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CASE STUDY

Breaking Down the Barriers Between Health and Social Care Services: Implementing a Social Determinants of Health Network

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Most determinants of health are social and not directly amenable to medical treatment. To improve equity, the medical delivery system must partner with social care services, but the institutional bridges are often lacking. Healthy Alliance — originally funded in 2015 by the New York State Department of Health's Delivery System Reform Incentive Payment program through the Medicaid Section 1115 demonstration waiver — in 2018 developed a social determinants of health network (SDHN) as a regional strategy to provide health-critical social care services in Upstate New York. After more than 4 years of implementation, Healthy Alliance's SDHN connects community members in need to more than 1,250 services across more than 580 partner organizations spanning 25 counties in New York State. Three managed care organizations have partnered with Healthy Alliance to improve health outcomes through social care services. To date, Healthy Alliance has completed almost 50,000 requests for connections, representing over 28,000 unique community members served. This case study examines those partnerships' successes, ongoing challenges, and key next steps.

- An Internet-based referral platform infrastructure can facilitate connecting health systems to social care service providers in a community and identify gaps in services.
- Human outreach efforts in change management, training, and listening to and supporting community partners are essential.
- Social determinants of health networks (SDHNs) have the potential to reduce medical costs, although additional studies are needed and ongoing.
- The SDHN model advances health equity objectives by providing access to a diverse array of services to managed care organization (MCO) beneficiaries and by engaging smaller grassroots community-based organizations (CBOs) to participate in funding streams and infrastructure support that would otherwise be inaccessible.
- Policies mandating social care services as part of health care benefits could help facilitate sustainable funding of SDHNs.

The Challenge

Social and environmental factors significantly influence population health care costs and outcomes.[1] A growing body of evidence suggests efforts to address various unmet social needs, such as food insecurity and housing, may reduce health care costs.[2-6] These social care services are underfunded in the United States because the current structure of federal-, state-, and local-level funding for health care, social care, behavioral health, and public health falls within silos, creating a disjointed and inefficient patchwork of services.[7,8] Attempts to break down these silos suggest that integrating service offerings may offer significant benefits. For example, WellCare Health Plan's Health*Connections* program connects Managed Medicaid and Medicare Advantage members with diverse social needs to services through a call center referral program. Their retrospective study across 14 states found 10% savings in the second year of the program for beneficiaries who had all social needs met compared with those who had none of their social needs met ($2,443 reduction in annual expenditures).[9]

Although U.S. health systems have in recent years been committing new spending to social determinants of health (SDOH)-related efforts, largely in housing, these investments still represent a small fraction of their overall spending.[10] The *wrong pocket problem* describes the idea that an entity does not invest in a program because they do not observe or receive the downstream economic benefit of the investment.[11] For example, a medical respite program that gives homeless individuals who are hospitalized a safer place to recover after they are discharged is a social-sector initiative that benefits, but is not necessarily supported by, the health care sector.[12] Instead, CBOs, with location-specific community trust and knowledge, frequently play a central role in addressing social needs. As the health care sector increasingly recognizes the need to partner with a breadth of CBOs to effectively address social needs as

part of the health care continuum, there is also recognition of the need for new mechanisms to support such interactions between health delivery and CBOs of varying size and capacity.[13,14] The need for and vision of such coordinating entities has recently been hailed by leaders within the U.S. Department of Health and Human Services; they use the term *community care hubs*[13] to describe entities that provide administrative and organizational infrastructure to support a network of CBOs and ideally "provide the connective tissue within a community to ensure that a coordinated system of health and social care is working equitably to meet an individual's needs."[13,15] To coordinate and facilitate such efforts, the concept of *braiding and blending* the disparate federal, state, local, and private funding streams is seen as a way forward for supporting social care services in a community.[16] However, which model of such hubs and what mix of funding can feasibly provide a sustainable answer to the wrong pockets problem remains an open question.

In this case study, we share the lessons learned from 4 years of implementing and operating Healthy Alliance's SDHN, recently selected as a participant of the Administration for Community Living and Centers for Disease Control and Prevention's Community Care Hub National Learning Community.[17] The Healthy Alliance SDHN acts functionally and financially as a hub to connect a broad range of social-service CBOs and has combined initial Medicaid waiver funding with subsequent contracting with MCOs under its novel use of an Independent Practice Association (IPA) for social care.

The Goal

In 2018, prompted by community stakeholders, Healthy Alliance (Alliance for Better Health and its affiliates) embarked on a journey to improve the health of community members by improving support for social needs by connecting clients with identified needs to CBOs. Healthy Alliance initially envisioned a call center as its core intervention. Rather than putting out a request for proposals (RFP) for a call center, Healthy Alliance posted an RFP that described the problem rather than the solution. Although call center companies responded, Healthy Alliance selected Unite Us (New York, NY), an Internet-based technology platform that connects social care services across sectors. The technology platform facilitated Healthy Alliance's ability to make closed-loop referrals within its existing network of social, medical, and behavioral health agencies.

> *"Integrating social care service providers under a single organization makes social care service investment easier and ideally more attractive and feasible for payers … by contracting with Healthy Alliance through the appropriately purposed entity."*

Subsequently, in a novel approach for a community hub, Healthy Alliance formed an IPA to be financially sustainable. As required by New York State, the IPA structure provided Healthy Alliance with the ability to contract with MCOs, which are increasingly seeking ways to proactively address social needs among their population of members as a way to reduce costs, for example those associated with avoidable acute hospital care use. The New York State Department of Health's Delivery System Reform Incentive Payment (DSRIP) Performing Provider System (PPS)

board, made up of health systems and a CEO who was a physician, understood the importance of CBOs' work in improving the health of individuals. They had the vision to engage CBOs alongside health systems at a governance level, thus creating and investing in a novel social care–focused IPA.

Healthy Alliance invites MCOs to contract with its IPA, which in turn contracts with a diverse set of community organizations to provide service to members. Reflecting the complex realities of the U.S. health care funding landscape, Healthy Alliance now maintains three entities: an IPA, Healthy Alliance IPA; a 501(c)(3) tax exempt organization, Healthy Alliance Foundation, Inc.; and the legacy PPS continuing DSRIP activities, Alliance for Better Health, a limited liability company (LLC) (Figure 1).

FIGURE 1

Healthy Alliance Business Structure

Healthy Alliance has evolved into an organization encompassing three entities — an independent practice association (IPA), a nonprofit foundation, and a legacy Performing Provider System (PPS) continuing Delivery System Reform Incentive Payment (DSRIP; authorized through federal Medicaid Section 1115 waivers) activities — to enable funding from multiple payer types and reflecting the legal requirements and expertise required to navigate the complexities of a *blending and braiding* approach to financing social care.

