

Addressing Social Determinants of Health Identified by Systematic Screening in a Medicaid Accountable Care Organization: A Qualitative Study

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Abstract

Introduction/Objectives: Systematic screening for social determinants of health (SDOH), such as food and housing insecurity, is increasingly implemented in primary care, particularly in the context of Accountable Care Organizations (ACO). Despite the importance of developing effective systems for SDOH resource linkage, there is limited research examining these processes. The objective of the study was to explore facilitators and barriers to addressing SDOH identified by systematic screening in a healthcare system participating in a Medicaid ACO. **Methods:** This qualitative case study took place between January and March 2020. Semi-structured interviews were conducted with fifteen staff (8 community resource staff and 7 managers) from community health centers and hospitals affiliated with a large healthcare system. Interviews were transcribed, coded, and analyzed using the Framework Method. **Results:** Facilitators for addressing SDOH included maintaining updated resource lists, collaborating with community organizations, having leadership buy-in, and developing a trusting relationship with patients. Barriers to addressing SDOH included high caseloads, time constraints, inefficiencies in tracking, lack of community resources, and several specific patient characteristics. Further, resource staff expressed distress associated with having to communicate to patients that they were unable to address certain needs. **Conclusions:** Health system, community, and individual-level facilitators and barriers should be considered when developing programs for addressing SDOH. Specifically, the psychological burden on resource staff is an important and underappreciated factor that could impact patient care and lead to staff burnout.

Keywords

community health, primary care, qualitative methods, underserved communities, health outcomes

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Screening for social determinants of health (SDOH), such as food insecurity and housing instability, is increasingly being implemented in health care settings.¹ In the United States, Accountable Care Organizations (ACOs), healthcare networks that share medical and financial responsibility for a particular patient group (eg, Medicaid beneficiaries), have contributed to increased recognition that social needs have a substantial impact on health outcomes and healthcare delivery.^{2,3} Providers and professional organizations support systematic SDOH screening^{4,5} and healthcare settings, including large systems^{6,7} and community health centers,⁸ have generally found it feasible. Therefore, systematic screening for SDOH across healthcare systems has the potential to substantively improve important health-related outcomes.

Screening for SDOH, however, is more likely to be beneficial if followed by adequate provision of resources to meet identified needs. Garg et al⁹ have cautioned against screening patients for sensitive issues such as food and housing insecurity when addressing such needs is not

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plausible, because it could lead to frustration for both patients and providers. Therefore, healthcare systems that screen for SDOH must establish efficient and feasible workflows and programs for addressing needs. Common procedures involve linking patients with clinic and community resources.¹⁰ Some systems harness technology (eg, electronic health record automation) to connect patients with SDOH referrals and/or resource guides^{6,11} while others provide one-on-one or on-site assistance (eg, food pantries, enrollment of patients into Supplemental Nutrition Assistance Program [SNAP]).¹²

Despite the importance of effective systems for SDOH resource linkage, there is limited research examining the facilitators and barriers of these processes. Further, little is known about the experiences of staff members who are largely responsible for this work as well as the challenges they face in addressing patients' SDOH. Identification of these important factors can inform workflow implementation efforts as well as staff training and support across the many types of healthcare organizations screening for SDOH. To address these gaps, the present study explored facilitators and barriers to addressing SDOH identified by systematic screening in a healthcare system participating in a Medicaid ACO. We conducted interviews with frontline community resource staff (community resource specialists, community health workers, social workers; hereafter referred to as "resource staff"), managers of community health center programs responsible for addressing SDOH, and program managers responsible for the implementation of the Medicaid ACO screening program to explore the: (1) SDOH referral workflow, (2) common ways of addressing food and housing needs, and (3) facilitators and barriers of SDOH referrals.

Methods

Participants and Setting

This study took place at Mass General Brigham, a large integrated health care system in Massachusetts that implemented system-wide annual SDOH screening in March 2018 for all patients enrolled in its Medicaid ACO. The screener was developed by a team of physicians and community health specialists at Mass General Brigham and included questions about food security, housing, transportation, cost-related medication underuse, paying for heat/electricity, child/eldercare, unemployment, and education. Food security was assessed with the validated 2-item United States Department of Agriculture (USDA) screener, and the 3 housing questions were developed based on prior literature.¹³⁻¹⁵ Data for this study were collected from 5 community health centers that were affiliated with the 2 main hospitals in the healthcare system and were participating in a longitudinal evaluation of a new Medicaid ACO program (Flexible Services) to provide nutrition and

housing resources to some patients.¹⁶ All study procedures took place before implementation of the Flexible Services program.

