OVERVIEW OF COMMUNITY INFORMATION EXCHANGE (CIE) EFFORTS

May 2022

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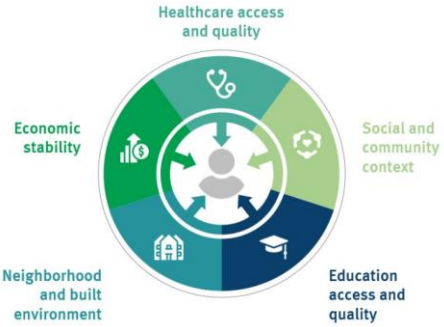
Executive Summary

This report was created to provide a high-level overview of Community Information Exchange (CIE). A CIE is a localized effort to create and sustain the technology and relationships required to collect and act-upon the Social Determinants of Health (SDOH) needs of both individual and community. The CIE components are not new concepts or efforts. Interoperability and referral systems, for example, have a long history. However, critical to the success of addressing SDOH is collaborating with an ever-changing array of non-standard, non-profit, and localized efforts, to provide help outside of the traditional provider/payer systems. Coordinating care requires bi-directional information exchange and engagement. Creating and sustaining this is challenging for a number of reasons. Many social services are outside of the traditional provider-patient-payer relationship. Social service providers vary in what they provide, how they provide it, who they provide it for, and where they provide services. Technological capacity and use vary, as do methods for collecting, storing, and governing data. The landscape of funding, administration, and service delivery is also not standardized.



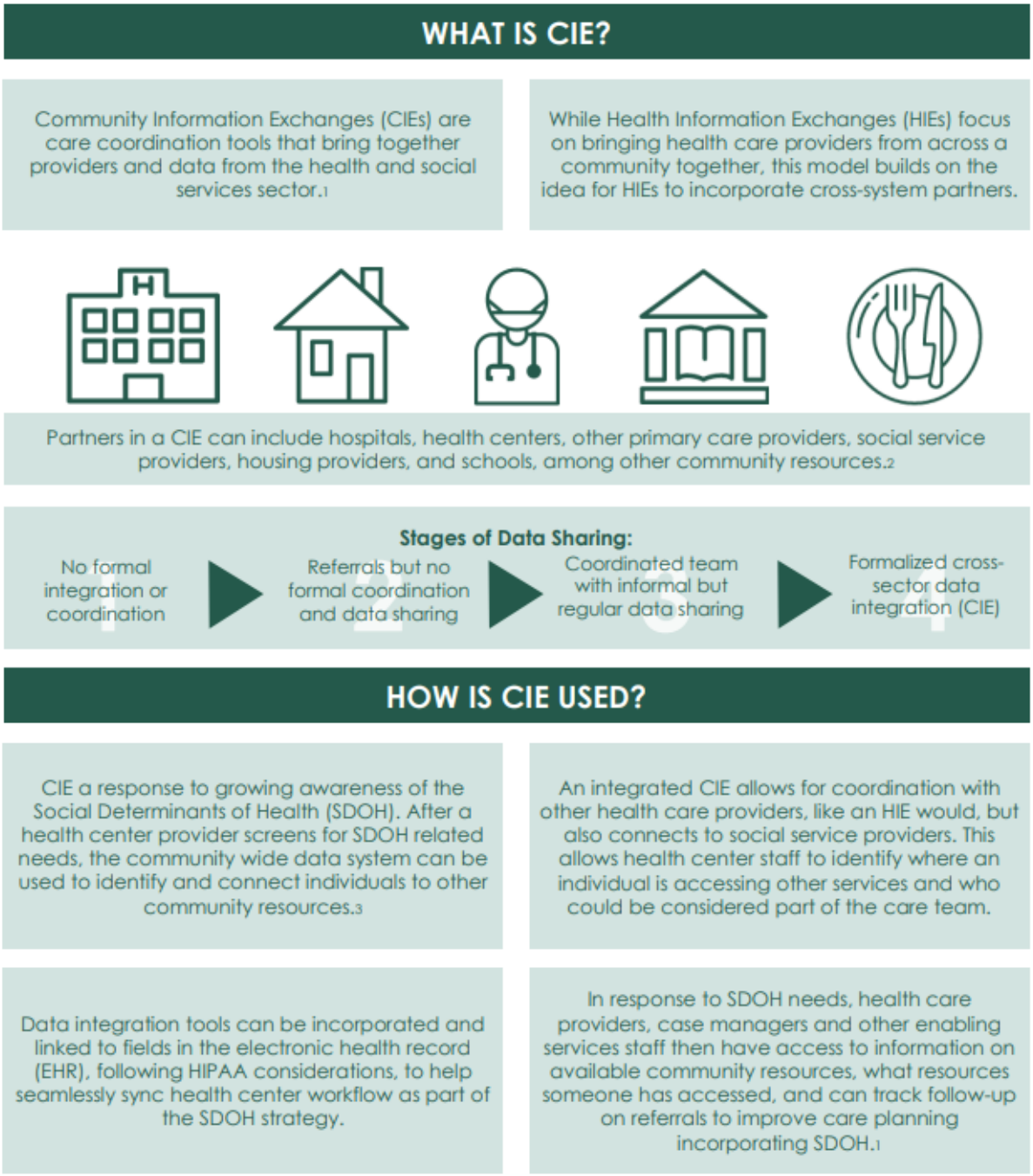
This overview also seeks to provide a conceptual knowledge of CIE in service both the 2022-2024 SDOH strategy**,** Michigan's Roadmap to Healthy Communities [1], and the Michigan Health IT Roadmap, Bridge to Better Health [2] - as each roadmap intersects at CIE.