CBO = community-based organization, DOH = (New York State) Department of Health, LLC = limited liability company, MCO = managed care organization, NYS = New York State.
Source: Healthy Alliance

This structure enables funding from different types of payers/funders (governments, MCOs, philanthropies, medical providers, and private-sector entities). Integrating social care service providers under a single organization makes social care service investment easier and ideally more attractive and feasible for payers — such as government entities, health care organizations, and insurance companies — by contracting with Healthy Alliance through the appropriately purposed entity.

In the community, Healthy Alliance implemented a standardized social needs screening tool (Appendix) for use at health care settings and CBOs alike and facilitated referrals to needed services throughout the network. Healthy Alliance provides visibility into the social needs of individuals, streamlines referral processes between CBOs, and monitors referral outcomes — replacing the typically informal, disorganized, often one-off navigation of social care services in a community. Historically, community members seek out services and navigate the complex social care services organizations (government and nongovernmental) on their own. When health care team members are involved, informal referrals from health providers for social care services are typically in the form of phone calls, faxes of nonstandard referrals, printed-out Web pages, or sticky notes with CBO phone numbers. Integrating social care service under a single organization that can then function as a unified community care hub[13] facilitates collaboration among sectors that have historically functioned in silos.

Additionally, Healthy Alliance provides the transparency, data, and structure to begin to solve financing challenges (such as the wrong pockets problem) by providing visibility of social care data and the mechanism for a single entity — not hundreds of individual CBOs within a local catchment — to contract with government entities, health care organizations, and insurance companies. Healthy Alliance's SDHN also provides the mechanism to aggregate data from different sectors and the flow of money from the different funders and, therefore, contributes to the evidence base related to linking social care service investment with downstream economic and health benefits, thus building the case for sustainable social care service funding.

The Execution

Through the IPA, Healthy Alliance developed a distinct governance structure that leverages the CBO expertise in community collaboration and social service delivery. CBO leaders serve on the Healthy Alliance board and committees alongside health systems' and behavioral health providers' leadership. Healthy Alliance uses this collaborative approach with the philosophy that rather than imposing rigid practices on organizations, the best solutions and processes are developed when the organizations participate in solving them.

Its governance follows a *mirror governance* mode to facilitate visibility across all of the entities and to stay aligned on the strategic vision. There is no *top organization* but rather there are three separate entities — IPA, LLC, and 501(c)(3) — with mirror boards and committees. The board is a governing, not advisory, body. The CEO is hired by the board and is an ex officio nonvoting member on the board and Executive Committee. The committees are Executive, Integration & Quality, Audit & Compliance, and Finance. Healthy Alliance contracts with partner organizations.

The board made the decision to continue the investment in this vision and to support its long-term strategy. Healthy Alliance partners, using a *no wrong door* approach, screen community members when they seek services from a variety of organizations and then refer them to others within the network to address their needs holistically. Client referral and service journey are tracked using the Unite Us Internet-based referral platform, and data from each organization's documentation system (electronic health record [EHR], case management tools) are aggregated to help inform outcomes (Figure 2).

Healthy Alliance focuses work on the community member receiving services and provides support to partner organizations (health care and social care) in a variety of areas to facilitate successful service connections. Components of Healthy Alliance fall into the areas of technology, user support, quality, data management, and financing. Table 1 summarizes key factors that have been critical to the organization's success in connecting services to each other and community members to needed services.

Technology

Healthy Alliance uses the Unite Us Internet-based *closed-loop referral platform* as a technological backbone to track and provide feedback on the status of a referral to the organization making the referral. The referral platform is a necessary component for facilitating referrals between sectors, documenting success in making service connections, providing data for development of community-specific interventions, identifying gaps in services, and improving network management; it functions as a tool shared among all participating organizations. Healthy Alliance partner organizations continue to use their own case management and EHR tools for internal service documentation. The Unite Us referral platform is just one tool in the hub, one that captures interagency referral activity. To avoid duplication in documentation for the partner organizations, Healthy Alliance works closely with its partner organizations to share data that are stored in their respective case management and EHR systems. This provides a more holistic view of the social care ecosystem and improved visibility of each organization's activities and met/unmet needs in the community.