Study participants were recruited from the 5 affiliated community health centers and the healthcare system's Medicaid ACO team. In order to sample from each community health center and the Medicaid ACO, at least 1 resource staff and 1 manager were recruited from each health center in addition to ACO manager-level staff at each of the 2 hospitals. Study staff contacted health center resource staff and managers and manager-level staff at each of the 2 hospitals by email or phone to invite them to participate in the study. Participants from community health centers included resource staff who were responsible for providing direct assistance to patients, as well as managers of primary care practices. Program managers for the healthcare system's Medicaid ACO were responsible for the implementation and monitoring of the screening and referral processes at the health centers included in this study and the 2 hospitals with which they were affiliated.

Measures

We developed a semi-structured qualitative interview guide that allowed for expansion on topics discussed, adapted to fit the role of the interviewee, and facilitated consistency among interviews. The interview guide included 4 targeted content areas: workflow of SDOH referrals, common ways food and housing needs are addressed, facilitators of SDOH referrals, and barriers to SDOH referrals (See Supplemental Materials for interview guide).

Procedure

All procedures were approved by the Mass General Brigham Institutional Review Board (Protocol #2019P002441) on August 27, 2019, and all participants provided verbal informed consent. Three members of the research team were involved in data collection and analysis: 2 female PhD-level researchers with backgrounds in clinical psychology, behavioral science, and public health and a female MD-level researcher with a background in internal medicine and public health. The 2 PhD-level members of the study team conducted all interviews in person or by phone, depending on the preference of the interviewee. All interviews were audio recorded, lasted 20 to 40 min, and did not include any additional personnel present aside from the participant and researcher. Participants did not receive compensation for completing interviews.

Study Design and Data Analysis

The purpose of the study was to explore the facilitators and barriers to addressing SDOH identified by systematic

screening within a large healthcare system using a qualitative case study design. This type of design was selected given its appropriateness for examining existing processes (without manipulating such processes) and the relevant contextual influences.¹⁷ Qualitative coding and analysis was conducted following the Framework Method,^{18,19} a 7-stage thematic analysis procedure through which researchers develop an analytical framework based on defined categories and codes and apply this framework to the data. This method was chosen given its suitability for applied multidisciplinary health research and analysis of semi-structured interviews as well as its appropriateness for use in qualitative case study designs.

Consistent with this method, audio recordings of interviews were first transcribed and subsequently coded and analyzed. Coding and analysis were completed using Dedoose Software Version 8.0.35.²⁰ (Los Angeles, CA, 2018). The research team developed an analytical framework with codes based on the domains covered in the semi-structured interview guide (See Supplemental Material for coding scheme). In order to minimize the impact of researcher bias and to facilitate greater reliability, the 2 PhD-level researchers independently coded all transcripts and resolved discrepancies as needed with input from the senior MD-level researcher. During and after the coding was completed, the research team held biweekly meetings for data interpretation, including discussion of emerging themes within and across transcripts. The research team determined that data saturation was achieved given that new codes did not emerge outside of those established in the original analytical framework.^{21,22} Finally, to ensure face validity, themes and final results were reviewed with the larger group of multidisciplinary co-authors and collaborators who has extensive health care system experience.

Results

Participants

Fifteen participants completed interviews between January 13, 2020 and March 13, 2020. Massachusetts declared a state of emergency on March 10, 2020 due to the COVID-19 pandemic and subsequently issued a stay at home advisory and suspended all in-person operations of non-essential businesses on March 23, 2020. All interviews were completed prior to the substantive changes in healthcare operations and daily life that occurred due to COVID-19.

The sample was primarily female (87%) with an average age of 39 years (SD=10.4). Half of the sample identified as Hispanic, Latinx, or Spanish ethnicity; 21% identified as Black or African American; and 50% identified as white race. Participants comprised resource staff (N=8) and managers (N=7), most of whom had been in their current role for 5 years or less (N=12). Managers either provided

oversight for health center programs and resource staff or provided oversight within the health system's Medicaid ACO (manager types were combined to protect participants' confidentiality).

Workflow

All of the health centers represented in this study screen primary care patients in the Medicaid ACO for SDOH annually. At the time of the study (pre-COVID-19 pandemic), patients completed an 11-item SDOH screening tool on an electronic tablet in the waiting room. A medical assistant or other health center staff viewed the results and if needed, generated a referral within the electronic medical record for the provider to sign. Once a signed referral was generated, the referral was sent to health center resource staff or manager directly or via a central team of patient navigators that processed referrals for multiple health centers (Figure 1).