[1] https://www.michigan.gov/-/media/Project/Websites/mdhhs/Folder1/Folder2/Folder1/FULL_SDOH_Strategy_032222.pdf?rev=809a412c24274ca28e1e707bf79ac024

[2] https://www.michigan.gov/mdhhs/-/media/Project/Websites/mdhhs/Doing-Business-with-MDHHS/Boards-and-Commissions/Health-Information-Technology-Commission/CY2022_Bridge_to_Better_Health_Final_Draft_Report.pdf?rev=bb547852c24942f888790e60ed264a80

Definition

The National Health Care for the Homeless Council provides a comprehensive definition of CIE in this infographic:[3]



[3] https://nhchc.org/wp-content/uploads/2020/04/NHCHC_Community-Information-Exchange2.pdf

Core Components

Existing models consistently define the core technical components as:

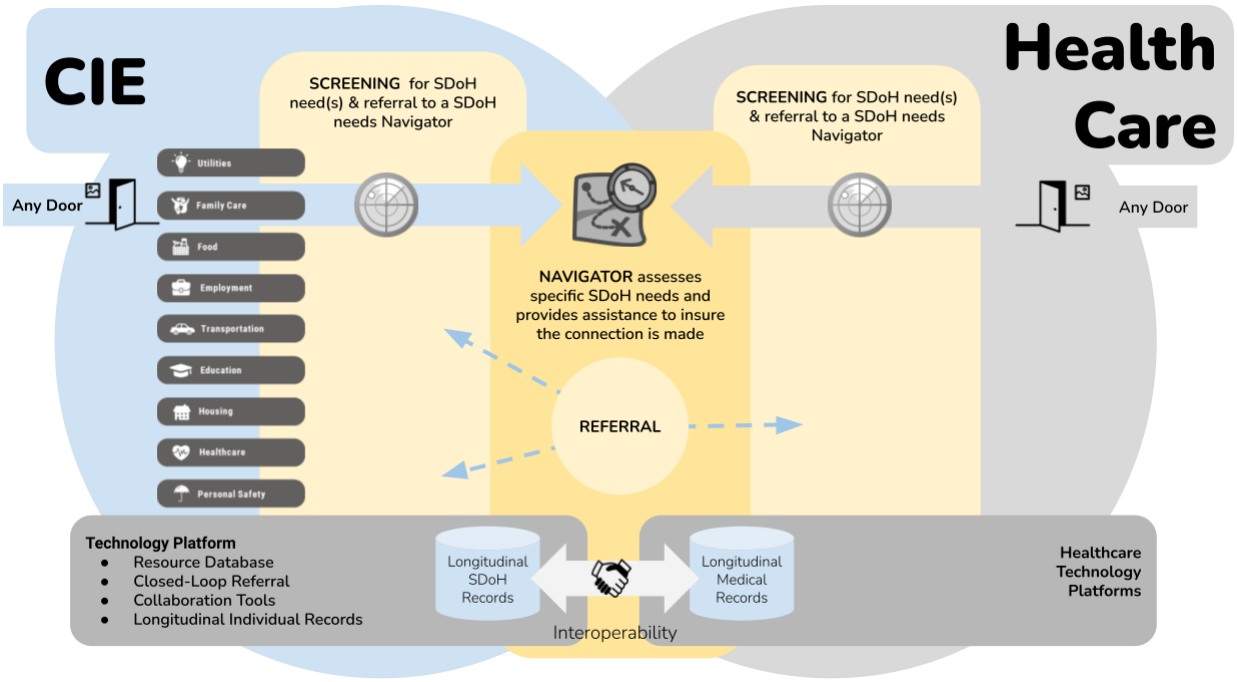
- SDOH Screening – How needs are identified and the intake process.
- Referral system (closed loop) – Connecting patients with care and having that intervention documented in a way that results in a longitudinal record of care.
- Resource directory – Database of providers and services
- Interoperability – Ability to communicate between referral system, resource directory, and provider systems and Electronic Health Records (EHR).
- Data analysis and standardized metrics – Ability to identify needs at the community level as well as tracking the efficacy of the effort.

