departments and hospitals with health, housing and other services.

  - o *Johns Hopkins Community Health Partnership*, in which teams of nurses, physicians, case managers, pharmacists, and community health workers screen and provide services to patients with chronic conditions, substance dependency or mental illness.

  - o *Michigan Pathways to Better Health*, in which community health workers screen older or disabled adults with complicated medical needs and provide or coordinate services for them.

  - o *Oregon Coordinated Care Organizations* for Medicaid recipients integrate medical, mental health, addiction, oral health, and social services. Coordinated Care Organizations have a fixed, global budget.

  - o *Spectrum Center for Integrative Medicine*, a Michigan-based initiative that provides enhanced medical management, aggressive social services and intensive psychiatric services, some of which are delivered on-site.

- **Population-level approaches**, which address larger groups or categories of people. Here are just a few examples of programs that use a population-level approach:

  - o *American Board of Family Medicine's Population Health Assessment Tool*, which is based on a geographic information system (GIS) and will allow physicians to look at disease clusters, use SDOH data to create community vital signs and address SDOH by referring patients to social services.

- o *Cincinnati Child Health-Law Partnership (Child HeLP),* a medical-legal partnership between a hospital and legal aid organizations in which doctors or social workers screen families for problems that need legal assistance and refer them to on-site legal staff for help in resolving them. The partnership both helps individual patients and also works at the population level by using the legal system to secure broader policy changes.

- o *Community Commons*, a global mapping system with population-level data that has mapping, reporting, collaboration, networking, and storytelling tools and includes socioeconomic, demographic, health, education, political, and environmental data for all counties in the United States.

- o *Loma Linda University Health's Healthy Communities Movement*, a partnership between Loma Linda and two California counties to develop a common data platform using GIS and a database of tools and analytics to enable common tracking of measures.

- o *Stakeholder Health*, a learning collaborative of more than 40 health systems focusing on partnerships between health systems and communities to improve population health and take innovation to scale.

Summary descriptions of these programs and short sidebars on three of them appear in the Learning Compendium.

Different Ways to Collect SDOH Data

"There are lots of issues about best way to collect the data and how to act on it," says the IOM's *Nancy E. Adler*, PhD, professor of medical psychology and director of the Center for Health and Community at the University of California, San Francisco School of Medicine. And people working with SDOH data use a variety of methods to collect, use, and share data.

Data are collected with assistance from staff and by self-report. For patients who need complex care, staff-assisted screening works best. For sensitive topics, self-report works best. Most programs reviewed use staff-assisted data collection. (See the Learning Compendium for examples of data collection in several programs).

Many types of people collect data. Community health workers, college student volunteers, case workers and other social workers, nurses, and therapists may do this. Doctors are typically involved in medical-legal partnerships and some programs for medically complex patients.

Data are collected electronically, on paper, or both. Most programs reviewed collect data electronically, using a custom screening instrument. Population-level programs focus on publicly available community data in GISs.

What Prevents the Widespread Collection and Use of SDOH Data?

People interviewed for this report pointed to four types of challenges to the collection and use of SDOH data to improve health. Many of them observed that *using* SDOH data is more challenging than collecting them.

While the challenges in doing this work are extensive, some people and organizations are finding solutions. People interviewed also offered many suggestions for solving challenges. Their suggestions are covered under the section Where Can Foundations Have the Most Impact on the Collection and Use of SDOH Data?

Challenge #1: Lack of Knowledge and Consensus

In the absence of standards or tools, and without knowledge about best practices, health systems and community coalitions create home-grown initiatives. While experimentation is essential when entering a new field of work, it also benefits from guiding standards and context.

> *What we have is "death by 1,000 pilots." — Loel Solomon, Vice President of Community Health, Kaiser Permanente*

Limited Knowledge of What Works Best

> *"There are lots of issues about the best way to collect the data and how to act on it." —Nancy E. Adler, IOM*

Clinicians, health care leaders, program operators, and researchers interested in using SDOH data to improve health and health care all want better guidelines, best practices, evidence, and models on the best ways to collect, share, and use these data. People are struggling with something as basic as deciding who to screen for social needs: everyone or only people likely to need help? Where will the line be drawn?

Those working in this area also need consensus—or at least shared understanding—of how to adapt screening tools and procedures for people with low health literacy, undocumented

residents, non-English speakers, and others who have historically not been included in decisions about their health care.

Laura Gottlieb, MD, MPH, assistant professor of family and community medicine at the University of California, San Francisco, says that much of the current focus is on the 5 percent of people who consume 90 percent of health care resources, but many other people just need a little or a moderate amount of help.

Robert Phillips, MD, MSPH, vice president of research and policy at the American Board of Family Medicine says that screening should be universal so it's "normative" and patients don't "feel like they're being singled out, threatened, profiled, etc."

Lack of Standardization and Tools

Without a standardized measure for collecting SDOH data, there is no consistency and little analysis can be done. Yet, there is also a need for flexibility.

"A lot of good thinking needs to go into the front-end around protocols on how you build a quality approach to data collection," says the *Christopher Fulcher*, PhD, director of the Center for Applied Research and Environmental Systems (CARES) at the University of Missouri, the technical team supporting the Community Commons. The IOM report is "a good start" in defining SDOH and identifying the data to be collected, adds *Robert Corey Waller*, MD, medical director at Spectrum Health Center for Integrative Medicine in Grand Rapids, Mich.

Lack of Knowledge on How to Link Patient, Population, and Public-Health Data

Developing effective, targeted SDOH interventions requires linking patient-level (clinical) data to population and public-health SDOH data. "We should be thinking more about data analytics for driving care, not relying so much on screening everybody for everything," says *Megan Sandel*, MD, MPH, medical director at the National Center for Medical-Legal Partnership.

Challenge #2: Resource and Power Differences Between Social Services and Health Organizations

"We have an obsolete and broken social service sector that's undercapitalized and underperforming."—Jeffrey Brenner,

MD, Executive Director, Camden Coalition of Healthcare Providers

The information about social services is based largely on interviews with eight clinicians, researchers, or program operators, one social services provider, and two reports.[4] This is not an exhaustive review, however, and further exploration of this topic is warranted.

This topic is important because it's clear that health and social services collaborations pay off. Researchers at Yale Global Health Leadership Institute (*Leveraging the Social Determinants of Health: What Works?*) cite strong evidence that partnerships involving coordination that provides access to housing, Women, Infants, and children (WIC) and prenatal supports, and some food and nutrition programs improve health outcomes and lower health care costs among low-income and other vulnerable populations.

Some said that many communities have too many of some services and too few of others. "We see gaps between the needs and the service density in a region all the time," says **Manik Bhat** of Healthify. Health systems and hospitals "know they need to refer to these services more effectively," he adds.

Dora Barilla, DrPH, a participant in Stakeholder Health and president of HC2 Strategies, poses some key questions and observations:

• "How do we vet some of the social service agencies within our community and figure out where are the viable ones that we need to support?

• What are the entities that perhaps need to merge so they're stronger? So many of them are competing over pennies. They're killing each other. We've got to stop that. We've got to have an honest conversation."

People who spoke about the role of social services noted that the social services sector has always been significantly underfunded and undervalued compared with the health sector. This has created a sector too often characterized by inordinate time spent on scrambling for funds, limited investment and leadership capacity in areas like strategic planning and management, and high rates of staff turnover.

Health system leaders understand that they will not succeed in addressing SDOH without collaborating with social services agencies. They also appreciate that social services agencies

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[4] The reports are "Leveraging the Social Determinants of Health: What Works?" and the "Health Systems Learning Group Monograph."

often have earned the trust of community residents. Before referring patients, however, they have to feel confident that the agencies provide high-quality services.

Health Care and Social Services Share Goals But Have Different Perspectives

More than ever before, health care and social services systems need each other in order to serve their communities and achieve their goals. Both systems are increasingly aware of their shared interests and their need to make major changes. But several factors make this change hard to accomplish.

Health systems have capital and infrastructure, while social service agencies are often small and poorly funded. This causes staff in the two sectors to have different perspectives and leads to:

- Reluctance of health systems and hospitals to make referrals to social service agencies out of fear of capacity and quality issues

- Fear of or discomfort of social service staff with hospitals and health systems

- Lack of understanding by health systems and hospital staff of the depths of the needs or realities of the lives of some of their patients, or why they end up back in the emergency department or hospital

"They [hospitals] discharge patients often to places they assume are suitable and they [the patients] end up back in the hospital, because people don't have gas and electric or the water has been turned off."—Leon Purnell, Executive Director, Men and Families Center in Baltimore.

Not being able to pay for medicines prescribed is another problem that results in readmission to the hospital, adds **Purnell.**

Not having the identification needed to get health insurance is another problem The Men and Families Center was helping people get new cards, but ran out of money for this activity. The organization is working with Healthify and Johns Hopkins on several projects to address this and other issues.

Health Systems Need Better Understanding of their Communities

At the most basic level, the question needs to be asked, "Who is defining the community of focus and what do they mean by 'community'?" It seems that a lot of health care system leaders still think of the population of "covered" lives instead of all members of the community their system serves. "To know that community," says **Martha Davis**, a senior program officer at RWJF, "You would have to know about, and find ways to connect to, those who are far outside any system: the very vulnerable and often invisible members of the community."

Stakeholder Health participant **Dora Barilla** of HC2 Strategies also notes that health systems/hospitals must be willing to learn from staff at the community-based organizations. "Nothing replaces executives, CEOs, board members, sitting down with social service providers and understanding the incredible needs of the community once they leave the doors of the hospital," she says.

Leon Purnell agrees. "Hospitals have worked so long in solo that it's hard for them to work with somebody in tandem." As part of the Johns Hopkins Community Health Partnership, Purnell organizes "meet and greets" so hospital staff gets to know social service providers and learn how they can help, and so social service providers can develop contacts with the right people at the hospital to efficiently collaborate and help their clients. Progress is being made, but there is a long way to go toward full collaboration and coordination.

Social Service Organizations Need to be Open to Change

For their part, social service agencies must be willing to change in a number of ways:

- They need to adapt new technology and processes to improve their workflow and be more proactive about sharing best practices.

- They also have to be prepared to be held accountable for outcomes and to collaborate and even merge with other social agencies if warranted.

- Social services leaders and boards of directors have to balance the benefits of having a local community presence with the benefits of economies of scale and talent that come from a robust infrastructure, good technology and analytic systems, and more predictable funding streams.

Challenge #3: Lack of Effective Multi-Sector Collaboration

More effective collaboration is a key need. These collaborations need to address not only who will collect data and how; but how it will be made available to health care providers; how

they will act on collected data; and how they will link patients back to social service providers. No one's figured out a "sustainable business model" for multi-sector collaboration, says **Martin Sepulveda**, MD, MPH, vice president of integrated health services at IBM Corp. Barriers include differing approaches, values, and attitudes toward the work and evaluation.

Although some organizations are doing innovative work to identify and address SDOH in a collaborative manner, for the most part, health systems and social service providers operate in siloes.

At the most basic level, the problem for a hospital is financial, writes **Stuart Butler,** PhD, in an article in *News at JAMA*, "… investing in community partnerships is a … cost … with no direct financial benefit to the hospital … (other than, perhaps, an avoided readmission penalty). Worse still for the hospital's bottom line, if [its] community outreach means fewer people need hospital services, then [it] loses business—a classic example of 'no good deed goes unpunished.'"[5]

Challenge #4: Rigid Technology Systems

While technology is essential to moving this work forward, the consensus is that this challenge is more solvable than other challenges. And, says **David A. Ross,** ScD, director of the Public Health Informatics Institute, "It's about 95 percent sociology and about 5 percent technology." Two key technology challenges were noted.