Managers described 2 primary challenges associated with this screening procedure: (1) patient difficulty completing the screener prior to their appointment (eg, because of discomfort with technology, limited time), and (2) staff difficulty making a referral for positive screens (eg, time constraints, other competing demands). Two participants explained the inefficiency in the process for generating a referral from a positive screen:

"I would say one challenge, [. . .], is that the workflow is heavily dependent on the medical assistant right now. . . And there are time constraints. There are a million other things they're doing. [. . .] it's a barrier, because it's dependent on a human person getting it right every single time. And that doesn't happen."

– Manager

"So once a screener is done – and we are getting them done in spades at this point – it's hard for any clinic staff to find the answers, and the referral mechanism is multiple clicks. And so the click fatigue thing is real, and just practices have trouble working that into workflows of any staff, whether it be [medical assistants], nurses, or doctors." – Manager

Upon receipt of the referral, resource staff from all health centers called the patient by phone and followed up 3 to 4 times if unable to reach the patient. When the patient was contacted, resource staff typically scheduled appointments to meet in person and provide assistance. After staff provided resources or made a referral, some followed up with the patient to confirm the need had been addressed. Others were unable to do so because of their high caseloads and time constraints. One resource staff described how time constraints and competing priorities prevented them from following up:

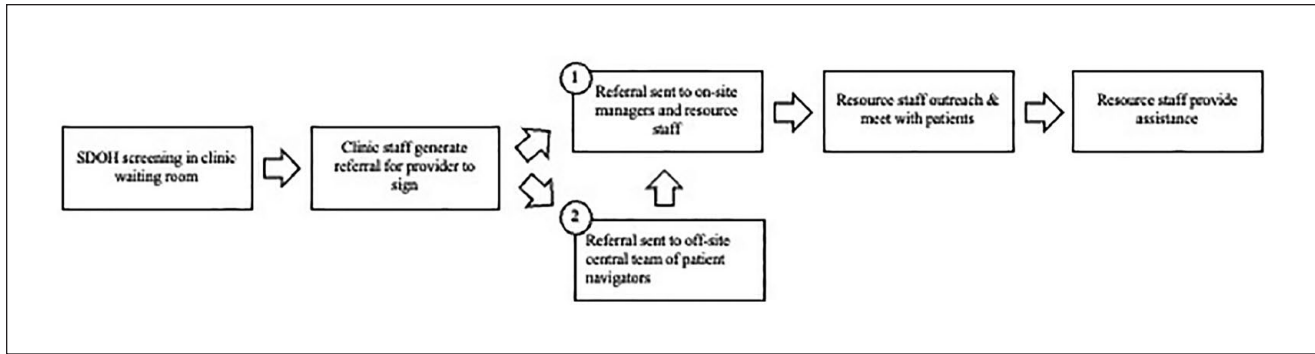


Figure 1. Social determinants of health (SDOH) screening and referrals workflow. The figure above illustrates the 2 types of workflows that were implemented across the health centers. Health centers followed the same SDOH screening procedure that consisted of patients completing the measure in the waiting room. Clinic staff reviewed the results and generated a referral for the provider to sign when SDOH needs were identified. Once the referral was signed, health centers either sent the referral (1) directly to onsite managers and resource staff or (2) to be processed by an off-site central team of patient navigators before it was sent to on-site managers and resource staff. Once the referral reached the on-site managers and resource staff, patients were contacted for meetings and assistance was provided.

“That’s something that we’ve spoken about before because, obviously, that would be great if we could do that. But we just don’t have the time to just follow up with all of our cases, especially because we just have the ones that are just coming in and then we have the pendings and now we have the [social determinants of health screens]. So it can be a lot. And we get interrupted a lot for warm handoffs and stuff like that [. . .].”
– Resource Staff

Common Ways of Addressing Food and Housing Needs

Resource staff assisted patients with food insecurity primarily in 3 ways: (1) applying for government assistance, such as the Supplemental Nutrition Assistance Program (SNAP) or the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC); (2) providing information on free and low-cost community food sources (eg, food pantries, low-cost food programs), and (3) offering one-time emergency food assistance, typically in the form of gift cards.