Existing models also recognize that technology only provides a foundation. Additional considerations include:

- Policy – Encouraging, facilitating, and funding data exchange, as well as actively promoting policies that encourage collaboration and revising policies that inhibit it.
- Governance – By whom, for whom, how, when, and why, the data is utilized.
- Engagement – The challenge of making the system valuable and accessible in vastly different settings, meeting the needs of patients, community-based organizations (CBOs) and clinical providers such that all are incentivized to participate. On-boarding providers is often a defined role in existing CIEs (someone dedicated to reaching out to service providers and working with them on enrollment into the CIE), often handled by vendors like 2-1-1. They may have limited staff and resources to devote to a new business process and funding, training, and supporting will be the challenge. Others will have a significant existing investment in technology and business processes where interoperability will be the main challenge. Above all patients and providers of every variety need to find see the effort is worth the outcome.

How CIE components fit together

Existing CIE efforts tend to be tailored to specific community needs having been developed by the people and resources in the community they serve and prioritize the needs specific to the individuals in that community. Therefore, there is a great deal of variability in approach. There are key similarities, however. Most, if not all, rely on a “no wrong door” approach, a screening process, a navigator role, and resource and referral technology to facilitate the entire process (often provided by vendors like Unite Us, Aunt Bertha, Healthify and/or 211). Interoperability and closing the referral loop between CIE data and Electronic Health Records (EHRs) and/or other Health Information Networks (HINs) is also a goal across models.



CIE Examples in Other States

CALIFORNIA

SAN DIEGO CIE

The San Diego CIE (CIESanDiego.org), while not statewide, provides a mature model of CIE using Salesforce CRM as the technology platform.

The San Diego CIE began as a pilot focused on homeless populations. Building on successes from the original effort that CIE has continued to expand. Live Well San Diego, and one of the CIE's collaborators published this description on their site: "The initial pilot addressed the needs of homeless service provides enabling more than 75 users across six organizations to access program history and case manager information for more than 800 homeless clients in downtown San Diego. With a second grant of $1 million from the Alliance Healthcare Foundation, CIE will expand to organizations serving seniors aging in the community."[4]

[4] https://www.livewellsd.org/content/livewell/home/all-articles/partners/partner-home/community-information-exchange.html

San Diego 2-1-1 has trademarked "CIE" and the President & CEO of San Diego 2-1-1 (William York) is also President & CEO of CIE San Diego. The CEO bio on CIESanDiego.org suggests "As the President & CEO of 2-1-1 San Diego, William York operates one the most successful 2-1-1 providers in the nation… William has successfully secured 94 percent of the organization's $14 million budget in fee-for-service contracts and business partnerships."[5] 2-1-1 San Diego is likely inextricably linked to CIE San Diego. In any case, 2-1-1 plays a central role. San Diego differs from most examples in that 2-1-1 is typically managed by United Way (as is the case in Michigan).

Similar to MiBridges in Michigan, as well as Michigan 2-1-1, The San Diego resource database is open to the public.[6] This appears to be a Salesforce CRM platform that is also where vetted providers log in to interact on the system.

CIE San Diego is managed by[7]

- Executive Leadership (9 positions)
- Program Leadership (9 positions)
- CIE Advisory Board (24 stakeholders made up of stakeholders such as non-profits, payers, providers etc.)

UNKNOWNS:

It's unclear what the specific relationship is between CIE San Diego and the 115 Partners listed on their site, many of which are traditional payers like BCBS and clinical providers. Listed as Data Sharing Only Partners are [8]

- Live Well San Diego
- San Diego County Health & Human Services
- Sand Diego County Public Safety

Existing CIEs in Michigan, and other states, have a SDOH screening process at every possible entry point. It's implied that to help an individual find needs one would have to determine what those needs are, but it's unclear how CIE San Diego approaches this process.