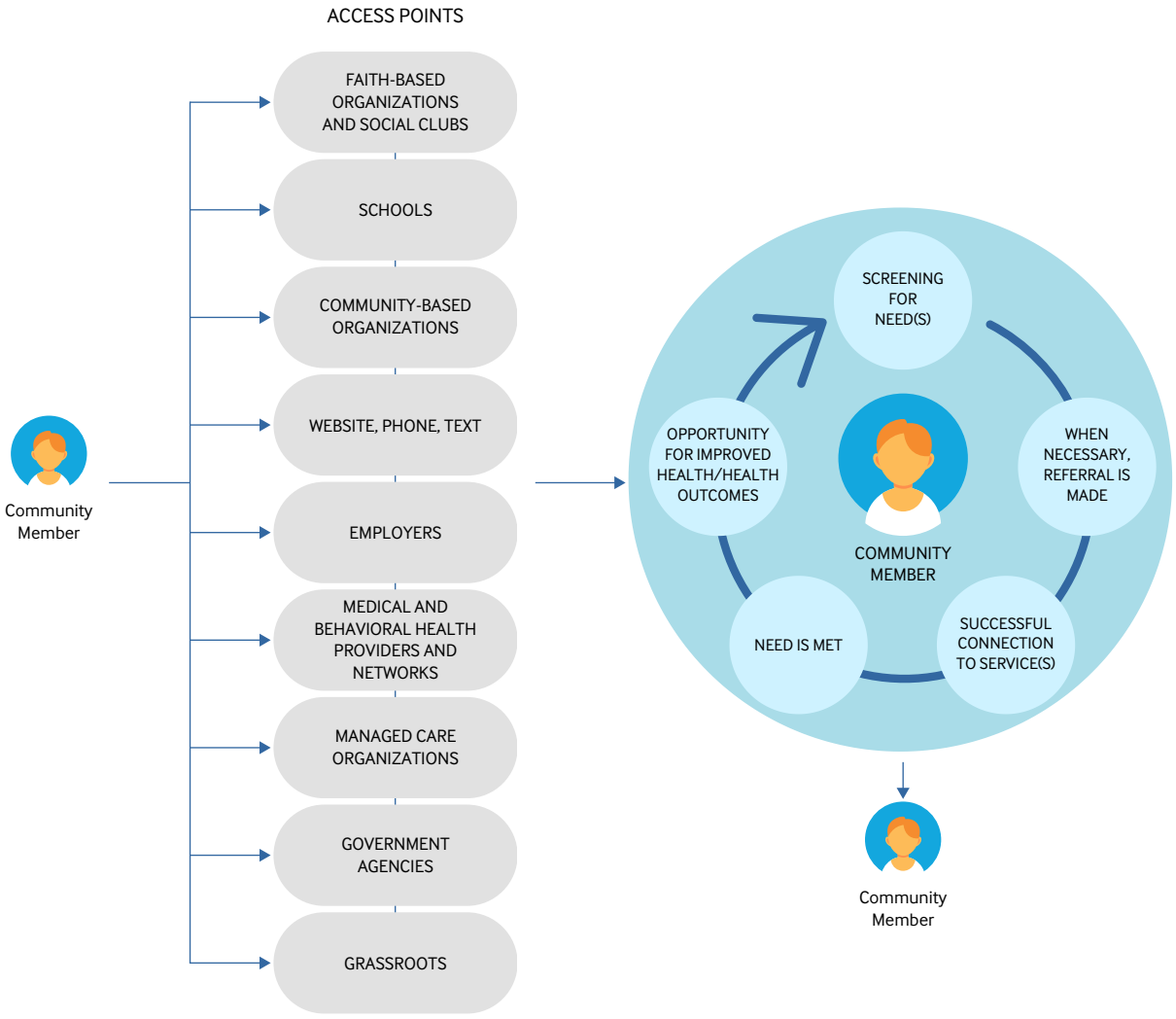
User Support

The closed-loop referral platform is only part of the solution to making referrals between organizations. Healthy Alliance's performance and referral navigation team (now approximately 20 employees serving approximately 4,000 users at 580 organizations and more than 1,000 individual sites) provides training and implementation support to include assistance with technology adoption, social need screening, and network optimization. Healthy Alliance also has a referral center staffed with referral navigators who are local to the communities and have detailed knowledge of the regions they serve. The referral navigators assist agencies in directing referrals to organizations that are best suited for the clients and monitor all referral activity in the platform to ensure clients are connected to services in a timely manner. Each in-network health care organization is assigned their own referral navigator to support this work.

FIGURE 2

Life Cycle of Healthy Alliance Services

Starting from the left side of the diagram, using the *no wrong door* approach, individuals residing in a community are offered social determinants of health screening when they seek services from a variety of access points (community-based organizations, clinical sites, schools, employers, etc.) and then are referred to other service providers within the network to address their needs holistically (circle on the right). The Healthy Alliance Social Determinants of Health Network has service partners from medical, behavioral health, social care, and government sectors. The client journey is tracked using the Unite Us referral platform. Data from each organization's documentation system (electronic health record, case management tools) are aggregated to help inform outcomes. Community members exit the circle when their needs are met.



Source: Healthy Alliance

Table 1. Key Solutions Contributing to Beneficiary–Service Connections Through Healthy Alliance's Network

Area	Feature of SDHN	Key Activities
Technology	Closed-loop referral platform (i.e., tracks referral status over time, through fulfillment of meeting the need)	• Tracks referral information • Facilitates referrals among sectors • Documents service connections • Provides data for identifying gaps in services
User support	Training and implementation support	• Assistance with technology adoption • Social needs screening best practices • Adoption and optimal use of Healthy Alliance's network
User support	Referral center	• Assists agencies in directing referrals to organizations that are best suited for the community members • Monitors all referral activity to ensure timely service connections • Assigns Regional Referral Navigator to partners
User support	Performance optimization	• Regionally based performance consultants provide partners with ongoing feedback and workflow assistance to support network adoption
Quality	Network-wide service standards	• Ensures partners are receiving and responding to referrals in a timely fashion • Ensures service connection success
Data management	Policy- and process-related management	• Clarifies data privacy issues around data capture and sharing • Assists with data management and aggregation
Financing	Contracting	• Healthy Alliance provides a single point of access for MCO contracting with CBOs • Enables agencies not equipped to directly contract with MCO to receive funding
Governance	Board and committees	• Leverage CBO expertise in local and regional community collaboration • Governing structure includes CBO leaders alongside health systems and behavioral health providers

SDHN = social determinants health network, MCO = managed care organization, CBO = community-based organization. Source: The authors

In addition, Healthy Alliance developed network standards to ensure that referrals are addressed in a timely fashion. Healthy Alliance monitors the time it takes organizations to accept or reject referrals to ensure outreach and activity support service connection and also tracks rates of successful service connection for each service type and for individual partners. Healthy Alliance established initial benchmarks and then updated and refined expectations based on input from network organizations as well as experience managing the increasing referral activity in the network. Each organization is paired with a performance consultant employed by Healthy Alliance who provides ongoing performance feedback and helps troubleshoot implementation challenges. The Healthy Alliance team helps partners optimize the use of the network as they are onboarded and then on an ongoing basis. The team provides support on workflow development and optimization, data capture, privacy, and access to other Healthy Alliance services. When quality concerns arise, corrective plans are developed and ultimately the Integration and Quality Committee gets involved if a partner continues struggling.

These initiatives have been critical to the improvement in referral quality and success of resolution as well as ensuring all programs' profiles in the Healthy Alliance network are up

to date and reflective of service offerings including eligibility requirements and areas served, making sure the network is continually reviewed and updated. Healthy Alliance developed network standards to ensure that referrals are addressed in a timely fashion.

Data Management

Healthy Alliance developed a data factory that aggregates data from all of the disparate systems currently being used. Data from the referral platform, transportation platform, and SDHN organizations' EHRs and Health Information Exchanges (HIEs) are brought into the data factory where the data are transformed and normalized into standard data sets. Using an entity resolution solution, data are combined to produce rolled-up person-centric data views. The data factory enables Healthy Alliance to monitor its integration and quality measures and provide insights into best practices, opportunities for improvement, and the impact of the services provided. All data are viewed through a health equity lens considering geography (e.g., zip code) and population (e.g., race, ethnicity, age, and gender). In addition, Healthy Alliance uses the data to identify network service gaps and then proactively seeks to engage new organizations or encourage existing organizations to expand services to meet the needs of the communities with identified gaps in services. Data are shared with SDHN organizations as part of the feedback that Healthy Alliance's performance consultants provide to them.

Healthy Alliance has an Internal Data Governance Board (IDGB) that establishes the organization's plan for access, use, and disclosure of data. All data are stored and shared according to IDGB guidelines, Healthy Alliance security and privacy policies, and regulatory requirements such as the Health Insurance Portability and Accountability Act (HIPAA), 42 CFR Part 2 (of the Code of Federal Regulations), and Family Educational Rights and Privacy Act.