Identifying and Developing the Right Technology(ies)

At present, 95 percent of health care organizations are still learning how to use EHRs for clinical basics such as charting and prescribing, so it is still difficult for them to use these new digital data sources to tap into the social or population health dimension, says Johns Hopkins University's **Jonathan P. Weiner**, DrPH, director of the Center for Population Health and Information Technology and professor of health policy and management and heath informatics at Hopkins.

Even if health care organizations learn how to use EHRs, they still may not be the best tool for collecting and using SDOH data. Sharing the data across sectors and translating it into useful, actionable information will be a major challenge.

Technology is often not flexible or user-friendly for multiple stakeholders, and/or meaningful to the community. "If we don't have the right data and technology and tools, it's going to be

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[5] See http://newsatjama.jamar.com/2015/11/12/jama-forum-can-hospitals-help-create-healthy-neighborhoods

very difficult to tell our story and understand how we're going to do interventions," says **Dora Barilla** of HC2 Strategies who participates in Stakeholder Health.

"The investment in time, energy and money it takes to collect data in most EHRs isn't feasible for many providers, and it can be even more expensive and challenging to do something with it, like make it a part of an algorithm, analysis, or trigger." — Joshua Newman, MD, MSHS, Chief Medical Officer, Salesforce

Integrating social needs data into EHRs has also been a major challenge for Kaiser Permanente, which has about 30 programs to address the social needs of its members.

Yet, the IOM's **Nancy Adler** believes that routinely including SDOH data in EHRs and making them available to health systems and other partners will "have the biggest payoff over time."

Some organizations have been successful in using EHRs to collect SDOH data. At Spectrum Health Center for Integrative Medicine, **Robert Corey Waller** worked with his EPIC team to add SDOH data to the EHR, including a place for notes. (EPIC is one of the most common electronic health record systems used by hospitals). The keys to doing this, he says, are "to understand that you have to work with the system you have and not buck the system," and also working for a "forward-looking place" that is willing to pay for this work.

Alternatives to EHRs

The main alternatives to EHRs for the collection, sharing, and use of SDOH data are:

- Custom technology

- Cloud-based technology (which can include various data sources, including EHRs)

- Geographic information systems (GIS)

Custom technology. Health Leads and Healthify have each developed their own technology for collecting and sharing SDOH data. Both have cloud-based, secure systems that are compliant with the Health Information Portability and Accountability Act (HIPAA). They can integrate their data with EHRs, but this isn't easy. Health Leads has its own case management and resource system and uses the Salesforce cloud-based computing system to collect data, search its database, and manage cases. Healthify uses its own cloud-based technology and provides integration support for screening information and referrals.

Michigan Pathways to Better Health developed its data collection, sharing, and reporting system because existing software didn't meet the program's needs. In sharing results with primary care providers, for example, "We face a dilemma: how can we share structured data when there is no field in the EHR to contain information that this person needed housing or had a transportation barrier," says *Clare Tanner*, PhD, program director at the Michigan Public Health Institute.

Cloud-based technology. This is "a more innovative, flexible, agile, cheaper, lighter-weight technology" than most EHRs, says *Joshua Newman* of Salesforce. It facilitates collaboration between health systems and their partners and customers, and makes managing tasks and workflow, and analyzing data, easier.

GIS. This is another type of technology that could be used for this work, but it provides only population-level data. These systems can be integrated with EHRs, say Community Commons' *Christopher Fulcher* and the American Board of Family Medicine's *Robert Phillips*.

Sharing Data Across Sectors

Sharing data across sectors "is the hardest part."—Dora Barilla, HC2 Strategies, Stakeholder Health participant

Sharing SDOH data across sectors and making data actionable is a major challenge involving trust, technical, sector, workflow, and training issues.

Sharing data across sectors requires trust, which can only be built slowly and deliberately. The Camden Coalition of Healthcare Providers collected claims data from partners for 12 years before starting its health information exchange (HIE) for sharing data. This type of "incremental trust building approach" is necessary, says the coalition's *Jeffrey Brenner*.

While SDOH data are not protected health information[6] under HIPAA, there are many myths about what's necessary to comply with the requirements and the field is uneasy about HIPAA and data protection.

"If you follow the letter of HIPAA, you could argue that the specific data points on social needs are not protected health information, but it gets very blurry very quickly." —Kelly

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[6] Information in a medical record that can be used to identify an individual.

Hall, Managing Principal, Transformative Impact, Health Leads

Organizations like Health Leads and Healthify, and medical-legal partnerships, all err on the side of caution in complying with HIPAA and ensuring that their health system and other partners are comfortable with data sharing. All have, however, developed ways to address this challenge.

What Does the Future Hold?

Despite the challenges, people and the literature are generally positive about moving toward widespread collection and use of SDOH data.

The Future is Mostly Bright…

"The SDs are going to be as much a part of regular health care as treating blood pressure." —Robert Corey Waller, Spectrum Health Center for Integrative Medicine

There is interest, momentum, and through provisions of ACA, a strong business case for doing this work. Addressing the social, housing, and other needs of their patients will allow health care systems to allocate resources optimally to improve outcomes and decrease utilization of health care services. More passive forms of data collection, such as information provided by patients through medical devices (e.g., asthma inhalers) and apps on smart phones, will also increase understanding of population-level SDOH.

But It is Tempered with Challenges and the Stakes Will be High

"Health care organizations are now on the hook for making people and populations better. Everybody's struggling with how to do that."—Marsha Regenstein, National Center for Medical-Legal Partnership

There will be conflict among stakeholders and confusion about how best to do this work. Social service, public health and other agencies need to learn how to work with health systems, and vice versa. Health systems need to learn to work with their communities more

effectively, and should expect pressure from community-based organizations to spend more money to address SDOH.

Lack of collaboration and coordination between social services and health care, and resistance from some physicians and health systems will slow down the work. Physicians often don't want to, don't have time to, or don't feel able to collect SDOH data and link patients with social services. Health system staff needs help in understanding the value of this work to achieving health goals. Social service staff and health care staff need help learning how to work together.

EHRs will slow down the work unless they're substantially revamped. They have to help and not hinder capacity to collect and share SDOH data.

> *"Vendors' tend not to focus on SDOH or making people healthier. They tend to respond to customer demand."—Joshua Newman, Salesforce*

HIPAA and related privacy and security concerns will impede cross-sector collaboration. Technologies other than EHRs may emerge as the best way to collect and use SDOH data to improve health.

State Medicaid agencies will need a framework for investing in the collection and use of SDOH data and measures to show whether providers are effectively addressing SDOH. They also lack payment models that provide incentives and resources for health care providers to address SDOH among Medicaid beneficiaries. Political differences that lead some states to focus on accountability and cost and others on coverage and access make standardization of services to Medicaid beneficiaries difficult to implement and evaluate.

Where Can Foundations Have the Most Impact on the Collection and Use of SDOH Data?

> *"If we don't do something and step up to the plate, we're going to have chaos in health care. We need people with great stamina to stand strong, to believe our health system can be better, and to make it happen."—Dora Barilla, HC2 Strategies, Stakeholder Health participant*

The SDOH field needs guidance—standards, tools, best practices, evidence, and more—about how best to do this work.

All of the recommendations below derive from our interviews and research. We identified common perspectives and grouped the recommendations into seven categories. Within these categories, some recommendations came from one person, while others were suggested by up to 12 people. In assessing the ideas, we gave more weight to those from people who are already deeply involved in this work and those backed up by evidence in reports and journal articles.

Each opportunity area starts with a summary of the key points, followed by specific action-oriented recommendations from interviewees.

Opportunity 1: Make the Work Easier by Using a Population-Focused Approach

> *"Within areas of poverty . . . "We're getting to the point where we can do proxies of SDOH." — Robert Corey Waller, Spectrum Center for Integrative Medicine*

Collecting, sharing, and using SDOH data needs to be easy. Supporting work that uses mostly neighborhood-level data to address SDOH (a mostly population-health approach), was mentioned by 12 people, and came across as the strongest opportunity for foundations.[7]

GIS and medical-legal partnerships are two common population-health or mostly population-health approaches.

GIS: A Way to Identify Where to Focus Efforts

Neighborhood-level data that are already available in GIS can provide most of the information needed to address SDOH and identify where to focus efforts, say Spectrum Health's **Robert Corey Waller**, **Robert Phillips** of the American Board of Family Medicine, and others.

> *"Using GIS will become more widespread. It's the common denominator for linking individual to place-based data."— Dora Barilla, HC2 Strategies, Stakeholder Health participant*

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[7] Those interviewed consistently used "neighborhood" as opposed to zip code or county data.

Phillips suggests distilling SDOH into a community vital sign physicians can use to "look for common problems that might lead to common solutions" for a physician's panel of patients. The population-level data would be used in combination with limited additional data collected from individual patients, for example, about stress and physical activity.

GIS also provides much of the information health systems/hospitals, health departments, and others need to develop community health needs assessments or community health assessments.[8]

Community Commons and the American Board of Family Medicine's GIS-based Population Health Assessment Tool warrant further attention. *Christopher Fulcher* of Community Commons is testing a way to include data from EHRs with Community Commons. As the certifying body for family physicians, the American Board of Family Medicine has leverage to encourage physicians to use its tool.

Medical-Legal Partnerships: One Way to Address Individual and Systemic Problems

"More and more, clinical data and population level data need to talk together."—Megan Sandel, National Center for Medical-Legal Partnerships

One example: at Boston Medical Center, the medical-legal partnership added utility shut-off protection letters to the EHR, enabling doctors to send letters to utilities earlier, and for many more patients in much less time. The partnership also helped get a state regulation about utility shut-offs changed so fewer people faced shut off, eliminating the need to send many of the letters.

HealthLeads and the Camden coalition are also working with attorneys to address problems with housing, public benefits, and utilities.

There is much opportunity for medical-legal and other types of partnerships to engage in more population-level work. By using a population health approach, attorneys and other professionals can help many patients in the community with about the same amount of effort needed to help one patient. "We can use data that we already have available to better target interventions instead of creating more bureaucracies," says *Sandel.*

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[8] The ACA requires tax-exempt hospitals to submit community health needs assessments. Public health departments seeking accreditation must submit a community health assessment.

Recommendations to Support a Population-Focused Approach

- **Provide the field with standardized, easy-to-use tools to assess population health.**

  o Support the work of the American Board of Family Medicine, which as a certifying body holds sway over physicians, in developing the Population Health Assessment Tool and then in training physicians in its use. Other groups might be developing analytics to bring SDOH information into clinical settings, however, and the work of those groups could also be explored.

  o Support the Community Commons team to enhance its public good utility which includes GIS, reporting tools, digital storytelling, and access to data.

  o Bring the Community Commons team together with other organizations doing this type of work, such as TRF PolicyMap and *Health* Landscape.[9]

- **Accelerate the work of the more than 40 health systems/hospitals in Stakeholder Health and facilitate the capture and sharing of lessons with the field.** Projects could include:

  o Supporting health systems/hospitals to collaborate in developing *regional* community health needs assessments (CHNAs) rather than individual CHNAs

  o Highlighting models and best practices in regional CHNAs to the field

- **Facilitate the development and evaluation of effective partnership models that engage the legal profession with medical systems to help with social problems.** Projects mentioned include:

  o Create a roadmap for information sharing between health systems/hospitals and the legal community.

  o Explore different models of providing legal help where needed: One model could involve lawyers handling the most severe legal issues and trained case managers, backed up by a lawyer, handling more routine legal needs.

  o Improving data collection and analysis about the impact of legal services by working with the Legal Services Corp., which develops legal data sets, to collect the right data.