[5] https://ciesandiego.org/about/william-york/
[6] https://my211.force.com/s/?language=en_US
[7] https://ciesandiego.org/about/
[8] https://ciesandiego.org/partners/

NORTH CAROLINA

NCCARE360 is the first statewide network that unites health care and human services organizations with a shared technology that enables a coordinated, community-oriented, person-centered approach for delivering care in North Carolina. NCCARE360 helps providers electronically connect those with identified needs to community resources and allow for feedback and follow up. This solution ensures accountability for services delivered, provides a "no wrong door" approach, closes the loop on every referral made, and reports outcomes of that connection. NCCARE360 is available in all 100 counties across North Carolina.[9]

NCCARE360 is a public-private partnership between the NC Department of Health and Human Services (DHHS) as part of their part of the Healthy Opportunities[10] strategy and The Foundation for Health Leadership and Innovation[11] (FHLI).

STRATEGIES INCLUDE:

- Creating an interactive statewide map of SDOH indicators that can guide community investment and prioritize resources.
- Developing a set of standardized screening questions to identify and assist patients with unmet health related resource needs.
- Building a statewide coordinated care network (NCCARE360) to electronically connect those with identified needs with community resources – and allow for a feedback loop on the outcome of that connection.
- Incorporating SDOH strategies throughout the Medicaid 1115 wavier.
- Developing Healthy Opportunities Pilots to test and evaluate the impact of providing select evidence-based, non-medical interventions related to housing, food, transportation, and interpersonal safety to high-needs Medicaid enrollees.
- Building an infrastructure to develop and support a Community Health Worker Initiative.
- Examining better ways to streamline cross-enrollment in existing key benefit programs.

IMPLEMENTATION

IMPLEMENTATION WAS A COLLABORATIVE EFFORT INVOLVING:

- Expound Decision Systems, a cloud-based technology and implementation solutions for non-profit sector
- Unite Us, a popular referral system platform
- United Way of NC 2-1-1, nearly identical to the Michigan United Way 2-1-1

[9] https://nccare360.org/about/

[10] https://www.ncdhhs.gov/about/department-initiatives/healthy-opportunities

[11] https://foundationhli.org/#:~:text=The%20Foundation%20for%20Health%20Leadership,Carolina%20through%20collaboration%20and%20respect.

GOVERNANCE

NCCARE360 is guided by The Foundation for Health Leadership and Innovation (FHLI)

NCCARE360 MANAGEMENT STRATEGY[12]

Community Engagement Team (15 people)

Community Engagement Managers - *hold all community meetings in a particular region and ensure that the technology is personalized to fit each partner's needs.*

Network Health Managers - *monitor the network and identify trends in the data to help ensure its success. They conduct ongoing user support and receive feedback on features, empowering partners to continue utilizing the NCCARE360 network*.

Account Managers - *provide high touch support to systems, managed-care organizations, hospitals and other customers and funding partners in North Carolina. They work with accounts on EHR/CRM integrations, data options and SDOH strategy.*

This team is powered by Unite Us [an outcome-focused technology company that builds coordinated care networks of health and social service providers][13]

NC 2-1-1 Navigators and Resource Team

United Way of North Carolina (UWNC) is the state association for 52 United Ways serving communities all across North Carolina. UWNC also administers the statewide NC 211 information and referral system.

Resource Team - *verifies local resources that are integral to the build out of NCCARE360 and helps inform the engagement strategy by the Community Engagement Manager.*

Navigators - *based in the NC 211 call centers, respond to requests received via www.nccare360.org and support health care providers who need help making the best referral.*

FUNDING

Through partnerships with federal, state, and local resources, funding is sometimes available to be directed to community-based organizations to bolster the CBO infrastructure. [14] The Foundation for Health

[12] https://nccare360.org/team/
[13] https://uniteus.com/
[14] https://nccare360.org/community-funding/

Leadership and Innovation (FHLI) will award grants to 15 community organizations in 10 counties to support the growth and network health of NCCARE360. FHLI is awarding two separate grants: [15]