Financing

Healthy Alliance was originally funded through earnings under Medicaid 1115 Waiver Amendment DSRIP from the state of New York for years 2015 to 2020; in 2018, an IPA was established as required by New York State to contract with MCOs to achieve long-term financial viability. Healthy Alliance's vision was to create a sustainable structure to provide MCOs and others access to a broad spectrum of social services, while reducing silos, as a way to move interventions upstream from initial waiver activities that focused heavily on reducing medical costs to improve health. MCOs would benefit from contracting with the SDHN as a single entity that covers hundreds of CBOs and that provides assurance that members are receiving services, as the network tracks referrals and their outcomes (i.e., completion status) over time.

Healthy Alliance assists CBOs in meeting the regulatory and privacy requirements for MCO contracting; this allows agencies that are not equipped to directly contract with an MCO to receive funding. In addition, it affords MCOs the ability to contract with multiple organizations to holistically address social needs, providing their beneficiaries a diverse array of services, rather than engaging a single program or more typical multistakeholder efforts that tend to focus only on a single high-profile social need (e.g., housing).

Covid-19 Impact

The Covid-19 emergency accelerated Healthy Alliance's role in the community by helping the organization to build trust with health systems, community partners, public health, and others. The loosening of regulatory requirements on spending and data sharing enabled Healthy Alliance to fund community programs geared toward pandemic response efforts. During the early pandemic time frame, Healthy Alliance surveyed CBO leaders and staff to understand needs as they developed. Initially, Healthy Alliance provided essential supplies to CBO partners who were having difficulty accessing supplies such as thermometers, face masks, and hand sanitizer. It was during this time that many community members were facing unemployment and in need of basic services; in response, Healthy Alliance developed a funding contract that advanced the SDHN model. These programs — the *Covid-19 Emergency Response* and *2021 Continued Response* — provided Healthy Alliance partners added financial support of existing emergency services for Medicaid enrollees or uninsured community members. These services were not eligible for Medicaid reimbursement and were deemed critical for advancing population health objectives in the face of the Covid-19 emergency.

Instead of funding individual vertical programs, Healthy Alliance developed this model to fund a wide array of services to help CBOs as they faced increased demand for their services, thus advancing the Healthy Alliance objective of providing a holistic network of services. The reimbursement was to cover the referral and initial activity required but was not intended to cover the full cost of the service or ongoing services. The program encouraged CBOs to use the Unite Us platform to track referral activity, thus giving visibility to the work they were doing. The program also included financial assistance reimbursement for utility, rent, and medical expenses. Healthy Alliance has collaborated with hospitals, public health agencies, and MCOs during the Covid-19 period to facilitate vaccination for vulnerable individuals, those with low digital literacy or poor access to health services, and those who were being impacted disproportionately by Covid-19–related illness and deaths. Healthy Alliance obtained funding from MCOs and hospital systems and employed trusted messengers to help implement a preregistration process for vaccines for equitable vaccine distribution.

Illustrative Examples: CBO Partners

Here are brief examples of the execution through the experience of two partners, CEK RN Consulting and the Interfaith Partnership for the Homeless (IPH) Medical Respite Program.

The Experience of CEK RN Consulting, Inc.

CEK RN Consulting, Inc., serves individuals residing in low-income neighborhoods of Albany, New York, by providing advocacy and education to help them understand their health treatment(s). Community health workers (CHWs) attend doctor appointments with these individuals and provide subsequent follow-on support, empowering them to make informed decisions. The organization has been working with Healthy Alliance since 2020, engaging with the Unite Us referral platform both to receive referrals and seek access for their clients to more social care service resources. They began with receiving referrals for adults with health literacy issues and later expanded their

services to health coaching for prenatal and postnatal women and children. The CHWs use the platform and Healthy Alliance support services to receive referrals from other Healthy Alliance SDHN organizations for health literacy and coaching services but also to refer patients out to other CBOs for food and utility services.

CEK RN Consulting has recognized and expressed several benefits to being a Healthy Alliance partner, including:

1. The network of providers, support services, and referral platform bring CBOs together in unprecedented cooperation, allowing multiple organizations to navigate and manage a patient's social needs collectively. CBOs are previously vetted by Healthy Alliance and are understood to be working toward the same goal.

2. The network, services, and platform facilitate data collection, which can be used to track referral outcomes for CBO purposes (e.g., annual reports, process improvement, additional funding opportunities, etc.).

3. Healthy Alliance acts at the grassroots level, nurturing local organizations to work through HIPAA requirements; assisting with the technology, step by step; providing access to a grant writing service; and generally meeting organizations where they are and instilling trust.

In a recent use-case example, the Healthy Alliance SDHN supported an integrated approach to the social care services for a 50-year-old woman who was referred by a community health center to CEK RN Consulting through the platform for SNAP (Supplemental Nutrition Assistance Program) benefits. At the intake, the CEK RN Consulting CHW screened the client for SDOH needs and identified additional medical and mental health comorbidities, as well as immigration needs that arose after her husband left her without any documentation. The CHW then used Healthy Alliance to place referrals to other CBOs, which subsequently facilitated her transition to becoming a permanent U.S. resident; in addition, the health coaching gave this client the confidence to pursue clinical and mental health support.

The Experience of IPH's Medical Respite Program

The Medical Respite Program of the Albany, New York–based IPH provides a secure environment for rest and recuperation by bridging the gap between the hospital and home for homeless individuals with acute illness and injury. Upon discharge from hospitals, homeless individuals who are medically stable, capable of performing activities of daily living but have health needs that cannot be safely accommodated in a group living facility such as an emergency shelter, are eligible for medical respite programs. These programs provide shelter in a private or semiprivate room, access to visiting nurses, coordination of clinical care, and comprehensive case management. Respite programs are shown to facilitate reduced length of hospital stay for homeless individuals.[12] IPH Medical Respite is sometimes eligible for funding through the New York State Department of Social Services; however, the amount it receives from this funding stream is not sufficient to cover costs. Healthy Alliance has both funded this innovative program and subsequently helped secure

a hospital system contract for individuals discharged from the hospital to the IPH Medical Respite facility.

Consider the example of a man in his 20s with a new diagnosis of inflammatory bowel disease. He had been working and living with roommates, but his sudden-onset illness resulted in the loss of employment and housing. He was discharged from the hospital to the IPH Medical Respite Program for 2 months. During his stay, he attended multiple medical appointments and received regular intravenous infusion treatments. He learned about his illness and was able to recognize signs and symptoms of flare-ups and the importance of maintaining a specific diet. Once he was stabilized, he transitioned into the IPH Emergency Shelter, where he stayed for 6 months before moving into independent housing and finding a job.