Opportunity #2: Give the Field a Home Base

"There needs to be some group connecting and sharing the research in this field."—Laura Gottlieb, University of California, San Francisco

Two people used the term "national home" in making this recommendation, but many people interviewed told us that it's difficult to find information about what's happening in the field, what works and doesn't work, and equally difficult to access tools. They find this information almost by chance.

Funding Recommendation

The "home base" could be a simple clearinghouse or repository, a larger learning community with webinars, annual meetings, and opportunities for people to interact online, or something in between. It could also provide technical assistance and conduct or manage research projects. Possible models for a national home include:

- A ClinicalTrials.gov model in which members would be required to submit information and products about their work online

- HealthBegins, a social network for clinicians focused on SDOH

- Stakeholder Health, which has live meetings and a website with tools and resources, case studies, promising practices, and webinars

Opportunity #3: Provide Guidance: Standards, Metrics, Best Practices, and Tools

*"Build a 21st century framework for data sharing."
—Tom Lewis, MD, Chief Information Officer Primary Care Coalition of Montgomery County*

Ten people suggested investing in work to develop, share, and promote standards, metrics, best practices, and tools for collecting and using SDOH data. Some suggestions are about technology, but most covered a range of topics. "These are all human problems, not technology problems," says Camden Coalition of Healthcare Providers' **Jeffrey Brenner**. These resources could be posted on the national home to promote sharing and exchange.

Develop Standardized SDOH Screening Instruments for EHRs

"If there was a standardized, validated SD screen, it could easily be dropped into EPIC for widespread use."—Robert Corey Waller, Spectrum Health Center for Integrative Medicine

"We don't need big data. We need smart data," says **Dora Barilla** of H2C Strategies and Stakeholder Health. Smart data should include helpful information not only about social determinants in general but also about those determinants within individual racial, economic, and ethnic groups.

In October 2015, the American Academy of Pediatrics issued a statement urging pediatricians to screen all patients for food insecurity and to refer patients to food assistance programs if appropriate. The academy suggested that asking parents just two questions might identify 97 percent of children at risk for going hungry: whether they had worried that food would run out before they could buy more, and whether the groceries they buy last until they had money to buy more.

Recommendations on Providing Guidance to the Field

- **Invest in technology solutions.**

  - Support the development and validation of tools, such as a standardized SDOH screening instrument, in EPIC and other EHRs.

  - Convene EHR vendors and other stakeholders (health systems/hospitals, social service agencies, public health, and medical-legal partnerships) to define standards for interoperability. Focus on making data easily sharable and actionable across sectors, including through apps.

- **Develop guidelines, best practices, and training for collecting, using, and sharing data.**

  - Invest in the development of guidelines for sharing data across sectors to address HIPAA, data protection, and related concerns. Provide training and education on this.

  - Develop guidelines and best practices for public health departments on how to work with health care systems around collecting and using SDOH data. Provide training on this.

- o Develop training for new roles related to SDOH data collection, such as community health workers. Emphasize inter-professional teamwork.

  In order for these trainings to be sustained after the grant period, developers need to own the intellectual property connected to the training programs and be able to charge a fee for providing them.

- o Convene stakeholders to develop standards for deciding where and when to intervene and at what level (e.g., the 5% percent of the population with the most needs, the 15% of the population with some needs, or the 80% of the population that need a little help).

- o Advance consistency in and promote the use of effective models for collecting and utilizing SDOH information by requiring grantees to use best practices and validated tools.

- **Invest in research.**

  There is a role for research in virtually all of the opportunities identified in this report. The field is new and people are generally working separately from one another, so that generating and disseminating evidence is particularly important.

  - o Conduct early qualitative research and usability testing so physicians understand how to collect and use SDOH data.

  - o Study the relationship between neighborhood-level data and individual SDOH—how much are they aligned and in which areas?

  - o Define the roles of new types of health professionals (e.g., community health workers and college student volunteers) and traditional health professionals in collecting and using SDOH data.

  - o Analyze the effectiveness of data collection methods for different racial and ethnic groups, and for people who are not fluent in English.

  - o Conduct a meta-analysis of current work to better understand what's happening in the field.

  - o Study the return on investment in SDOH programs and develop evidence of the financial and health outcomes of addressing SDOH.

  - o Study legal requirements and other concerns about sharing SDOH data. Compare ways to share these data (e.g., business associate agreements, memorandums of understanding, moving SDOH data to a health information exchange).

- o Evaluate the health impacts and health care cost impacts of partnerships between health care providers and systems and social service or other systems.

- **Invest in communications.**

> *"Stories are the way people learn. It's not the data."*
> *—David A. Ross, Public Health Informatics Institute*

- o Establish the value of addressing SDOH through case studies. Tell compelling stories using real people and photos. Develop different products for different audiences.

- o Develop a campaign to educate patients about why they're being asked for SDOH data and how these data are important to their health.

- o Show the business case for addressing SDOH, This is crucial says Salesforce's *Joshua Newman*. "Health care organizations must respond to reimbursement schemas, and when it's in line with their professional ethics or their political or social views, that's a bonus," he says. "They have to get paid. They can't go out of business."

Opportunity #4: Show How to Do this Work: Demonstration and Evaluation Projects

> *"Funding a few demonstration projects . . . so the value of this can be demonstrated is a critical role for a foundation."—Nancy E. Adler, IOM*

Eight people we interviewed suggested funding demonstration projects and evaluating the results of these projects to develop an evidence base. "We need to create versions of what works and evaluate them to figure out the core components that are scalable. Evaluate and then elevate," says *Laura Gottlieb* at the University of California, San Francisco. She also notes that some things won't work for everyone. Lessons learned about what doesn't work are important too, says *Dora Barilla* of H2C Strategies and Stakeholder Health.

Funding Recommendations

- **Support demonstration and evaluation projects to provide models for collecting and acting on SDOH data and for generating evidence about what works best under different circumstances.** Possible projects include:

o Testing the role of community health workers employed by a hospital, health system, or clinic in collecting SDOH data and linking patients to services.

o Comparing different workforce models, such as community health workers, college student volunteers, and seniors in collecting SDOH data and getting them into the health system to improve health.

  • Include models that use promotoras in Latino communities and health ministers trained as community health workers in communities where faith organizations play an important role

o Comparing different screening and data collection methods (e.g., self-screening vs. staff-assisted) and electronic vs. paper and texting, which could work better for some populations.

o Comparing the effectiveness of different types of technology (e.g., EHRs, custom systems, and cloud-based systems) in the collection and use of SDOH data, with a focus on sharing data across sectors

o Comparing initiatives operating in different settings (e.g., health systems/hospitals, accountable care organizations, social service agencies, and public health departments)

o Funding three or four SDOH "laboratories" focused on re-structuring social services and government contracting for these services.

Opportunity #5: Advance the Capacity of Social Services to Work with Health Care Systems in Collecting and Using SDOH Data

"Knowing the supply and demand of needs and referrals can change how we approach the social services sector and how we invest there."—Manik Bhat, Healthify

Five people and two reports[10] offered recommendations related to social services.

Funding Recommendations

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[10] "Leveraging the Social Determinants of Health: What Works?" and "Health Systems Learning Group Monograph".

- **Facilitate the development of databases or repositories of social services resources in a community.**

  o Consider supporting intermediaries to serve as repositories. The intermediary, which could be the local health department, would maintain a validated database of resources. Some United Way branches do this for their communities, Health Leads and Healthify do this for their clients; and Call 2-1-1 offers some of this type of assistance.

- **Support the development of models to assess the social services assets, needs, gaps, and areas of duplication within a community.**

  o Be sure that the entity leading the assessment has the capacity and credibility to do this; at the same time be aware of the tensions that often exist between small community organizations run by residents and volunteers, and the larger, usually more heavily resourced agencies that might not be as representative of the communities they serve.

- **Support efforts to develop standards for assessing the quality of social services.**

  o Collaborate with other funders to develop standards of quality that can be used to guide funding decisions. This will help social service agencies work towards achieving common standards instead of having to meet artificially different standards for different funders.

  o "The social service marketplace is difficult to navigate. It's difficult for funders to assess the quality of proposals and grantees, and it's hard for organizations to distinguish their quality." says *Adam Shyevitch,* principal of programmatic work at Health Leads. "One of the best things a foundation could do would be to convene funders and providers around a shared set of principles for assessing social service grantees," he says.

- **Consider supporting a Health-Grades-like or accreditation program for social services that will enable effective social services to be recognized.**

  o Choose an organization with autonomy and integrity, and one that is not competing for funding, to develop and implement the program in partnership with government

agencies. Similar models include The Joint Commission[11] or the Public Health Accreditation Board.[12]

- o Provide capacity-building support to social service agencies to meet program requirements. Public health accreditation is one model.

- **Build the capacity and leadership of social service agencies so they can provide more effective services in collaboration with the health care sector.**

  - o Support demonstration and evaluation projects that give social service leaders and staff help in building leadership and analytic capacity. Evaluate these projects to develop and share best practices.

  - o Support the upgrading of technology at social service agencies to facilitate efficient service delivery and sharing of SDOH data with health systems/hospitals and others.

- **Develop and share best practices.**

  - o Develop and share best practices for providing social services through the national repository or through a separate learning community. The repository or learning community could include case studies, or could fund social service-health collaborations to adapt best practices.

  - o Consider starting with best practices on services related to housing, WIC and prenatal supports, and food and nutrition programs, where strong evidence exists showing improvements in health outcomes and reductions in health care costs from addressing these concerns.

  - o Use a "pay for success" model to encourage high-quality social services by providing funding and technical assistance for social service agencies providing services with measurable and meaningful outcomes.

    - The University of Utah's Pay for Success model is providing funding and technical assistance to projects that advance and evaluate high-quality social interventions in communities in the Intermountain West for the chronic homelessness, early education, and recidivism.

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[11] The Joint Commission is a not-for-profit organization that accredits and certifies nearly 21,000 health care organizations and programs in the United States.

[12] The Public Health Accreditation Board funded by RWJF and the CDC is a voluntary national accreditation program. Its goal is to improve and protect the health of the public by advancing the quality and performance of Tribal, state, local, and territorial public health departments. See the Program Results Report on the board.

- • *Manik Bhat* of Healthify suggests piloting models using incentive payments to further the work of social service agencies that are doing good work and to spur the growth of new social service agencies to fill unmet needs.

- **Support research and evaluation to build an evidence base for social services.**

  o Evaluate social service interventions and workflows to determine what works best for specific groups of people and situations, and what works best at scale. Healthify already conducts this type of research and evaluation.

  o Build the evidence base and strengthen the social services literature through rigorous studies that document the impact of different services on health and health care cost. RWJF's Practice Based Research Networks might provide a model for the social services field.

- **Facilitate effective collaboration, information exchange, and coordination between social services and health systems.**

  o Develop technology systems to link and share SDOH data. This is unlikely to be EHRs, which do not prompt actions (e.g., to follow up if a patient does not access a service) or offer a feedback loop for social services and health care professionals to communicate about services provided. Explore using care management systems for this.

  o Develop metrics that are aligned with and encourage integration across the social services and health care sectors.

  o Develop best practices for reinforcing the common agenda of social series and health systems/hospitals/providers.