Housing needs spanned from eviction notices and difficulty with rent or utility bills to experiencing homelessness. Resource staff reported 5 primary forms of assistance: (1) connecting patients to community housing organizations, (2) connecting patients to legal aid, (3) helping patients apply for housing assistance programs, (4) referring patients to a specialized housing coordinator, and (5) reviewing patients’ options for staying with natural supports (eg, family, friends) or in a shelter. Participants reported difficulty assisting patients with homelessness because of limited housing resources and long waitlists. Two participants (1 manager and 1 resource staff) acknowledged the limited availability of housing and expressed

divergent perspectives on the value of helping patients apply for supportive housing:

“There is not enough housing in [city], what is available is too expensive, and there’s not much we can do. We think that the easiest and most needed need right now is having people to sit down and fill out housing applications with people, get them on all the lists that they can be on, and then create a relationship with them where they’re regularly reviewing those lists, calling housing authorities [. . .].” – Manager

“Housing is just – it’s really, really awful and difficult. And I hate having to tell people that I don’t have a lot of options for them. I mean, I can help sit down with people and do some applications. But it’s not a great use of my time honestly because there’s just so many of them. And then you get on a waitlist for eight years from now, so it’s not anything that will fill an immediate need.” – Resource Staff

Facilitators of SDOH Referrals

Both managers and resource staff identified important facilitators of effective SDOH referrals. These included knowledge of available resources within the community, communication and collaboration between staff and community organizations, leadership buy-in, and positive relationships with patients. Participants described the importance of maintaining updated resource lists specific to the communities they serve, and of the longstanding relationships of the health centers with community organizations. One manager highlighted this strength of health center staff:

“They’re very experienced. They know their patients. They know their communities. They know the resources in their communities. So when they get a referral, they’re in the best

position to know what to do and how to help their patients. Because they have the history. They understand social determinants really well [. . .]. And they have the community-based relationships. They have the partnerships with other social service organizations.” – Manager

Additionally, participants actively sought out new partnerships with community organizations that address SDOH. One participant described this valuable part of their role in tandem with having leadership support:

“The good thing about my role is that I get to connect with a lot of organizations in the community. My supervisor gives me and the other [resource staff] permission to go and meet one-on-one with organizations and just let them know, “Hey, would you like to collaborate with us? What is the best form of communicating with you? If it’s by email, if it’s referral.” – Resource Staff

Participants also described the importance of a positive and trusting relationship with the patient in facilitating SDOH referrals. Food and housing insecurity are difficult for many patients to discuss and some may feel ambivalent or uncomfortable receiving assistance. One participant noted that developing trust is a critical first step:

“I think that first, building a relationship among the community resource specialist and housing advocate with the patient, I think is very important. Because if the patient doesn’t feel that they trust the person that they’re working with, I think it’s lots more difficult to assist the patient.” – Manager

A strong staff-patient relationship was not only a facilitator of SDOH referrals, but also a rewarding aspect of the work. Resource staff described finding meaning and fulfillment in their relationships with patients and in being able to address their needs. Two participants commented on these aspects:

“Just having to help the patients. I think that’s the most fulfilling. Just to see them satisfied, happy that, ‘Oh, you finally gave me some resources that I can work with and help.’ Assistance, I think that’s the most wonderful thing. And they’re always saying, ‘Oh, thank you so much. We’re happy that you’re here to provide us all these resources, the help that we need.’ I think that’s a great feeling. For me, that’s everything.” – Resource Staff

“So my mom taught me when you do something that you really love, it’s not going to be a real job. And that is actually [what] I found out to be very much truth. And to see the patient’s face when they come to me initially and say and feel hopeless. [. . .]. How grateful they are that you helped them. And [. . .] that makes my day.” – Resource Staff

Barriers to SDOH Referrals

Barriers to SDOH referrals included the challenges inherent in resource specialists’ jobs and the lack of community

resources. Specifically, resource staff noted having a large caseload and significant time pressure. Following up with patients after referrals was difficult due to inefficiencies in tracking within the electronic medical record. Further, resource staff described being unable to address some patients’ SDOH needs due to limited availability of resources, particularly in housing.

In addition, resource staff and managers explained that certain patient characteristics, including being elderly, speaking limited English, having complex medical needs, having mental health and/or substance use challenges, not having permanent legal status in the United States, and having discomfort with accepting help, were barriers to connecting patients with resources. Assisting patients with mental health challenges and complex medical problems was particularly challenging because these patients often had difficulty following up with the resource. Staff commented that participants who do not speak English proficiently also struggle to follow-up with resources, even with the help of interpreter services. One participant explained the unique challenge of aiding patients who are undocumented and the fear that accompanies their experience:

“But I forgot to mention one challenge that is the biggest one, by far, which is the legal status. [. . .]. So it is really – the system is not made for people with no documents. Some of them who have children who were born here, so they could benefit from some of the programs. But right now, the environment of terror, it’s also not allowed for those patients to look and get those resources, either.” – Manager

These barriers prevented many patients from receiving needed resources and contributed to strain on the resource staff. Staff reported that the most stressful aspects of their jobs were being unable to address their needs. Two participants described feeling that they were “*the bearer of bad news*” or a “*no-sayer*” because of having to tell patients that they were unable to provide the assistance they were seeking. Another participant reflected on the helplessness this job can produce for resource staff:

“And having to call people and say there’s nothing I can do to help you and just having to kind of sit with their sadness and understandable anger and pain and being kind of failed by the system.” – Resource Staff

Discussion

This study identified facilitators and barriers to addressing SDOH from the perspective of resource staff and managers in a health system that has implemented systematic SDOH screening. Maintaining updated resource lists, collaborating with community organizations, having buy-in from leadership, and developing a trusting relationship with patients were identified as facilitators of addressing

SDOH. Yet, addressing SDOH was hampered by high caseloads, time constraints, tracking inefficiencies, limited resources, and patient characteristics. In addition to these barriers, resource staff described the psychological toll of their job, an important component of the SDOH referral process that is often overlooked. This qualitative evaluation offers a unique lens into the process of addressing SDOH and the resource staff experience.

Our findings illustrate that resource staff were passionate and committed to their roles but faced a number of challenges that affected their professional productivity and personal well-being. Understanding and improving the staff experience should be a priority given their critical role in addressing SDOH and the potential for burnout. Recent studies have demonstrated that patients were more likely to access an SDOH resource when they received adequate outreach, assistance, and follow-up from staff.^{23,24} Further, evidence suggests that programs involving direct staff support—compared to “light-touch” interventions (eg, that provide information only)—may be most suitable for effectively addressing SDOH.²⁵

Facilitators of addressing SDOH included both practical (eg, maintaining updated community resource lists) and relational (eg, with patients and other professional staff) aspects. Participants noted the importance of having leadership support for this work, which has previously been identified as a facilitator of successful SDOH screening in community health centers.²⁶ Additionally, resource staff described how a trusting relationship with patients facilitated their ability to address social needs. A qualitative study of patients receiving assistance for SDOH from volunteers reported that the connection with the staff helped them to feel heard and supported.²⁴ The patient-staff relationship, also known as the therapeutic or working alliance, is associated with adherence, satisfaction, and outcomes in psychotherapy^{27,28} and medical care²⁹⁻³¹ and similarly appears to be an important component of addressing SDOH. Training and supervision of resource staff should emphasize these interpersonal factors that facilitate engagement of patients and ultimately help meet their needs.

Resource staff and managers also described several barriers that impact their work and well-being. Challenges related to their specific roles (eg, high caseload, time constraints), the availability of resources, and patient characteristics (eg, mental health challenges, legal status) were noted. Resource staff expressed frustration, helplessness, and sadness when they were unable to address patients’ needs. The frustration may be further exacerbated by divergent views between resource staff and leadership in terms of how best to address SDOH, such as housing. In 1 case, our results demonstrated that while a manager encouraged resource staff to fill out housing applications with patients, resource staff had several concerns with the worth of this task, including

the time burden and years-long housing waitlists. This example demonstrates the need for open communication between managers and staff on optimal strategies for addressing SDOH needs.

The rise of ACOs and increase in funding for SDOH programs² may alleviate some barriers. For example, MassHealth’s Flexible Services Program¹⁶ will provide health-related nutrition and housing resources to some ACO patients. However, the challenges of large caseloads, complex patients, and delivering difficult news will remain. Hsu et al²⁴ recommend that staff are trained to engage in these difficult conversations around SDOH. Furthermore, given that resource staff may have to be “the bearer of bad news,” they should receive training in how to manage the personal impact of this experience to prevent distress and burnout.^{32,33}

This study has several limitations that should be considered. First, the sample size was small and drawn from a single healthcare system in 1 U.S. state, which limits generalizability. Second, this study focused exclusively on addressing SDOH in the context of a health system that systematically screens for SDOH, which may not reflect processes, facilitators, and barriers in other types of organizations. Third, our results only capture the staff perspective and do not provide information about patients’ experiences. Finally, this study was conducted prior to substantial changes in healthcare delivery and daily life due to COVID-19 and thus may not reflect all aspects of the current environment. However, given that the pandemic has led to increased food insecurity and other social inequities,^{34,35} our findings provide a valuable foundation for future work to improve programs and processes for addressing SDOH.

This study offers an in-depth view of the process that unfolds after a patient completes systematic screening for SDOH and the facilitators and barriers of addressing social needs, as reported by the staff directly involved. These results emphasize the personal impact, both positive and negative, that this work has on the resource staff, and highlights health system, community, and individual-level factors that healthcare organizations should consider when addressing SDOH.

Authors’ Note

The views expressed in this article are those of the authors and do not necessarily reflect the position or policy of the United States Government or Department of Veterans Affairs.

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Supplemental Material

Supplemental material for this article is available online.

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