The Team

In total, as of March 2023, Healthy Alliance has about 46 employees: approximately 10 referral navigators; 10 performance consultants (mixed team with nursing, care coordination, social work, and community organization experience); 10 technology and solutions consultants (data, reporting, business process, solutions, implementation, IT), as well as vendor support; three in communications; three in-network development and strategic partnerships; one in compliance/contracting; two in finance and accounting; two in human resources; one medical director; and four executive leaders. They also work with an external general counsel for legal support.

The Healthy Alliance Navigation team members help individuals connect to services in the community by providing coordination support for network partners and direct service to community members. They live in the communities they serve and often have expertise in a particular service area or have worked with CBOs in the past. Performance consultants are assigned to each partner, and each consultant supports multiple organizations at the same time. They provide partners with ongoing support around workflows and implementation, data management, and funding opportunities, as well as real-time feedback on their specific organization's data to help optimize partner participation in the network.

Metrics

Between April 2018 and December 2022, Healthy Alliance has served more than 28,000 unique community members with over 50,000 requests for service connections across 25 counties in New York State. Table 2 shows the growth of Healthy Alliance's network from six to 25 counties over close to 5 years and service connection improvement for the overall network.

The referral platform has 20 service types, some of which are used more frequently than others. Figure 3 shows the number of referrals for common services. *Housing and Shelter* is one of the most frequently requested services, but a successful connection is made just 56% of the time. To date, mental health referrals including medication management and adult and youth counseling services have the lowest successful connection frequency (36%).

Table 2. Snapshot of Healthy Alliance Growth: April 2018–December 2022

	2018*	2019	2020	2021	2022
No. of counties	6	6	6	22	25
No. of partners Organization sites**	179	295	470	520	580
No. of unique community members served	497	3,726	5,196	9,183	10,200
No. of unique referrals (service requests)	741	6,791	10,155	19,230	25,404
% of referral acceptance, annually (benchmark = 65%)	43	54	54	65	64
% of resolved service connections each year (benchmark = 70%)	50	50	60	70	60#
No. of Unite Us users in network	445	1,178	2,515	2,967	3,970

*Partial year; data started in April 2018 with the launch of the Unite Us referral platform. **Partner organizations include social care, health care, behavioral health, school districts, and government organizations. #Decrease in resolution rate of referrals in 2022 was due to multiple reasons. Healthy Alliance onboarded many new users to the network and, historically, the network has seen the resolution rate increase as the partners gain more experience and work with the Healthy Alliance team longer. In addition, Unite Us enhancements impacted network workflows and data visibility. Finally, we saw an increase in the proportion of mental health and housing service requests, which are scarce services in the region. Source: Unite Us data

Regarding the number of referrals, the network organizations serve a much larger population than is reflected in the Unite Us referral platform; referrals between organizations happen outside of that platform. Where data access is available to compare the network organizations' client rosters, the overlap with Unite Us is generally a small portion. Given the SDHN's *no wrong door* policy, we would expect and Healthy Alliance accepts that partners may not use the Unite Us platform exclusively; thus, not all referrals can be tracked through the platform. In some cases, the organizations do not have all of their programs and/or staff in the platform, and in some cases, they will use alternative referral methods that are working for them and their clients. Over time, however, as the level of engagement grows, Healthy Alliance expects continued adoption of the referral platform (Figure 4).

Healthy Alliance's data core tracks the services used as well as the linkages between community members and service providers. Of 5,805 social needs screenings captured in the Unite Us platform data (January 2021–May 2022), at least one need was identified in 3,599 (62%) of the screens. Of those 3,599 community members, 1,260 (35%) had more than one unmet social need at the time of the referral, with an average of 2.2 unmet needs. Individuals may have additional service providers not in the platform, such as government services that are not in the platform, as well as some agencies that continue to follow legacy practices of phone, email, and fax referral processes.

Hurdles

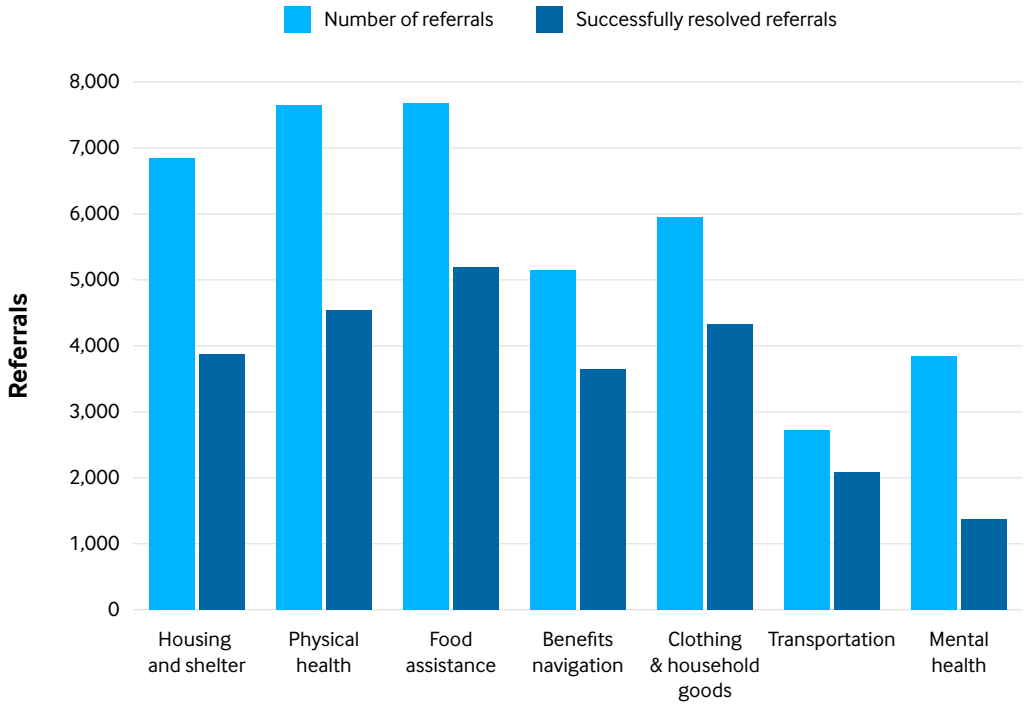
There are ongoing challenges encountered in implementing and managing an SDHN, listed in Table 3 along with current solutions and next steps.

There is growing recognition that social care data are important to direct investments and policies. The process of collecting accurate data and aggregating them, however, has been difficult, and the

FIGURE 3

Healthy Alliance Network, Number of Initiated and Resolved Referrals, by Type, April 2018–December 2022

Healthy Alliance services recorded in the Unite Us platform (from April 2018 to December 2022) were analyzed for the most frequently requested services. Resolved referrals mean that individuals were successfully connected to the requested services. Reasons reported for unresolved referrals include not being able to reach the client, duplicate referral, services declined by the client or service provider, the client was not eligible for the service, or less frequently, the service was unavailable. Note: This figure includes referrals from all types of providers but is limited to those that are entered into the Unite Us referral platform.