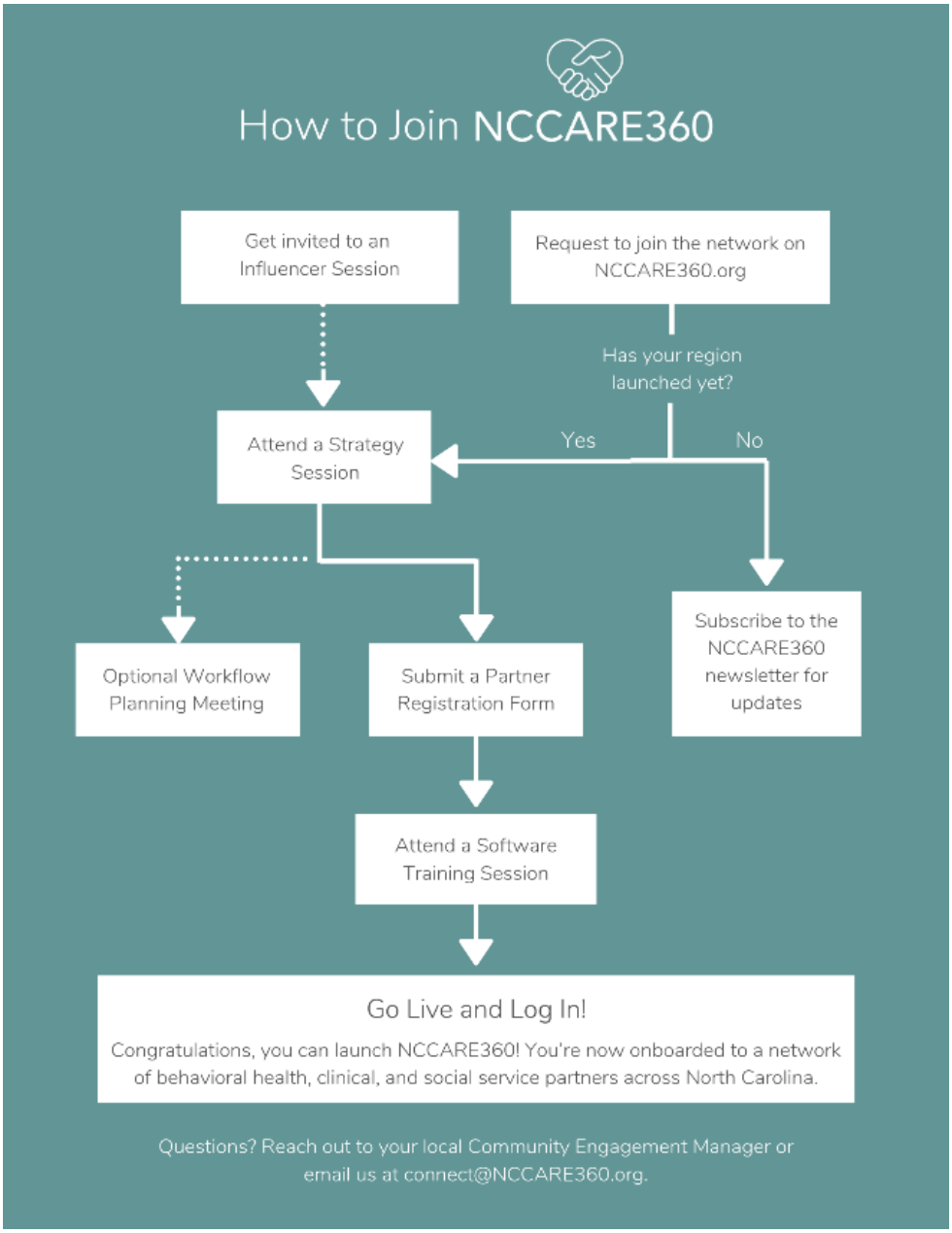
- Community Organizations Health Equity Grant *will onboard community-based organizations onto or increase their use of NCCARE360. The goal is to help these organizations connect the people they serve to other community services and increase their own capacity to respond to referrals.*

- Network Support Agency Health Equity Grant *will provide funding for organizations to serve as local hubs and support clusters of community-based organizations currently on the NCCARE360 network through meaningful technical assistance for use of the platform. Both grants will work across healthcare and community organizations to create cross-sector partnerships to better address whole-person health.*

- The grant funding was made available to North Carolina DHHS through the CDC's largest investment to date to support communities affected by COVID-19-related health disparities. It is part of $2.25 billion provided through the federal Coronavirus Response & Relief Supplemental Appropriations Act.[16]

[15] https://nccare360.org/community-funding/current-funding-opportunities/
[16] https://www.cdc.gov/publichealthgateway/partnerships/COVID-19-Health-Disparities-OT21-2103.html

ON-BOARDING PROVIDERS[17]