The More About Social Services section of the Learning Compendium includes a discussion of the most commonly needed social services, examples of how Health Leads and Healthify assess the quality of social services, and additional suggestions for funders.

Opportunity #6: Facilitate Multi-Sector Collaborations to Promote Collection and Use of SDOH Data

"Start with a very small group of people and get something done, anything done. Stop rounding up people." — Jeffrey Brenner, Camden Coalition of Healthcare Providers

Making sure SDOH information makes it into the health care system and then results in services to address identified problems requires effective collaborations that go beyond health systems/hospitals and social services. Important partners include public health, community groups (e.g., faith-based organizations), and advocacy organizations. Other partners are legal and housing services, education, law enforcement, business/economic development, and leaders (e.g., foundations and government officials).

Ten people recommended that funders invest in helping collaborators from different sectors work together effectively by identifying and disseminating best collaborative practices, funding the work of strong collaborations, and bringing together multiple collaborations to learn from one another.

Three people also recommended that foundations should partner to promote these collaborations. For information about other funders working to in this area, see the Learning Compendium.

Models of Effective Multi-Sector Collaborations

Current models include multi-sector collaborations led by health systems and those facilitated by a neutral convener.

The **health systems** in Stakeholder Health are building community partnerships with the capacity to bring about measurable health improvement for individuals, communities, and the health systems' bottom line. Health systems have the capital and financial incentives to lead these partnerships, but they must come to the table as trusted partners rather than "the big elephant in the room" says *Dora Barilla* of HC Strategies and Stakeholder Health.

For more information specifically related to collaborations between health systems/hospitals and social service agencies, see the Learning Compendium.

Models such as the Convergence Partnership use a **neutral convener** to guide the work and provide administrative support. This funding collaborative of RWJF and eight other funders centers on shared decision-making and leadership. PolicyLink manages and facilitates the Convergence partnership, with Prevention Institute providing strategic support and The Tides Foundation serving as the fiscal agent.

Paul L. Kuehnert, DNP, RWJF associate vice president, Program, says that all multi-sector collaborations need a backbone organization to facilitate their work. This could be a United Way or YMCA, or a local health department. "Public health historically, and in its best state in current practice, is a natural entity to do that kind of convening and coalition building,"

says Kuehnert. He also notes that some multi-sector collaborations, including RWJF Culture of Health Prize winners, have started a separate entity to facilitate their work.

Work to Engage Community Residents and the Agencies That Best Represent Them

> *"The wisdom of the community in this type of work is priceless."— Dora Barilla, HC2 Strategies Stakeholder Health participant*

An early step in the collaborative process say both **Barilla** and **Kuehnert** is to identify community health needs and assets, including those related to SDOH, and then agree upon priorities to address them.

> *"Work in the community's interest and not as a science experiment to extract data and test a theory."—Silas Buchanan, Chief Executive Officer, Institute for eHealth Equity*

Community health needs assessments are a key too. "There's nothing better than sitting down and looking people in the eye and really understanding each other," says **Barilla**. It's especially important for hospital executives to understand the needs of community members once they leave the hospital and for them to ensure that staff at all levels share this understanding.

> *"We have a better pulse on the community than they [hospitals] do. The medical model works only in the hospital."—Leon Purnell, Men and Families Center,[13] Baltimore.*

Understand Characteristics of Collaborations that Collect, Share, and Use SDOH Data Effectively

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[13] The Men and Families Center works to create safer, more resilient men, women, children and families by supporting them in developing their inner strengths, life skills, parenting skills and networks. Most clients are single parents, grandparents with custody of their grandchildren, re-entry parents or other guardians.

IOM's *Nancy Adler* notes that it would be "extraordinarily effective" to identify the characteristics of collaborations that work and are sustainable. While some knowledge exists about effective multi-sector collaborations, foundations have an opportunity to support the study of what makes them work and promote the development of tools, training, and more to facilitate collaborations that effectively collect, share, and use SDOH data.

Jeffrey Brenner of the Camden Coalition of Healthcare Providers highlights the importance of starting with a small group that works hard to understand and know each other. Early, quick wins that generate momentum are also important. "Shrink down the things you work on to the smallest thing that would be one step forward," he says.

Having collaborators who understand each other and understand their shared roles in collecting and acting on SDOH data is both difficult and key. Guidance in increasing understanding of the perspectives of different sectors could be provided. *Daniel Stein*, MBA, president of Stewards of Change Institute, suggests a center for effective multi-sector collaborations. "The center would bring together the knowledge and learning of places that are doing this work and make it available. It would be able to do the in-depth research necessary to get the evidence that everybody wants," he says.

The Role of Foundations in Multi-Sector Collaborations

A study of global partnerships by Rosenberg et al. in *Real Collaboration: What It Takes for Global Health to Succeed*[14] found that in effective collaborations, the role of donors went beyond funding.

In the most effective collaborations, says Rosenberg, funders provided strategic guidance, which supported local area infrastructure and encouraged collaboration between partners. Rosenberg identified these roles of funders for improved collaboration:

- Modeling collaborative behaviors

- Sponsoring forums to reach consensus on priorities

- Supporting skills development in leadership and management

- Leveraging the grant process to encourage collaboration

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[14] Rosenberg ML, Hayes ES, McIntyre MH, Neill N. *Real Collaboration: What It Takes for Global Health to Succeed*. Berkeley and Los Angeles, CA: University of California Press, 2010.

- Adopting policies to strengthen the support for infrastructure. Including funding for infrastructure (e.g. information technology, analytic staff, and staff development) is necessary for sustainability

Funding Recommendations

- **Support studies of multi-sector collaborations that work with SDOH data.**

  o Fund studies to identify characteristics of effective multi-sector collaborations, such as:

    - Meta-analyses of community collaboration initiatives

    - Analyses of the RWJF Culture of Health Prize communities

  o Develop and disseminate best practices for effective multi-sector collaborations

  o Develop a framework for evaluating multi-sector collaborations that aim to collect and use SDOH data and then begin evaluating collaborations to determine what works. The collaborations in Stakeholder Health offer models that could be evaluated

- **Develop guidance for effective multi-sector collaboration on the collection and use of SDOH data to improve health outcomes**. RWJF's *County Health Rankings & Roadmaps* program, which helps communities identify and implement strategies that make it easier for people to be healthy, offers one model for doing this. Other models are:

  o Establish a center for multi-sector collaboration, which could be a repository for information, a larger learning community with webinars, meetings, and perhaps training, and other opportunities for people to interact online. The center could also provide technical assistance and conduct or manage research projects.

  o Create a toolkit for developing and sustaining multi-sector collaborations focused on SDOH.

  o Develop detailed case studies on how to get work done.

- **Support projects to demonstrate multi-sector collaborations focused on collecting and using SDOH data to improve health outcomes.**

  o Develop premier models of collaboration and coordination between health systems/hospitals and social service agencies by supporting projects that are already working to address SDOH; Health Leads is one such model; there may be others.

- o Support small collaborative projects that let multi-sector collaborations achieve small goals and develop the momentum necessary to engage partners to continue working together.

- o Reward success by sustaining collaborations that work and ending funding to those that don't.

- o Consider collaborating with other funders, perhaps using the Convergence Partnership model. Build accountability into grantmaking related to social services.

- **Identify and work closely with trusted community organizations that can help collect SDOH data.** Include organizations that have the confidence of the racial, ethnic, and cultural groups living in the community.

- **Promote the involvement of community organizations in identifying and executing strategies to collect SDOH data and to deliver services based on the data collected.**

  - o Make sure grantees include community-facing organizations such as churches and local businesses as partners in grant-funded projects from the beginning. Make sure they are engaged in designing and overseeing projects and provide them with regular feedback and results. Develop ways to reward and recognize them for their contributions.

- **Be aware of opportunities to work with churches or other faith organizations to promote or assist in collecting SDOH data or following-up with referrals for services**.

  - o Explore the development and enhancement of health ministers and health ministries, and the use of health ministers as community health workers.

    - OurHealthMinistry.com, a "culturally specific Web-based health information resource" designed to "help church-based health ministries more effectively reach, engage, and empower communities of color" is one vehicle for doing this.

    - Consider supporting training for health ministers as community health workers and provide churches with technology, including care coordination programs, to facilitate their work.

Opportunity #7: Work With State Medicaid Agencies to Develop a Framework for Addressing SDOH Among Medicaid Beneficiaries

Some state Medicaid programs (including Michigan and Oregon) are using SDOH data, primarily population-level data. Some Medicaid managed care plans are using Healthify. Medicaid and budget officers need assistance in taking stronger leadership roles in setting coverage policies and incorporating non-health services into their reimbursement formulas and health outcome reporting systems.

The different state politics and policies, traditions, and values must be considered in developing a framework or model for this work. While all states want to improve the health status of their citizens, they differ in their beliefs in how to do that. States with more conservative traditions, for example, may emphasize strategies to contain costs and achieve specified outcomes. States with more liberal traditions may focus on strategies that increase coverage and access to services.

Only one person specifically recommended working with Medicaid agencies. We include this recommendation, however, because Medicaid plays an essential role in setting program and financing policies related to SDOH.

Funding Recommendations

- **Help state Medicaid agencies develop a framework for making strategic investments in the collection and use of SDOH data.**

    o Develop measures of whether Medicaid providers are effectively addressing SDOH.

    o Support the development of payment models tied to the risks of dealing with the Medicaid population. This includes risk adjustment mechanisms that incorporate SDOH data so that Medicaid rates and payment levels will be more attuned to these beneficiaries and give the providers and health plans the resources to serve them.

Conclusion

Addressing SDOH through the collection of SDOH data and providing it to health care system providers, and through bolstering the social service agencies that can address SDOH, can improve the health of individuals and communities and is a key part of building a Culture of Health. Changes in the health care landscape have created interest in collecting and using SDOH data and generated momentum and many good ideas.

Yet, the collection and use of social determinants of health data by the health and health care sectors is an emerging field and the people and organizations working to improve individual and community health by addressing SDOH need help. The field needs national leadership and guidance.

Learning Compendium

Key Resources

General Resources

Bachrach D, Pfister H, Wallis K, and Lipson M. *Addressing Patients' Social Needs: An Emerging Business Case for Provider Investment.* New York, NY: The Commonwealth Fund, 2014. Available at http://www.commonwealthfund.org/publications/fund-reports/2014/may/addressing-patients-social-needs. Funded by The Commonwealth Fund, Skoll Foundation, and Pershing Square Foundation, this report covers the economic rationale for investing in social interventions and strategies to meet patients' social needs.

Crossley M, Tyler ET, Herbst JL, "Tax-Exempt Hospitals and Community Health Under the Affordable Care Act: Identifying and Addressing Unmet Legal Needs as Social Determinants of Health," *Public Health Reports,* Washington: George Washington University Milken Institute School of Public Health. Vol. 131, 2016. Available at *http://www.publichealthreports.org/userfiles/PHR131-1_Law.pdf.* This article reviews recently promulgated IRS regulations for nonprofit hospitals seeking tax exemption and a new estimate of national hospital community benefit spending, and analyzes how they point to the value of hospitals working with community partners to address the social determinants of health.

Health Systems Learning Group Monograph. Washington: Health Systems Learning Group, 2013. Available at http://stakeholderhealth.org/wp-content/uploads/2013/09/HSLG-V11.pdf. The Health Systems Learning Group, now Stakeholder Health, is made up of more than 40 organizations (including 36 non-profit health systems) working together to develop transformative community partnerships to improve individual and community health—and the bottom line for health systems. The report includes recommendations for transformative community partnerships and many brief case studies of work being done.