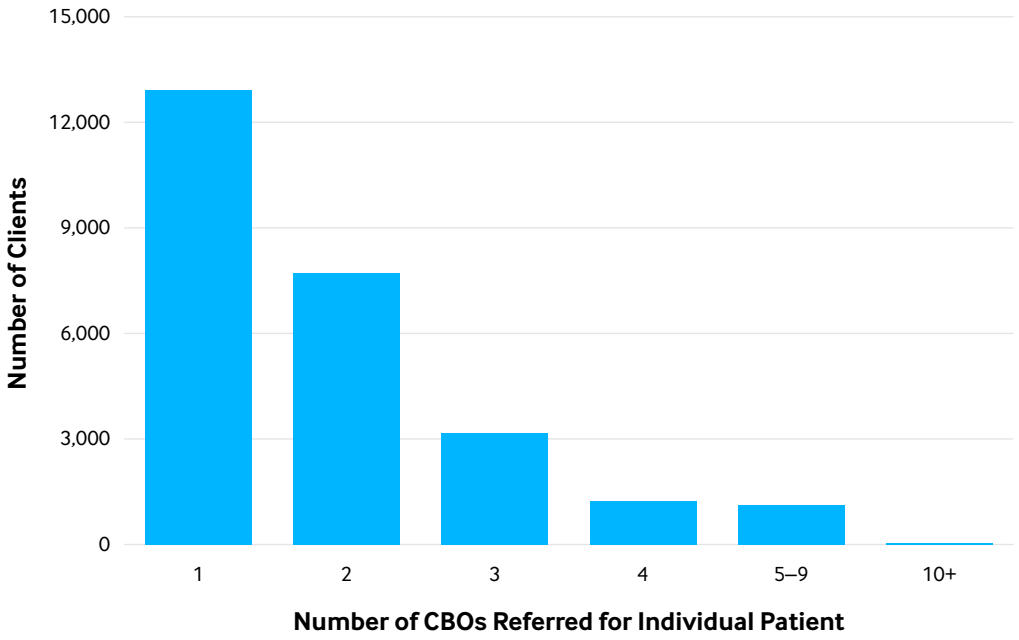
Source: The authors

Internet-based closed-loop referral platform does not provide full visibility into the services that are being provided in a community. Most organizations use computer systems for documenting services provided internally: CBOs have case management systems, Excel, and other systems; public health organizations have unique systems for contact tracing and other population-based programs; health care providers use EHRs; and government agencies have different closed data systems. However, these systems are not linked, and broad adoption of a new process requires significant resources and buy-in across these entities and also faces concerns about privacy. Healthy Alliance assists CBOs in meeting the regulatory and privacy requirements for MCO contracting; this allows agencies that are not equipped to directly contract with an MCO to receive funding.

FIGURE 4

Unique Clients Served by Number of Community-Based Organizations in the Healthy Alliance Network, April 2018–December 2022

Of the 26,200 unique Healthy Alliance clients analyzed in this data set, served through the Unite Us platform between April 2018 and December 2022, nearly half, about 12,914, were served by only one partner organization, although the number of services provided by that community-based organization (CBO) for that client may have been more than one. Among the other unique clients, they were served by anywhere from two to 12 different CBOs, although only about 39 were served by 10 or more CBOs in this period. Note: These data do not include the count of CBOs serving any clients who were also served outside of the Healthy Alliance network and its Unite Us referral tool.



Source: The authors

In working to overcome hurdles, Healthy Alliance's Performance Team provides training and user support to all partner organizations on both sides of the SDOH referral equation — CBOs and health systems alike. Many partner organizations are encountering frequent staff turnover, making consistent network adoption more challenging. To counter that, the Healthy Alliance team provides ongoing education, engagement, and workflow adoption support. Two examples highlight how Healthy Alliance's efforts are tackling issues across partners. In both cases, the solutions spotlight data management needs.

First, when one of the hospital systems started a near-universal SDOH screening program and began making referrals within the referral platform, successful connections were made only half of the time. Healthy Alliance identified the root causes, which included key missing data

Table 3. Challenges Encountered Implementing and Managing an SDHN

Area	Challenge	Current Solutions	Next Steps
SDOH screening	• SDOH screening approaches are inconsistent and not visible to partner organizations • High partner staff turnover and lack of training on screening	• Standardize SDOH domains in screening tools • Disseminate best practices on screening frequency • Encourage common platform for screening to reduce redundancy	• Provide training on trauma-informed approach to SDOH screening
Social care data visibility	• Silos of data wherein each partner/sector uses a different system to track data • Only social care referral data on Unite Us platform • Lack of integration between CBO systems and Unite Us system leads to burden of dual entry of data for already sparsely staffed CBOs • Social care data aggregators are not readily available and are expensive	• Collect service data rosters from partner organizations in addition to Unite Us referral data	• Establish interoperability • Ensure data privacy
Demographic data capture	• Inconsistent and/or duplicative demographic data capture	• Disseminate best practices for obtaining self-identified race/ethnicity, immigration status, gender, sexual orientation, etc.	• Establish data visibility across organizations so clients are not repeatedly asked for demographic data
Complexity of social service navigation	• Government social service benefit navigation is complex, time-consuming, and inefficient • Eligibility requirements are complex	• Referral navigators • CBO partners that are experts in benefits navigation	• Establish single-entry referral system that includes government and nongovernment social services
Network service quality	• Payers want to ensure quality for services rendered by CBO	• Institute IPA participation criteria and quality measure framework • Establish standardized network guidelines for referrals	• Surveying members on experiences
Service availability	• Availability of social services vary widely across geographic region, with significant gaps particularly in rural areas	• Identify gaps through analysis of service utilization data	• Inform community efforts and governmental policies to redress service gaps
Sustainable funding streams	• Sustainable funding for social care remains a challenge	• Blending and braiding of funds	• Incentivize MCOs to contract with SDHN to provide beneficiaries a diverse array of services rather than single programs • Establish policies mandating MCO funding of social services to all Medicaid members • Secure government funding for SDHN until long-term return on investment is evident to private payers
CBO funding	• Paying for startup cost of joining network and for CBO services	• Secure alternate funding for CBOs to adopt closed-loop platform and adjust workflows • To date, Healthy Alliance has paid the fee for CBOs to onboard onto the Unite Us platform and for service connection fees to encourage referrals through platform	• None

Table 3. Challenges Encountered Implementing and Managing an SDHN (cont.)