[17] https://nccare360.org/join/

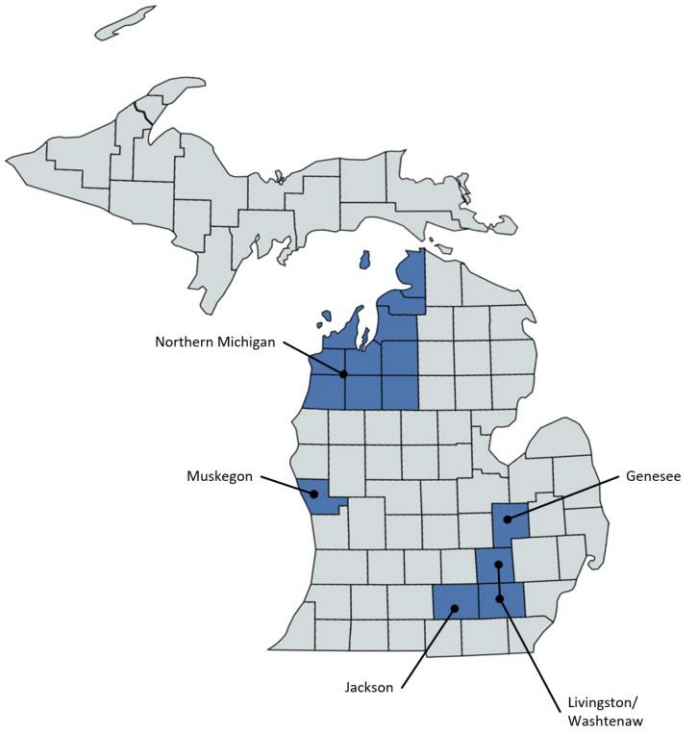
Case Example: What this looks like at the individual level in NC

Heather might show up at a homeless shelter, her primary care office, a food pantry, or a local human services nonprofit seeking help. Those organizations will all use the same assessment tool to screen her for various needs, such as healthcare, transportation, housing, food, and employment, not just the specific need she came in for. This organization will enter the information about Heather's identified needs into the hub tool (Unite Us), and a navigator (2-1-1 United Way) will review the information and refer Heather to various local or state services that have been mapped as part of the region's inventory of community resources. The receiving organization will enter information back into the system, indicating whether Heather made it to the food pantry or employment office she was referred to, allowing the staff at the original screening organization to know if her needs were or were not met, and to follow up with Heather appropriately at her next appointment.

Examples in Michigan

Similar to the North Carolina NCC360 model, in Michigan the CDC's **Clinical Community Linkages** (CCL) strategy[18] was implemented through the State Innovation Model (SIM)[19] . Michigan's SIM grant concluded on January 31, 2020, however, the Community Health Innovation Regions (CHIR) program has continued to advance CIE in their respective regions. A claims analysis completed in 2021 documented the success of this work through significant reduction in utilization and cost for CHIR participants in 4 of the 5 regions. [20]

A CHIR is a unique model for improving the wellbeing of a region and reducing unnecessary medical costs through collaboration and systems change. CHIRs engage a broad group of stakeholders to identify and address factors that affect residents' health, such as housing, transportation, and food insecurity, as well as access to high-quality medical care.[21]



[18] https://www.cdc.gov/dhdsp/pubs/docs/ccl-practitioners-guide.pdf
[19] https://innovation.cms.gov/innovation-models/state-innovations
[20] https://www.michigan.gov/-/media/Project/Websites/mdhhs/Folder1/Folder93/Section_1144.pdf?rev=a1fe80e3558d4d778960e7b86d70e297
[21] https://michirlearning.org/about-chirs

Jackson Care Hub

THE JACKSON CARE HUB (HUB) CONSISTS OF TWO PARTS:

(1) a social services screening and navigation application linked to the new and comprehensive Michigan 2-1-1 database and

(2) an IT infrastructure that connects community agencies to one another and to the shared community electronic health record. The Hub supports each step in a common core workflow co-designed by community service agencies (identify, assess, assist, and follow-up)

THE SOCIAL DETERMINANTS OF HEALTH (SDOH) SCREENING TOOL

The Jackson CHIR has developed a virtual Hub that hosts the social determinants of health SDOH screening tool for community agencies to use. An identical screening tool integrated with the Jackson Community Electronic Medical Record (an Epic platform) provides the linkages necessary to minimize duplication in screening and effectively coordinate services to address individuals' needs. Once specific SDOH domain needs are identified, whether screening occurred at a medical practice or by any community provider, the Hub's short assessment module provides additional questions to enable staff to determine severity and acuity of need and more precisely match need to best available community resource.

Identify:
The results of completed screenings will be exchanged between the screening and referring systems to allow the results to be visible to subsequent users in either system. When a specific domain need is identified by the screening tool, the screener may be prompted to complete a few "assessment" questions for that domain which will allow them to get a more precise estimate of the level of need.

Assess:
Once a domain need is identified, the Hub software can guide staff through an assessment process that will determine level of needs, find best options for resources to assist in meeting needs, address client preferences for care, and obtain client consent for sending referrals. The Hub also enables assessment and tracking of self-sufficiency in each core SDOH and functional domain through the Arizona Self-Sufficiency Matrix.