Taylor LA, Coyle CE, Ndumele C, Rogan E, Canavan M, Curry L, and Bradley EH. *Leveraging the Social Determinants of Health: What Works?* Boston, Mass: Blue Cross Blue Shield of Massachusetts Foundation, 2015. Available at http://bluecrossfoundation.org/publication/leveraging-social-determinants-health-what-works. Written by Yale Global Health Leadership Institute and supported by Blue Cross Blue Shield of Massachusetts Foundation, this report evaluates and summarizes the evidence base for interventions that address SDOH. While it pays special attention to models that may be applicable in the Massachusetts policy context, much of the report is widely applicable.

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Gottlieb L, Tirozzi KJ, Manchanda R, Burns AR, and Sandel MT. "Moving Electronic Medical Records Upstream." *American Journal of Preventive Medicine*. 48(2): 215–218, 2014. Abstract available at www.ajpmonline.org/article/S0749-3797(14)00375-4/abstract?cc=y=. Full article available from RWJF Information Center. Article illustrates the feasibility of collecting SDOH data in EHRs.

Vital Signs: Core Metrics for Health and Health Care Progress. Washington: National Academies of Medicine, 2015. Abstract and full report available at http://iom.nationalacademies.org/Reports/2015/Vital-Signs-Core-Metrics.aspx. An IOM committee proposes a set of 15 standardized measures, with recommendations for their application at every level and across sectors—in order to "provide consistent benchmarks for health progress across the nation and improve system performance in the highest-priority areas."

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American Board of Family Medicine Population Health Assessment Tool

Phillips R. "ABFM to Simplify Maintenance of Certification (MOC) for Family Physicians and Make it More Meaningful: A Family Medicine Registry," *Journal of the American Board of Family Medicine*. 10.3122: 431-433, 2015. Available at: http://www.jabfm.org/content/28/3/431.full.pdf+html.

Cincinnati Child Health-Law Partnership

Beck AF, Klein MD, Schaffzin JK, Tallent V, Gillam M, and Kahn RS. "Identifying and Treating a Substandard Housing Cluster Using a Medical-Legal Partnership." Pediatrics. 130(5) 831-837, 2012. Available at: http://pediatrics.aappublications.org/content/130/5/831.full.pdf+html?sid=a265e632-a86d-401b-a50a-a9c34ec59f2f. Article describes how a medical-legal partnership identified and improved substandard housing by collaborating with clinicians, lawyers, community partners and families.

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"Doctors and Lawyers Collaborating to HeLP Children—Outcomes from a Successful Partnership between Professions." *Journal of Health Care for the Poor and Underserved*. 24:1063-1073, 2013. Available at http://medical-legalpartnership.org/wp-content/uploads/2014/03/Doctors-and-Lawyers-Collaborating-to-HeLP-Children—Outcomes-from-a-Successful-Partnership-between-Professions.pdf. Case study on implementing the Cincinnati Child Health-Law Partnership.

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of-
health/2015/08/patient_and_citizen.html?rid=daroNVDVUoEAfqyPF3sQjDJyKyo0Yz46&et
_cid=330525.

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"Data Across Sectors for Health (DASH): Early Learnings from an Emerging Field".
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September 2015. Executive Summary available at: http://dashconnect.org/wp-
content/uploads/2016/03/DASH-Environmental-Scan-Executive-Summary.pdf

 "Examining clinical interventions to address social determinants of health and improving
research and evaluation to benchmark future work," by Laura Gottlieb (Grant ID# 72199;
November 2014 to April 2016)

Kaiser Permanente and W.K. Kellogg Foundation project to learn more from other
grantmakers about leveraging technology for population health data.

Resources: Where Can Foundations Have the Most Impact on the Collection and Use of SDOH Data

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Latinos*. Fresno, CA: Central Valley Health Policy Institute, 2009. Available at:
http://www.fresnostate.edu/chhs/cvhpi/documents/exec-summary-english-final.pdf.

Rosenberg ML, Hayes ES, McIntyre MH, Neill N. *Real Collaboration: What It Takes for
Global Health to Succeed*. Berkeley and Los Angeles, CA: University of California Press,
2010. Covers challenges affecting collaboration, insights from case studies, and a toolkit for
successful collaboration.

Establishing a National Public Health Accreditation Organization. RWJF Program Results
Report. A report on how RWJF and CDC supported the establishment of the Public Health
Accreditation Board and support provided to public health departments in preparing for
accreditation. Available at http://www.rwjf.org/en/library/research/2015/05/establishing-a-
national-public-health-accreditation-organization.html.

Examples of Programs That Collect and Use SDOH Data, With A Few Sidebar Stories

Broad Patient-Level Programs

Bay Area Regional Help Desk Consortium

Website: http://www.bayareahelpdesks.org
Contact: Laura Gottlieb, MD, MPH: Laura.Gottlieb@ucsf.edu

Summary

This collaboration between health systems, universities, a public health department, and social service agencies in the San Francisco Bay Area reflects the work being done at three Bay Area health systems to screen low-income patients for social service needs and connect them with local resources. Like Health Leads, each site uses student volunteers to screen patients and refer them to resources, including on-site social work and legal aid. Hospitals use their own technology, but are exploring a shared custom platform across sites.

Highlights

- Three hospitals in San Francisco Bay Area work together to improve efficiency, reduce cost, spread innovation, deepen evaluation capacity, assure sustainability, and increase influence with payers and policymakers.

- A randomized controlled trial evaluating the effectiveness of this model is underway; results should be available in mid-2016.

- The hospitals are not using EHRs for tracking data because the necessary EHR modifications were too complex.

Collection of SDOH Data

- Technology: Custom

- Data collector: Student volunteers

- Data collection method: Varies by hospital, but staff assisted at most hospitals. Volunteers enter data into a laptop

SIDEBAR

Bay Area Regional Help Desk Consortium

A Broad-Level, Three-Health System Program

In 2012, the Bay Area Regional Help Desk Consortium brought together hospitals in the San Francisco Bay Area that were addressing the social and legal challenges of low-income patients. The consortium involves three health systems, four universities, a public health department, and social service providers in the San Francisco Bay Area.

 "It seemed ridiculous that we weren't doing it in concert or collaboration. Everybody was recreating their own wheel," says **Laura Gottlieb**, MD, MPH, one of the consortium's founders.

A Help Desk Model Helps Patients Get Social Services

All hospitals use a Help Desk model to identify the patient's social needs and to connect the patient with relevant resources, including on-site social work and legal aid. The model is similar to Health Leads, says **Gottlieb**, though each site has slightly different relationships with behavioral health teams and legal service providers.

Student volunteers collect patient data on SDOH and enter them electronically (usually into a laptop). Then they work as needed with social workers and legal aid partners on tasks such as applying for or appealing denials of public benefits; connecting patients with health care providers or affordable childcare; and locating other relevant community resources. At each site, Help Desk volunteers follow-up with patients by telephone regularly to help ensure that their needs are being met.

Partners Fund Services, Train Students, and Participate in Evaluation

Some of the work has been funded through grants, but for the most part, the hospitals absorb the costs. At Highland Hospital, Alameda County pays for the program. "Each site is more or less cobble-stoning funding from lots of different sources," says **Gottlieb**.

The hospitals collectively recruit and train students. They share what they are learning through monthly meetings, including around evaluation tools, technology, and program funding. One example of sharing innovation is a new technology platform developed by UCSF-Benioff Children's Hospital Oakland that will be shared with the other hospitals. The hospitals are not using EHRs because they found it too complicated to modify them for evaluation activities.

Gottlieb is conducting a randomized controlled trial with partners at Zuckerberg San Francisco General Hospital and UCSF-Benioff Children's Hospital Oakland evaluating the effectiveness of this model. She expects to have results in mid-2016.

> EHRs might be a good way to collect and use SDOH data to improve health, says **Gottlieb**, but making the data actionable is complex and requires significant initial and ongoing investment. As an example, an EHR could be programmed to automatically print discharge information about food resources to any patient who was noted to be food insecure.

Esther Network (Sweden)

Website: http://plus.rjl.se/index.jsf?nodeId=31383&nodeType=12
Contact: Nicoline Vackerberg: nicoline.vackerberg@rjl.se

Summary

Creating the persona of "Esther", a reasonably self-sufficient 88-year-old with some chronic health issues, the Esther Network integrates health and social services for older adults in Jönköping County, Sweden. The program focuses on doing what is "Best for Esther" and on continual quality improvement. Patients (the "real Esthers") participate fully in care and improvement decisions. The Esther Network uses EHRs and shares information between health and social services through the Meddix system; the two systems are not linked.

Highlights

- Esther's needs can be assessed at hospital discharge or at home.

- The Esther Network has reduced hospital admissions (30% decline from 1998 to 2013) and reduced costs reductions (roughly $1 million a year from 2002 to 2013).

- Leaders insist on formal, routinized teamwork among health and social care providers. About 150 Esther coaches work with teams on helping patients and quality improvement.

- Every six weeks, Esther Cafes bring together patients (discharged from the hospital within the last year and who still use home services) and health care and social service providers to identify opportunities for improvement.

- Being part of the Esther Network increases understanding of the challenges in integrating health and social care for "Esther" by having nurses, doctors, and other health workers from the hospital shadow fellow social workers and nurses in home care services, and vice versa.

- The Esther Network is one of two international teams that participated in the RWJF national program Pursuing Perfection.[15]

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[15] For further information on this program, see the Program Results Report at http://www.rwjf.org/en/library/research/2011/12/pursuing-perfection.html.

Collection of SDOH Data

- Technology: EHR and custom system

- Data collector: Care planning team (social worker, nurses, therapists)

- Data collection method: Staff assisted

Health Leads

RWJF Grant IDs 69371, 71495, 71495 and 71496
Website: https://healthleadsusa.org
Contact: Kelly Hall: khall@healthleadsusa.org

Summary

Health Leads enables healthcare providers to prescribe basic resources like food and heat just as they do medication and refer patients to the Health Leads program just as they do any other specialty. College advocates use Health Leads Reach™, Health Leads' resource database and case management system, to fill these prescriptions by working side by side with patients to connect them with the basic resources they need to be healthy.

Starting in 2014 and going forward, Health Leads instituted significant changes in its strategy, with the goal of scaling the approach and providing expert guidance to others:

In a "Grow and Catalyze Strategy," Health Leads seeks to:

- Innovate and scale the model by partnering with leading health systems to address patients' social needs as a standard of care using an array of products and services, and creating evidence and examples

- Offer direct access solutions by rapidly disseminating tools and insights to 300 to 500 institutions, using Health Leads-hosted learning collaboratives

- Have a transformative impact by cultivating the context necessary to make resources connections the "new normal", which it is doing by convening health system leaders, solidifying the business case, and engaging key health sector actors to enable this approach to care

Highlights

- The program has been especially effective for patients who have been unable to get services on their own.

- Health Leads uses HIPAA business associate agreements to exchange data with health care partners.

- An evaluation of 416 patients enrolled in Health Leads at two academic primary care practices found clinically meaningful improvements in blood pressure and cholesterol.

Collection of SDOH Data

- Technology: Custom

- Data collector: College student volunteers

- Data collection method: Step 1: Patient self-report on paper form. Step 2: For patients who need social supports and public benefits Health Leads volunteer collects more data and enters into custom system. If clinic has a social needs field in an EHR, information from paper form is added to the EHR.