Area	Challenge	Current Solutions	Next Steps
		• Establish successful models for payment of CBO services: fee-for-service for agencies that provide discrete services (such as food pantries) and case rates (for those with a holistic wraparound approach)	

SDHN = social determinants of health network, SDOH = social determinants of health, CBO = community-based organization, IPA = independent practice association, MCO = managed care organization. Source: The authors

elements in the outgoing referrals. Healthy Alliance worked with the hospital to address this challenge and provided staff thorough additional training, increasing successful referral connections from 50% to 70%.

Second, on the CBO partner side, a particular challenge has been in capturing demographic data; 51% of all client records in Unite Us had undisclosed race/ethnicity data in 2021. The Healthy Alliance team worked with partners to understand why this was happening. Reasons included lack of training of the staff to ask clients, redundancy in documentation, and client hesitation to disclose race/ethnicity data. One partner organization was initially reporting race/ethnicity in only 12% of clients, and as a result of working with the Healthy Alliance performance consultant team, their race/ethnicity capture increased to 90% in 2022.

Funding and payment models represent an ongoing hurdle. Since 2015, New York State has explored alternative payment models to modernize its Medicaid program. One of its objectives was to replace the traditional fragmented, fee-for-service payment system with "an integrated and community-based system focused on providing care in or close to the home."[18] The state funded Healthy Alliance through a Medicaid waiver under a demonstration provision in Section 1115 of the Social Security Act.[19] Healthy Alliance subsequently formed the IPA as a way to secure a more long-term funding stream by linking independently operated CBOs to health plans and providers. Healthy Alliance has evolved into an organization encompassing three entities — an IPA (Healthy Alliance IPA), a 501(c)(3) nonprofit (Healthy Alliance Foundation, Inc.), and the DSRIP PPS organization (Alliance for Better Health, LLC) — to provide vehicles to enable funding from multiple payers (MCOs, governments, philanthropies, medical providers, private sector entities) and reflecting the legal requirements and expertise required to navigate the complexities of the blending and braiding approach to financing social care (Figure 5).

Although Healthy Alliance entities have received grants and funds through hospital and MCO contracts, none of the entities generate an income yet. Healthy Alliance primarily operates on funds earned by the PPS during DSRIP as the work aligns with the vision of DSRIP's promising practices,[20] which calls out the SDHN model. In the meantime, the New York State Department of Health has submitted another waiver application, and the latest draft, 1115 Waiver-New York Health Equity Reform, currently under review with the U.S. Centers for Medicare & Medicaid Services (CMS), would help continue this work by designating regional SDHNs (name of entity might change to align with CMS and other initiatives focused on health-related social needs).

FIGURE 5

Healthy Alliance's Funding Stream Model

The Healthy Alliance funding stream, as of 2023, takes advantage of multiple funding sources by *blending and braiding* funds from government, philanthropy, and health sector entities to provide funding for its Social Determinants of Health Network. Integrating social service providers under a single organization makes social care service investment easier and ideally more attractive and feasible for payers — such as government entities, health care organizations, and insurance companies — by contracting with Healthy Alliance through the appropriately purposed entity.

Source: Healthy Alliance

This new waiver engages MCOs and advances value-based payment requiring SDHN participation, which would provide additional investments to continue the vision and path toward sustainability. Over time, as value is demonstrated, we anticipate SDHN funding would be more evenly spread among a variety of payers (employers, government, philanthropy, businesses, health care, etc.) through the appropriate entity: LLC, IPA, or 501(c)(3). Which entities receive the greatest proportion of funds in the future will ultimately depend on which sector derives the most value from the SDHN.

Thus, in addition to MCO funding and Medicaid waiver funds earned to continue aligned activities including supporting the SDHN, Healthy Alliance assists partners in obtaining grants and other funding sources for the services they provide. Since its inception in 2018, Healthy Alliance has secured seven contracts with health plans and one contract from a health system. Healthy Alliance has also steadily grown its SDHN of CBOs. Both the funders and service providers might see value in the connections that Healthy Alliance provides, although sustainable funding has remained elusive. Healthy Alliance provides key contracting experience that the CBOs often lack. From the perspective of a sustainable business, both sides would pay Healthy Alliance for its intermediary services. However, the CBOs operate on razor-thin margins and in the case of the SDHN are beneficiaries of resources.

MCOs have much larger budgets, and they have deep experience with contracting. For them, the chief concern has been the cost of establishing and maintaining these contracts (a transaction cost). They have minimized their transaction cost by exclusively working with a few CBOs, which has been important to them, given uncertainties about whether working with CBOs will have any return on investment. The wrong pockets problem is a frequently cited obstacle preventing greater MCO investment in more comprehensive social care programs due to member adverse selection and churn, which make MCOs less likely to reap benefits of an SDOH investment.[11]

The network of providers, support services, and referral platform bring CBOs together in unprecedented cooperation, allowing multiple organizations to navigate and manage a patient's social needs collectively. Since 2018, New York State has incentivized connection of health and social care by requiring each value-based payment MCO contract "to include at least one SDOH intervention and a contract with at least one community-based provider."[14] With this minimal requirement, MCOs have continued to fund vertical social care programs that cover limited parts of the population and work with single CBO programs. However, our experience shows the importance of connecting health care to more holistic social care networks; our data are showing that 35% of individuals screened have more than one unmet social need, which is consistent with published data that low-income people tend to have multiple unmet social needs (38% have two or more unmet social needs).[21] The SDHN model can counter this challenge by providing a diverse array of services to all MCO beneficiaries by permitting smaller grassroots CBOs to participate in funding streams that would otherwise be inaccessible, thus improving the impact of social care funding in a community.

Although some states are beginning to invest in SDHNs, sustainable funding challenges remain. In recognition that health sector funders want to see quantitative returns on investment and may remain unconvinced that spending on non–health care services will improve the metrics, they are primarily measured by acute health care use and outcomes. Healthy Alliance has partnered with an academic evaluation team for a rigorous multiyear evaluation of economic and health outcomes impact of the model.[22] The future results may help demonstrate downstream economic benefits from the novel model, thereby encouraging investments and policies that support the use of the SDHN specific model of a community care hub as a scalable way to comprehensively impact health.

Where to Start

Establishing a successful SDHN presents technological, organizational, and financial challenges. Our experience shows that an Internet-based referral platform infrastructure can facilitate connecting health systems to social care service providers in a community and identify gaps in services. Just as important, however, are the human outreach efforts in change management, training, and listening to and supporting community partners. In addition to providing needed services, SDHNs have the potential to reduce medical costs, although additional studies are needed and ongoing. In the meantime, continued state and federal funding could encourage the creation and expansion of SDHNs to build the needed programs and infrastructure. Policies mandating social care services as part of health care benefits could also help facilitate sustainable

funding of SDHNs. Although there are likely multiple paths forward in the funding of an SDHN, Healthy Alliance's experience has elucidated numerous features and matured the model of a robust curated social care network to begin to address key challenges.