COMMUNITY AND PROVIDER REFERRAL PLATFORM

ASSIST

Assistance can be provided directly (for example, if the client presents to an agency that is able to provide the desired service) or through the closed-loop referral system embedded in the Hub. The Hub can send a standard electronic referral message ('task') to any connected community provider which will show up on their dashboard in the HUB. The agency will have three business days (72 hours) to reach out to the individual; 'urgent' referrals are to be addressed within 24 hours. To ensure accountability, there is an escalation phase built into the Hub to notify the user's supervisor if these deadlines are not met.

FOLLOW-UP

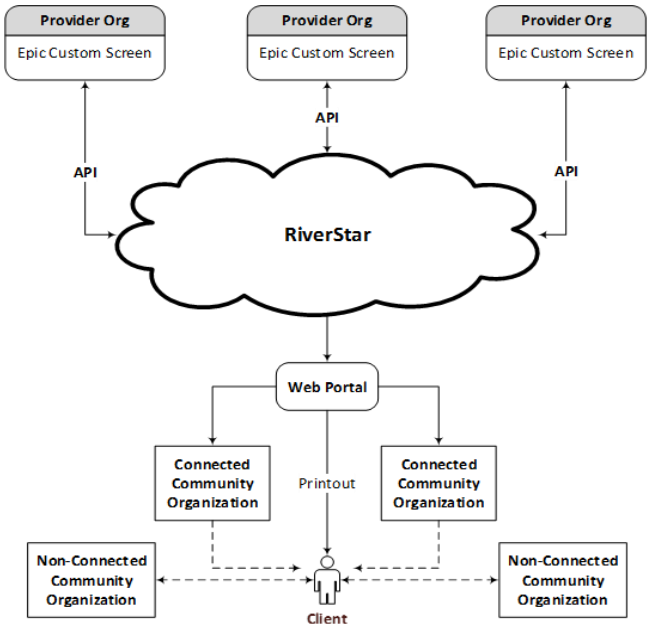
The resource provider receiving the referral can update the status of the referrals, make notes and see other identified needs through a referral dialogue window. There is also a referral dashboard for each Hub client where an agency involved in care coordination for an individual can view the full screening results, referrals, and the status of those referrals. Each referral message is assigned a status (Received, work started, redirected, waitlisted, scheduled appointment, unable to meet need, referral complete) that is changed by staff as care progresses.

When service is complete a message is sent to the referral initiator. This process creates a closed-loop referral system that enables tracking of the referral progress and completion and identifies any gaps in services. The Hub also allows users to provide feedback regarding their experience with the use of the system.

TECHNOLOGY

Jackson Care Hub is a cloud-based application that serves as a middleware between the providers and the connected community organizations for referrals. The Jackson Care Hub will serve as a repository for shared data entered in the screening tool as well as the referral and reporting platform.

1. This is a cloud-based Integration Platform as a Service (iPaaS) hosted and supported by RiverStar.
2. This type of system allows for rapid development and flexibility, cost minimization for IT maintenance and management, and ease of extending the application to industry or community partners.
3. A custom screen is built into Epic that interfaces with the Jackson Care Hub through an API (data transferred via XML)
4. Community organizations interface with the Jackson Care Hub through a secure web portal. Community organizations without portal access remain "non-connected":



"Connected" organizations receive electronic notifications while "non-connected" organizations contact information is given as a printout to the client.

5. RiverStar uses load-balanced web servers with auto-failover and a mirrored database. The servers are also split across regions for disaster protection and have point-in-time database recovery that supports disaster recovery. If RiverStar were to lose both regional data sites, they could recover from the mirrored data at a third site.