Healthify

Website: https://www.healthify.us
Contact: Manik Bhat: manik@healthify.us

Summary

Healthify's web platform helps its clients—managed care plans and integrated delivery networks—find social and behavioral health services in a community, connect members to resources, automate referrals, integrate information, and track progress in a population. Healthify develops a resource database of social, medical, and behavioral health services in each community where it works.

Screening for services can be done by staff or by self-report, whichever the client chooses. . Healthify's algorithm matches services to each person's needs and clients can also use the system to coordinate referrals and close the loop for a need.

Highlights

- Data can be integrated with EHR care management system modules, but more than integration into EHR is needed to make data useful.

- Data from Healthify's system can be used in many ways to improve social services:

  o Identify gaps between needed and available services.

  o Identify best practices: Which services work for which types of populations and which services work best.

- Evaluation studies are underway, including randomized controlled trial with Village Care and Project Connect in Baltimore. Laying groundwork for more evaluation.

- Healthify developed a user-friendly, engaging technology, based largely on user feedback and testing.

Collection of SDOH Data

- Technology: Custom

- Data collector: Care managers and community health workers

- Data collection method: Staff assisted or patient self report (client's choice), using Healthify's electronic screening instrument

Targeted Patient-Level Programs

Camden Coalition of Healthcare Providers

RWJF Grant IDs 56562, 62061, and 69124

Website: http://www.camdenhealth.org
Contact: Jeffrey Brenner, MD: jeff@camdenhealth.org

Summary

This citywide coalition of hospitals, community representatives, and primary care, behavioral health, social service, and housing providers reaches out to frequent utilizers of the city's emergency departments and hospitals to connect them with primary and specialty care and social services such as government benefits and temporary shelter. A nurse or social worker collects social and medical data from patients using standard and custom instruments. The coalition uses an online database (TrackVia) for collecting SDOH data and a health information exchange to share data.

Highlights

- The coalition developed a Health Information Exchange to share data and grew it slowly and incrementally to build trust.

- The coalition members see strong gaps in social services capacity and a strong need for training, technical assistance, and capacity building in that sector.

- The coalition has found evidence for helping people with complex health needs with housing first, showing that this can reduce hospitalizations and health care costs.

- A randomized controlled trial with health economists at Massachusetts Institute of Technology is underway.

- Simple technology can be used to address SDOH ("Desktop software can handle enormous data files and complex analyses" says *Jeffrey Brenner*, **MD,** executive director of the coalition).

Collection of SDOH Data

- Technology:

  o Online database (TrackVia)

  o Health Information Exchange for sharing clinical data

- Data collector: Nurse or social worker

- Data collection method: Staff assisted using standard and custom instruments and entered into the computer

Johns Hopkins Community Health Partnership

Website: http://www.hopkinsmedicine.org/community_health_partnership/

Contact: We did not interview anyone here. Joshua Newman at Salesforce told us about this program: jnewman@salesforce

Summary

This program serves adults in one of Baltimore's poorest neighborhoods, focusing on those with chronic conditions, substance dependency or mental illness, and adult patients discharged from Hopkins facilities. Health care teams include nurse educators, nurse transition guides, physicians, case managers, pharmacists, health behavior specialists, and community health workers. Community health workers or case managers collect data in the patient's home and enter them into a tablet.

Highlights

- The program uses Salesforce CRM (cloud-based system) to share data and deliver a coordinated care model.

- The program seeks to improve care and accountability for the total cost of care for both care teams and patients.

- It is funded by a $19.9 million, three-year grant from CMS.

Collection of SDOH Data

- Technology: Cloud (Salesforce).

- Data collector: Community health worker or case manager,

- Data collection method: Staff assisted and entered into the computer.

Michigan Pathways to Better Health

Website: https://www.mphi.org/projects/michigan-pathways-to-better-health/

Contact: Clare Tanner, PhD: ctanner@mphi.org

Summary

The Michigan Public Health Institute and the Michigan Department of Health and Human Services collaborate with community agencies in this program for adults with two or more chronic conditions living in three Michigan counties. Community health workers screen beneficiaries to determine their needs, and then provide or coordinate services for them. Program staff in Michigan developed custom technology for this project.

Highlights

- Pathways integrates health and social services for adults with two or more chronic conditions who are enrolled in or eligible for Medicaid and/or Medicare in three Michigan counties**.**

- The project is a collaboration between public health and community agencies.

- Community health workers provide services to program participants.

Collection of SDOH Data

- Technology: Custom

- Data collector: Community health workers (CHWs)

- Data collection method: Staff assisted

SIDEBAR

Michigan Pathways to Better Health: CHW Led Program Integrates Social and Medical Services

A Medicaid and Medicare Program

This program of the Michigan Public Health Institute and the Michigan Department of Health and Human Services integrates health and social services for adults with two or more chronic conditions in three Michigan counties. Pathways served over 7,000 cumulative unique clients from January 2012 to June 2015 with an award from the Centers for Medicare & Medicaid Services' (CMS), Center for Medicare & Medicaid Innovation (CMMI). In each participating county, one organization serves as a hub for linking participants with the services they need through referral to a care coordinating agency. The program has continued with other funding.

Community Health Workers Identify Needs and Coordinate Care

Community health workers (CHWs) hired by the care coordination agencies work with participants, including meeting them in their homes, and then provide or coordinate services with staff from other agencies. Using an electronic checklist, the CHW identifies each participant's health and social service needs. The checklist triggers suggested pathways—structured processes—to define and resolve each need.

The participant and the CHW decide together which pathways to pursue. "It's a person-centered approach, done in communication with where the clients feel they are," says **Clare Tanner**, PhD, a program director at the Michigan Public Health Institute and evaluator of Michigan Pathways to Better Health. Each pathway is tracked to completion and to a measurable outcome, such as when the participant receives the service.

Partners Collaborate to Overcome Technology Barriers

Program partners tried to buy existing software for the pathways project, but ended up designing a custom data collection system. The system supports the workflow of the CHWs and the workflow of the hubs. The system can be accessed while in the home via tablets so prior information is available for review and charting is at the point of contact. It has some reporting and feedback capacity, such as sending outcomes reports to primary care providers and case managers

To share the reports, the team developed a PDF format, which is sent by secure email or fax. "We face a dilemma: how can we share structured data when there is no field in the EHR to contain information that this person needed housing or had a transportation barrier," says **Tanner**.

Data Demonstrates Results and Leads to Policy and Practice Changes

The top needs identified through the Pathways program were housing (39.6%), dental care (39.3%), transportation (38.4%), and food (31%). CHWs linked 653 participants to dental care. For social services, community health workers linked:

- 1,329 participants to food assistance programs or WIC
- 1,270 participants to transportation
- 741 participants to housing

Tanner's evaluation found an immediate effect on the "super utilizers" of health care services, the program's target population. "Utilization starts to go down upon referral to Pathways," says Tanner. The cost trends are promising, but more data are needed. Participant satisfaction with the program was high.

The counties also used their data to impact policy. In Muskegon County, for example, program staff used data showing that people had difficulty getting to health care providers to get a bus route changed.

To reduce unnecessary emergency department visits via ambulance, community health workers in one county ride along with paramedics responding to calls from people who regularly call for an ambulance. Community health workers build relationships with these participants, and help them get the health care services they need to avoid going to the emergency department.

The Michigan Pathways to Better Health initiative continues, but was scaled back after the original CMS award period ended. As of fall 2015, the program is funded through a no-cost extension until June 30, 2016, along with funds from Michigan health systems and public agencies.[16]

Oregon Coordinated Care Organizations for Medicaid

Website: http://www.oregon.gov/oha/ohpb/pages/health-reform/certification/index.aspx

Contact: We did not interview anyone from Oregon. *Tricia McGinnis*, MPP, MPH, and colleagues at the Center for Health Care Strategies, Inc. told us about this program: tmcginnis@chcs.org.[17]

Summary

Oregon has moved its entire Medicaid program into a system of regional Coordinated Care Organizations (CCOs), which are similar to ACOs, but are paid with a global budget and are

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[16] The project described was supported by Grant Number C1CMS331025 from the Department of Health and Human Services, Centers for Medicare & Medicaid Services. The contents of this Learning Report are solely the responsibility of the authors and do not necessarily represent the official views of the U.S. Department of Health and Human Services or any of its agencies.

[17] Some details were provided via email by Beth Sorenson (beth@healthshareoregon.org) based on a consultation with the chief medical officer of HealthShare Oregon (a large CCO).

rewarded for measurable outcomes. The CCOs receive an integrated, global budget to cover medical, mental health, addiction, oral health, and social services for their Medicaid members. CCOs are incentivized to keep costs down due to fixed annual rates of growth in their global budgets. They are also incentivized to maintain or improve quality of care through either a quality pool of funding—or a withhold of funding from their global budget—that they can earn back if they achieve outcomes related to certain clinical and population-health metrics.

Highlights

- CCOs serve approximately 90 percent of the Medicaid population in the state through 16 regional organizations.

- The mid-year performance report for Oregon's CCOs from July 1, 2014 through June 30, 2015,[18] published in January 2016, noted the following results:

   o Emergency department utilization decreased 23 percent since baseline in 2011.

   o Decreased hospital admissions for short-term complications from diabetes. The rate of adult patients (ages 18 and older) with diabetes who had a hospital stay because of a short-term problem from their disease dropped by 32 percent since 2011 baseline data.

   o Decreased rate of hospital admissions for chronic obstructive pulmonary disease. The rate of adult patients (ages 40 and older) who had a hospital stay because of chronic obstructive pulmonary disease or asthma decreased by 68 percent since 2011 baseline data.

   o Patient-Centered Primary Care Home (PCPCH) enrollment continues to increase. Coordinated care organizations continue to increase the proportion of members enrolled in patient-centered primary care homes—indicating continued momentum even with the increase in members added since January 1, 2014. PCPCH enrollment has increased 61 percent since 2012.

Collection of SDOH Data

- Technology: Varies across CCOs, but incentives are provided to use EHRs

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[18] The report, *Oregon's Health System Transformation: CCO Metrics 2015 Mid-Year Update*, is available online at http://www.oregon.gov/oha/Metrics/Documents/2015%20Mid-Year%20Report%20-%20Jan%202016.pdf.

- Data collector: Determined by each CCO

- Data collection method: Usually staff assisted

Spectrum Center for Integrative Medicine

Website: http://www.shmg.org/cim
Contact: Robert Corey Waller, MD: corey.waller@spectrumhealth.org

Summary

The center is part of Spectrum Health, a health system in Michigan that includes a medical group, 12 hospitals, and a payer. It focuses on high-frequency emergency department and hospital patients and patients using controlled substances. Most patients have psychiatric and substance use disorders.

The program provides enhanced medical management, aggressive social services, and intensive psychiatric evaluation and treatment. The team includes staff members from the community mental health authority, who work on-site. The doctor or therapist collects SDOH data using standard instruments and enters the data into the EPIC EHR system.

Highlights

- The project uses EPIC for SDOH data. Staff worked with the EPIC team to develop notes and is working on developing daily dashboard reports through EPIC.

- The initial evaluation of first 100 patients found: Decreased utilization by 65 percent in Year 1 within Spectrum health system and 72 percent in Year 2.

- Priority Health, the payer that's part of the health system, helps support the program because it reduces utilization and costs.

- The county community mental health organization (Network 180) is integrated into the program; its staff work onsite.