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Appendix

Healthy Alliance SDOH Screening Tool

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References

1. McGinnis JM, Williams-Russo P, Knickman JR. The case for more active policy attention to health promotion. Health Aff (Millwood) 2002;21:78-93 https://www.healthaffairs.org/doi/10.1377/hlthaff.21.2.78 https://doi.org/10.1377/hlthaff.21.2.78.

2. Wright BJ, Vartanian KB, Li HF, Royal N, Matson JK. Formerly homeless people had lower overall health care expenditures after moving into supportive housing. Health Aff (Millwood) 2016;35:20-7 https://www.healthaffairs.org/doi/10.1377/hlthaff.2015.0393 https://doi.org/10.1377/hlthaff.2015.0393.

3. Srebnik D, Connor T, Sylla L. A pilot study of the impact of housing first-supported housing for intensive users of medical hospitalization and sobering services. Am J Public Health 2013;103:316-21 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3558756/ https://doi.org/10.2105/AJPH.2012.300867.

4. Carlson S, Keith-Jennings B. SNAP Is Linked with Improved Nutritional Outcomes and Lower Health Care Costs. Center on Budget and Policy Priorities. January 17, 2018. Accessed September 11, 2022. https://www.cbpp.org/research/food-assistance/snap-is-linked-with-improved-nutritional-outcomes-and-lower-health-care.

5. Feeding America Research. The Healthcare Costs of Food Insecurity. Published July 17, 2019. Updated November 23, 2022. Accessed September 11, 2022. https://public.tableau.com/app/profile/feeding.america.research/viz/TheHealthcareCostsofFoodInsecurity/HealthcareCosts.

6. Berkowitz SA, Terranova J, Randall L, Cranston K, Waters DB, Hsu J. Association between receipt of a medically tailored meal program and health care use. JAMA Intern Med 2019;179:786-93 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6547148/ https://doi.org/10.1001/jamainternmed.2019.0198.

7. Bradley EH, Canavan M, Rogan E, et al. Variation in health outcomes: the role of spending on social services, public health, and health care, 2000-09. Health Aff (Millwood) 2016;35:760-8 https://www.healthaffairs.org/doi/10.1377/hlthaff.2015.0814 https://doi.org/10.1377/hlthaff.2015.0814.

8. Hogg-Graham R, Edwards K, Ely TL, Mochizuki M, Varda D. Exploring the capacity of community-based organisations to absorb health system patient referrals for unmet social needs. Health Soc Care Community 2021;29:487-95 https://onlinelibrary.wiley.com/doi/10.1111/hsc.13109 https://doi.org/10.1111/hsc.13109.

9. Pruitt Z, Emechebe N, Quast T, Taylor P, Bryant K. Expenditure reductions associated with a social service referral program. Popul Health Manage 2018;21:469-76 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6276598/ https://doi.org/10.1089/pop.2017.0199.

10. Horwitz LI, Chang C, Arcilla HN, Knickman JR. Quantifying health systems' investment in social determinants of health, by sector, 2017-19. Health Aff (Millwood) 2020;39:192-8 https://www.healthaffairs.org/doi/10.1377/hlthaff.2019.01246 https://doi.org/10.1377/hlthaff.2019.01246.

11. Nichols LM, Taylor LA. Social determinants as public goods: a new approach to financing key investments in healthy communities. Health Aff (Millwood) 2018;37:1223-30 https://www.healthaffairs.org/doi/10.1377/hlthaff.2018.0039 https://doi.org/10.1377/hlthaff.2018.0039.

12. Cooper D. Medical respite programs for people who experience homelessness. Dela J Public Health 2021;7:112-7. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8352395/ https://doi.org/10.32481/djph.2021.07.017.

13. Chappel A, Cronin K, Kulinski K, et al. Improving health and well-being through community care hubs. Health Affairs Forefront. November 29, 2022. https://www.healthaffairs.org/content/forefront/improving-health-and-well-being-through-community-care-hubs https://doi.org/10.1377/forefront.20221123.577877.

14. Dutton MJ, Osius E, Rozario NM, Zayhowski Segal J. Working with Community Care Hubs to Address Social Drivers of Health. Manatt. November 17, 2022. Accessed March 23, 2023. https://www.manatt.com/insights/white-papers/2022/working-with-community-care-hubs-to-address-social.

15. Butler SM, Maguire M. Building Connective Tissue for Effective Housing-Health Initiatives. Brookings. May 3, 2022. Accessed March 23, 2023. https://www.brookings.edu/research/building-connective-tissue-for-effective-housing-health-initiatives/.

16. Hughes DL, Mann C. Financing the infrastructure of accountable communities for health is key to long-term sustainability. Health Aff (Millwood) 2020;39:670-8 https://www.healthaffairs.org/doi/pdf/10.1377/hlthaff.2019.01581 https://doi.org/10.1377/hlthaff.2019.01581.

17. Administration for Community Living. ACL Announces Selected Participants of the Community Care Hub National Learning Community. November 4, 2022. Accessed April 2, 2023. https://acl.gov/news-and-events/announcements/acl-announces-selected-participants-community-care-hub-national.

18. New York State Department of Health. Value Based Payment: Update. New York State Roadmap for Medicaid Payment Reform. December 2021. Accessed March 23, 2023. https://www.health.ny.gov/health_care/medicaid/redesign/vbp/roadmaps/updated_vbp_roadmap.htm.

19. Medicaid.gov. About Section 1115 Demonstrations. Centers for Medicare & Medicaid Services. Accessed March 25, 2023. https://www.medicaid.gov/medicaid/section-1115-demonstrations/about-section-1115-demonstrations/index.html.

20. New York State Department of Health Office of Health Insurance Programs. New York State Medicaid Redesign Team (MRT) Waiver: Delivery System Reform Incentive Payment (DSRIP) Amendment Request. September 17, 2019. Accessed April 2, 2023. https://www.health.ny.gov/health_care/medicaid/redesign/dsrip/2019/docs/amendment_req.pdf.

21. Kreuter MW, Garg R, Li L, et al. How do social needs cluster among low-income individuals? Popul Health Manage 2021;24:322-32 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8215422/ https://doi.org/10.1089/pop.2020.0107.

22. Systems for Action. Integrating Health and Social Services Through a Novel Independent Practice Association. 2021. Accessed March 25, 2023. https://systemsforaction.org/projects/integrating-health-and-social-services-through-novel-independent-practice-association.