Collection of SDOH Data

- Technology: EHR (EPIC)

- Data collector: Doctor or therapist

- Data collection method: Staff assisted, using standard instruments and entered into EPIC

Population-Level Approaches

American Board of Family Medicine Population Health Assessment Tool

Website: NA
Contact: Robert Phillips, MD, MSPH: bphillips@theabfm.org

Summary

The Population Health Assessment Tool builds on the UDS Mapper and its SDOH tools developed for community health centers. The American Board of Family Medicine is adapting it for family physicians nationwide by 2016 or 2017. Based on a GIS, the tool will help physicians define their clinical service area, look at disease and quality clusters, use SDOH data to develop community vital signs that serve to estimate patient and neighborhood risk, to identify potential partners for community interventions, and to adjust patient quality measures or even payments. This latter function may help clinicians in underserved areas get more resources to deal with SDOH.

The Population Health Assessment Tool will be integrated with data from EHRs and will include ways for physicians to address SDOH (e.g., links to the local YMCA for exercise) and to refer patients with complex needs to a social worker (within or external to the practice). The tool will be part of a family medicine registry to simplify maintenance of certification.

Highlights

- As the certifying body for family physicians, the American Board of Family Medicine will have leverage in encouraging physicians to adopt the Population Health Assessment Tool.

- The Population Health Assessment Tool will be integrated with EHRs.

Collection of SDOH Data

- Technology: GIS; can be integrated with EHRs

- Data collector: NA

- Data collection method: Public sources (e.g., Census Bureau and American Community Survey)

Cincinnati Child Health-Law Partnership

Website: http://www.cincinnatichildrens.org/service/g/gen-pediatrics/services/child-help/?WT.mc_id=101029&utm_campaign=Gen-Community-Pediatrics&utm_content=Cincinnati-Child-Health-Law-Partnership&utm_medium=Web-Print&utm_source=Multiple

Contact: We did not interview anyone here. *Ellen Lawton* (ellatwon@gwu.edu) and colleagues at the National Center for Medical-Legal Partnership told us about the Cincinnati project.

Summary

This is a partnership between Cincinnati Children's Hospital Medical Center and three legal aid organizations in the Cincinnati area. Doctors and social workers screen families visiting the hospital clinic to identify problems that can be helped through legal assistance—hunger, poor housing, domestic violence and inadequate special education services. Once problems are identified, patients are referred to Child HeLP for assistance in resolving them. Ninety percent of families are on Medicaid.

Highlights

* Families can meet with Legal Aid staff on-site at Cincinnati Children's primary care centers.

* The project works at the individual and population level, and has combined health and housing data to help children with asthma living in 16 buildings.

* Referrals to legal staff are made through EHRs, and the lawyer updates the referring doctor or social worker about the legal services provided.

Collection of SDOH Data

* Technology: EHR

* Data collector: Primary care physicians, including interns and residents, or social workers

* Data collection method: Staff assisted, using standard instruments and entered into an EHR

SIDEBAR

Cincinnati Child Health-Law Partnership

A Medical-Legal Partnership Combining Patient- and Population-Level Work

Since 2008, the Cincinnati Child Health-Law Partnership (ChildHeLP) has been helping families live healthier lives by solving legal and social problems. ChildHeLP is a medical-legal partnership between the Cincinnati Children's primary care centers, which serve 25,000 children, 90 percent of whom are on Medicaid, and legal assistance organizations in the Cincinnati area.

Doctors and social workers screen families visiting the primary care centers to identify problems that can be helped through legal assistance, such as insect infestation and other poor housing conditions and hunger. With parental permission, the doctor or social worker refers the family to Child HeLP via an entry in an EHR. Families can meet with an attorney or paralegal at a Child HeLP office located on-site at a clinic five days a week. The legal assistance staff member keeps the doctor or social worker informed about what happened so he/she can follow up with the family during subsequent clinic visits.

As part of training for the program, physicians tour a job and family services agency and a food bank. They meet with staff, observe the services, and participate in discussions on issues such as budgeting, domestic violence, housing, and education.

ChildHeLP Connects the Dots Between Individual and Population Health

Medical-legal partnerships like ChildHeLP can assist individual patients and families and also work at a population-health level. Asthma is one example. "We understand really well from public health data who has asthma, and clinically, we collect good data about asthma. But we don't always connect the dots between an ER visit for asthma and where the patient lives," says **Megan Sandel**, MD, MPH, medical director at the National Center for Medical-Legal Partnership at George Washington University.

Legal staff at ChildHeLP did connect those dots, and found that 16 families (with 45 children) had health and housing problems—including insect infestation, leaky ceilings, and mold—from 19 buildings owned by a single absentee landlord. More than a third of the children had asthma.

The Cincinnati health and building departments had cited all of the buildings for code violations but the owner had not made the necessary repairs. Legal Aid lawyers worked with the building department to help identify code violations in these buildings and to reissue orders for repairs. Lawyers also helped residents form a tenants' association, and worked with them to identify and prioritize repairs.

As a result, significant repairs were made to 11 of the 16 buildings, including a new roof, integrated pest management, and improved electrical systems. Since then, fewer children with asthma have had to go to the emergency department for care.

This is one example, says **Sandel**, of how medical-legal partnerships can bring clinical and population level data together, and use data analytics to better target interventions.

Community Commons

RWJF Grant IDs 65811, 66742, 66745, 67785, 68299, 68303, 69998, and 70839
Website: http://www.communitycommons.org
Contact: Christopher Fulcher, PhD: fulcherc@missouri.edu

Summary

The Childhood Obesity Geographic Information System (COGIS) is part of Community Commons, a global mapping system with population-level data that has reporting, collaboration, networking, and storytelling tools. It also includes socio-economic, demographic, health, education, political, and environmental data for all counties in U.S., with some sub-county data. Users can add local and regional data and can get county or ZIP code-level reports on 115 indicators, including health and SDOH, with comparisons to the state and the nation.

Highlights

- Community Commons can integrate population-level GIS data with patient data in EHRs.

- It offers users technical assistance in adding local data.

- It uses digital storytelling, linked to maps and reports, to engage people.

Collection of SDOH Data

- Technology: GIS, which can be integrated with EHRs

- Data collector: NA

- Data collection method: Many public, mostly federal, sources including Census Bureau and American Community Survey

Loma Linda University's Healthy Communities Movement

Website: Case study: Healthy Communities Movement: http://stakeholderhealth.org/loma-linda-university-health/
Contact: Dora Barilla, DrPH: dorabarilla@hc2strategies.com

Summary

Healthy Communities Movement is a partnership in California between Loma Linda University and San Bernardino and Riverside counties, both of which are home to recent Latino immigrants, who have some of the worst health outcomes in the state.

Local governments (primary partners), universities, school districts, health care providers, non-profit organizations, and the business sector are working to develop a common data platform that will use GIS and a database of tools and analytics to enable common goals and tracking of measures.

Highlights

- Hospitals in the region are working on a regional community health needs assessment.

- Loma Linda University Health works with faith communities.

- Kaiser Permanente has invested in some of this work.

Collection of SDOH Data

- Technology: GIS and EHRs

- Data collector: NA

- Data collection method: GIS from public sources and aggregate health system data

Stakeholder Health

RWJF Grant ID 70199 (to Methodist LeBonheur Healthcare for the Health Systems Learning Group, former name for Stakeholder Health)
Website: http://stakeholderhealth.org
Contact: Gary Gunderson: ggunders@wakehealth.edu

Summary

Stakeholder Health (formerly Health Systems Learning Group) is a learning collaborative of more than 40 health systems. Participating systems focus on partnerships between health systems and communities to improve population health and "take innovation to scale."

Much of this work combines broad and targeted patient-level work within a population health approach. Hospitals use community data and aggregated hospital data to analyze the health of their communities and design programs.

Given the immense challenges of addressing SDOH, most systems in Stakeholder Health are choosing a specific area of focus or population. For example, Advocate HealthCare in Chicago chose to focus on hunger and Nemours in Delaware on housing. Methodist LeBonheur's Congregational Health Network, is working with more than 500 African-American congregations in Memphis, Tenn.

Highlights

- Stakeholder Health involves hospital systems located across the country.

- Member health systems are working to integrate patient –and population-level health.

- Participating health systems choose different issues of focus, generating a diverse set of programs and interventions.

- The core investing partner health systems contribute $12,000 to participate.

Collection of SDOH Data

- Participating health systems determine what works for them. Stakeholder Health has no employees.

More About Social Services

The Most Commonly Needed Services: Housing and Food

The two most commonly needed social services identified are help with housing (#1) and food (#2). Here are examples of projects that provide this assistance.

Housing First

The Housing First model for medically complex homeless patients is "the only model that works," says *Jeffrey Brenner* of the Camden Coalition of Healthcare Providers. The Housing First model involves providing supportive housing to adults who are homeless and who have mental and behavioral health conditions without requiring them to stop using drugs and alcohol.[19]

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[19] RWJF has supported this model with grants to the Corporation for Supportive Housing. See the Program Results Report.

Yale researchers found that Housing First results in lower health care utilization and net cost savings. But, says **Brenner**, the Housing First model "takes a fair bit of training and sophistication that our local agencies don't have the background to do."

The Men and Families Center is working with landlords to provide more affordable housing in Baltimore. The center negotiates better rents by helping residents become more responsible for paying those rents. "We've been able to place quite a few people into housing that were being evicted or were in sub-standard housing. The landlords are willing to work with us because we work with people to help them get their finances together and emphasize that they have to pay by a certain date. It's been a win-win for both parties," *says **Leon Purnell***.

Access to Healthy Food

Nutritional assistance for high-risk women, infants, and children, as well as for older adults with functional and cognitive impairments, has been shown to both improve health outcomes and reduce health care costs. Programs that achieve these results include WIC and home-delivered meals for older adults and people with disabilities.

Other Important Needs and Challenges

The hospitals in Stakeholder Health often see patients with these two needs and the following other social challenges:

- Limited financial means

- Social isolation and weak systems of social support

- Limited English proficiency and newly arrived in the United States

- Re-entry into the community after incarceration

- Community or family violence

- Emotional or behavioral health issues that the social environment aggravates

- Substance abuse and addiction

Leveraging the Social Determinants of Health: What Works? has more information about what works in social services related to housing, nutritional support, and other areas.

Assessing the Quality of Social Services

Healthify and Health Leads have both identified two simple indicators of "success" in social service referrals:

- Percentage of patients (or clients) who can access a service (the "success" rate)

- Percentage of patients (or clients) who find the service helpful

Healthify has also identified positive feedback from the referring organization as an indicator of success. In Healthify's case, staff at Medicaid managed care plans and integrated healthcare delivery networks are the ones making social service referrals but this indicator is also applicable to other health systems and hospitals.

A longer-term, more difficult to measure indicator is the impact of the social services on health outcomes or spending.

Healthify's Strategies

Currently, Healthify validates information about the social service agencies listed in its resource database, more of a data check than a quality check, says Healthify's **Manik Bhat**. When Healthify goes into a community, it develops a resource database by searching government and other databases and by asking clients about their social service providers. Then staff members call each agency to validate information about services, hours, and so forth.

Healthify also is moving toward assessments of social services quality. Closer collaboration and coordination would include notification to the social service agency when the referral is made, notification by the social service agency to Healthify and the health care system when the patient accesses the service, and so forth.

A Promising Idea that Hasn't Worked Well

Healthify has tried to get feedback about social services from its clients (staff at Medicaid managed care plans and integrated healthcare delivery networks) and the patients who are being referred for services, but so far this hasn't worked well. Healthify's system allows care managers and community health workers to rate services and comment on them, which other users can see. But too few care managers and community health workers are submitting ratings and comments to make the data useful. They simply don't have time to do this.

To get feedback from patients, Healthify developed a texting system in which the person receives a text message with the referral with an option to message back about whether the service was helpful. While **Bhat** believes that texting could be a great way to get feedback from patients, Healthify hasn't been able to test this at scale. "A lot of systems are very hesitant to approach patient engagement through texting, especially with discrete things like referrals to certain agencies for certain needs," **Bhat** says. The laws on and ramifications of texting patients vary widely by state and are vague. The federal government hasn't provided any conclusive guidance on this issue.

Health Leads' Strategies

Health Leads evaluates the quality of social service agencies based on the number of resource connections made and the experiences of patients with the service and the agency. Since Health Leads advocates follow up regularly with each client, it's easy for the organization to do this. "We get a good sense of, did they have a bad experience or a good experience? Would they recommend this service provider to somebody else?" says *Adam Shyevitch*. Health Leads does not use a standardized assessment for this.

> *"We can pick out the agencies that our clients are most successful with but we couldn't broadly describe the quality of these agencies. This is the fractured nature of social service in this country."—Adam Shyevitch, Health Leads*

Other Organizations Trying to Assess the Quality of Social Services

Some organizations are validating the quality of the agencies they seek as collaborators, says *Manik Bhat*. Examples are Hennepin Health in Hennepin County, Minn., some of the coordinated care organizations in Oregon, and Kaiser Permanente. But these home grown efforts lack an evidence base and may be difficult to sustain.

Using Data to Inform Decisions About Collaborations

Through organizations such as Healthify and Health Leads, more data on social services and collaborations between social services and health systems/hospitals are becoming available.

The system used by **Healthify** includes advanced analytics and several evaluation studies are underway. With data from 18 states now available, "we can get a pretty accurate assessment of gaps in communities," says *Bhat*. That information can be extrapolated more broadly to other communities. "What we don't know yet is how different agencies run at the local level. That's going to change and vary widely." Healthify is also working on a more robust infrastructure for evaluation.

Health Leads is working with its hospital partners to evaluate Health Leads around six outcomes:

1. Process outcomes

2. Patient and physician satisfaction or experience

3. Clinical outcomes

4. Financial outcomes such as utilization or total cost of care

5. Clinic efficiency (e.g., no show rates)

6. Community benefit

One Approach to Facilitating Multi-Sector Collaboration

Stewards of Change Institute has created a way for people working in different sectors to understand the perspectives of collaborators in other sectors. "We've applied this concept of personas or human-centered design, or scenario planning, to represent the complexity of the issues and the various viewpoints that are necessary to solve the issues, as opposed to trying to explain it form a technical perspective, which puts people to sleep," says **Daniel Stein**, MBA, president of Stewards of Change Institute.

Stewards of Change Institute's process brings people together and presents them with a scenario related to SDOH. The facilitator asks the collaborators how they would address the issues in the scenario. "This encourages them to think broadly. They rapidly see that their small view of the pie won't solve the problem," says Stein. The facilitator then engages collaborators through adult learning techniques including multi-media. This "challenges them to think differently and interact differently than they would normally," says Stein.

While much of this type of training could be done through a toolkit, Stein recommends a combination of on-site and distance learning. "The importance of human learning is critical to these things," he says. Available multi-media technology can be used to engage people using web-based training, and help them build competency in effective collaboration.

Two Examples of Work with Specific Communities

HolaDoctor

HolaDoctor produces culturally relevant health content in Spanish for consumers, essentially "a WebMD in Spanish with a Hispanic flair," says **Dirk Schroeder** ScD, MPH, of HolaDoctor. The organization offers this content through *HolaDoctor.com* and on Univision.com, the main Spanish language website in the United States. It also produces consumer content that health plans, employers, and state agencies offer to their members, employees, or beneficiaries. HolaDoctor's recent work includes helping health plans educate Latino people about the ACA and health insurance options.

When surveying a specific Latino sub-group, HolaDoctor's process includes:

- Key informant interviews

- Pre-test study of the language used

- Focus groups

- Pilot test

People who are trusted by Latino communities, such as promotoras (community health workers), could be trained to ask patients about SDOH data and to collect the data. Data collectors must clearly explain how the data will be used, and that they are confidential and will not be given to government agencies. "The key is trust," says **Schroeder**. "A promotora is a trusted person who is saying, 'Hey, they're going to ask about this, and it's okay.' What's critical is to address upfront what we know are their fears." HolaDoctor works closely with Latino health serving organizations, such as Latino Health Access in California. These organizations have promotoras who know the communities well.

Schroeder says that educational materials should accompany the discussion about SDOH. For example, after introducing the topic, the data collector can ask the patient to watch a video about SDOH data before seeing the doctor.

Within Latino communities, people identify with the country where their parents were born and are more likely to answer this question than standard questions about race and ethnicity. So HolaDoctor sometimes asks about where the person's parents were born before asking where the person was born.

Institute for eHealth Equity

"You have to have an understanding of the culture, including from a faith-based standpoint. Faith plays an important role in targeted communities," says **Silas Buchanan** of the Institute for eHealth Equity. Black churches' health ministers and health ministries are already working to improve health in their communities, including through health fairs. About 35 to 40 percent of the 3,000 churches affiliated with the African Methodist Episcopal Church, for example, have a dedicated health minister. In larger congregations, the health minister is usually a nurse or doctor (retired or practicing). In smaller congregations, a church official may serve as the health minister.

The Institute for eHealth Equity is building OurHealthMinistry.com, a "culturally specific web-based health information resource" designed to "help church-based health ministries more effectively reach, engage, and empower communities of color. We see it as an ideal

way for public-private stakeholders to access and reach targeted communities, because we are known and trusted in communities," says Buchanan. With more funding, OurHealthMinistry.com could integrate care coordination software into its platform.

The Institute for eHealth Equity is also studying the role that health ministers could play in patient-centered medical homes and ACO workflow if they are trained as community health workers and supported by the right technology. For example, at church health fairs, health ministers would be able to refer people electronically to a primary care provider.

In that texting is a common form of communication among Black youth, the Institute for eHealth Equity tested Text4Wellness in three Black churches. This mobile health service provides timely and actionable information about healthy lifestyles, disease prevention, general wellness, and active living. During church services, the health minister talked about health and then asked people to take out their cell phones, text "Healthy" and then answer health-related questions.

The questions enabled the churches to collect data on race, age, gender, ZIP code, the person's church, whether the person smokes, whether the person has health insurance, and how the person rates his/her health. The response rate, says *Buchanan*, was 72 percent. The reason, he says, is the messenger: the trusted health minister. Text4Wellness can also be used to ask simple questions answered with a "yes" or a "no," such as "Are you interested in cooking more healthy?"

AETNA Foundation provided most of the funding for this project; additional funds were provided by Drexel University. Each person who participated in Text4Wellness got a $10 gift certificate for healthy snacks at CVS, Walgreens, or farmers markets. A platform such as Text4Wellness could be used by hospital systems for getting community input for their community needs assessments, says *Buchanan*.

List of Those Interviewed

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Funders in SDOH Data and Service Delivery

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www.bluecrossfoundation.org
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LEVERAGNG THE SOCIAL DETERMINANTS OF HEALTH: WHAT WORKS? June 2015 report prepared by Yale Global Health Leadership Institute, which evaluates and summarizes the evidence base for interventions that address SDOH

Example of SDOH-related co-funding with RWJF:

- Massachusetts Implements Program for Treating Chronic Conditions, Decreases ER Visits

The Boston Foundation

Boston, Mass.

www.tbf.org

Lucy Ellis, Program Assistant

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HEALTH STARTS AT HOME (2014). Initiative to bring together housing and health care organizations to support work that focuses on the benefits of stable, affordable housing on children's health outcomes

The Commonwealth Fund

New York, N.Y.

www.commonwealthfund.org

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ADDRESSING PATIENTS' SOCIAL NEEDS: An Emerging Business Case for Provider Investment (2014), with Pershing Square Foundation and Skoll Foundation

Kaiser Permanente

Oakland, Calif.

www.kaiserpermanente.org

Loel Solomon, Vice President, Community Health

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Some 30 programs to address the social needs of members, as part of the Total Health strategy that Ray Baxter and others have shared at various RWJF events. Programs include:

- A national program that screens Medicare members who are potentially dual-eligible for social needs and connect them with social supports in their communities
- A few Health Leads pilots being scaled up in Southern California
- Screening members for food insecurity, which started in Colorado and is now spreading to other regions.
- Working on a joint project with W.K. Kellogg Foundation to learn more from other grantmakers about leveraging technology for population health data

W.K. Kellogg Foundation

Battle Creek, Mich.

www.wkkf.org

Patrick S. Simpson, Director of Food, Health, and Well-Being

Programs include:

- A joint project with Kaiser Permanente to learn more from other grantmakers about leveraging technology for population health data.
- Committee on Institutional Cooperation: Leverage the expertise of academicians and public health officials in 11 states through a summit on the SDOH that form the basis of health disparities
- George Washington University: Improve children's health and well-being by informing federal health policymakers about the SDOH and developing new tools to develop more equitable and effective policies
- National Foundation for the Centers for Disease Control and Prevention: Enable communities to more effectively address inequities in health and safety by translating research on SDOH and injury into accessible formats for public health practice and action
- Poverty and Race Research Action Council: Ongoing work on race, health disparities, SDOH, and poverty as a clearinghouse, forum, convener, and sponsor of applied research linked to advocacy, policy development, and public education

Examples of relevant SDOH co-funding with RWJF:

- Groundbreaking New Website Launches, Giving Public Access to Measures of Child Well-Being and Equity Throughout the United States

The Kresge Foundation

Troy, Mich.

www.kresge.org

No relevant staff member identified

Programs include:

- George Washington University: National Health Policy Forum, a nonpartisan organization that offers federal health policymakers high-level, unbiased information and analysis on key health-policy issues.
- Michigan Public Health Institute: Place Matters Task Force, part of the Michigan Convergence Initiative, researches and identifies the social conditions in Michigan that are major determinants of health. Will produce four policy briefs.
- Institute for Alternative Futures: Review and assessment of how community health centers address the SDOH and new forecasting models for leveraging these key factors

Examples of relevant SDOH co-funding with RWJF:

- BUILD Health Challenge Announces 18 Inaugural Awardees from Across the Nation
- Convergence Partnership
- New Role for Health Care Providers: 'Hot-Spotting' Unhealthy Communities?

Pershing Square Foundation

New York, NY

www.pershingsquarefoundation.org

No relevant staff member identified

> ADDRESSING PATIENTS' SOCIAL NEEDS: An Emerging Business Case for Provider Investment (2014), with Commonwealth Fund and Skoll Foundation

Skoll Foundation

Palo Alto, Calif.

www.skollfoundation.org

No relevant staff member identified

> ADDRESSING PATIENTS' SOCIAL NEEDS: An Emerging Business Case for Provider Investment (2014), with Commonwealth Fund and Pershing Square Foundation

United Health Foundation

Minnetonka, Minn.

www.unitedhealthfoundation.org

No relevant staff member identified

> Programs include:

- America's Health Rankings: Since 1990, America's Health Rankings® has analyzed the health of the nation holistically, with in-depth data and analysis.

Examples of SDOH-related co-funding with RWJF:

- RWJF & UHF Community Health Grants: Collaborating With Business to Achieve Healthier Communities