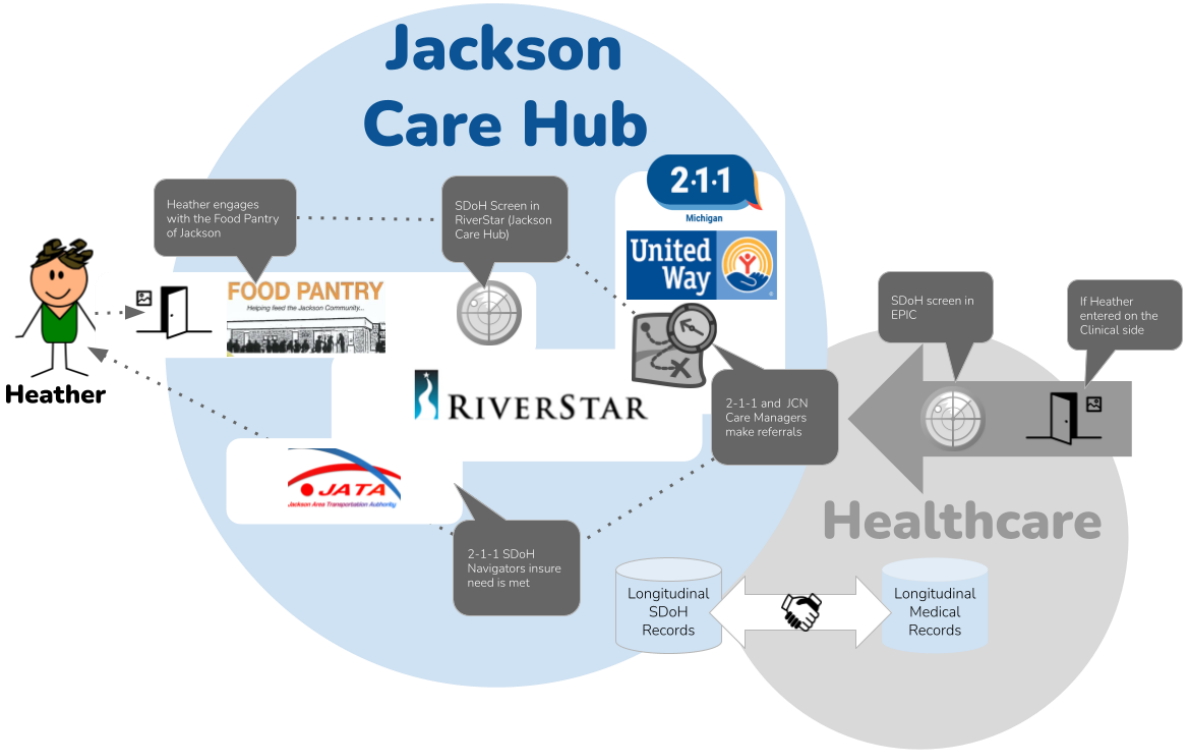
Reporting

Reports on core metrics is used to help identify process improvements to both the community and the medical entities. This supports understanding of resource gaps in the community and ensure there is a continued progress towards system change in addition to service provision. Partners can also review the progress with the individuals utilizing and receiving services through the Hub to ensure user and individual satisfaction. Reports can be exported to Excel, PDF, and CSV

Case Example: What this looks like at the individual level in Jackson, MI

Heather might show up at a homeless shelter, her primary care office, a food pantry, or a local human services nonprofit seeking help. Those organizations will all use the same assessment tool to screen her for various needs, such as healthcare, transportation, housing, food, and employment, not just the specific need she came in for. If this is a clinical door the SDOH needs screening will be done using the EPIC screening tool – a

screening tool embedded in the EPIC EHR. If through a Community service they will use Jackson Care Hub / River Star SDOH screening tool. A navigator (2-1-1 United Way) and a Care Manager (Jackson Health Network) will review the identified needs and refer her to various local or state services that have been mapped as part of the region's inventory of community resources. The receiving organization will enter information back into the system, indicating whether she made it to the food pantry or employment office he was referred to, allowing the staff at the original screening organization to know if her needs were or were not met, and to follow up with Heather appropriately.



Northern Michigan

The Northern Michigan Community Health Innovation Region (NMCHIR) is responsible for supporting 10 counties in the northwest lower peninsula of Michigan supported by the Northern Michigan Public Health Alliance (NMPHA) which leads and facilitates the development of a common agenda, shared measurement, mutually reinforcing activities, and continuous communication.

The NMCHIR developed and implemented a web-enabled, tablet-based screening and referral platform. Platform functionality allows locations to screen patients for SDOH using tablet devices,

refer patients on for community navigation services and ultimately coordinate care between community navigation and clinical service providers as needed.

The screening and referral platform is not tied to a specific screening source and can be expanded as needed with minimal modification for use across the spectrum of health care and community service organizations.

Genesee County

The Genesee Community Health Innovation Region (CHIR) is a partnership of a broad collection of multi-sector organizations, including three Accountable Systems of Care with 60+ Patient Centered Medical Homes (PCMH) practices, six Medicaid health plans, three hospitals, 30+ community-based organizations, and a Regional Health Information Exchange. Serving as the backbone of the Genesee CHIR organization, the Greater Flint Health Coalition (GFHC) provides leadership and guidance while working to leverage cross-sector partnerships that address population health and connect patients with relevant community and social services that address the social determinants of health (SDOH).

In establishing a technology solution to support Clinical Community Linkages, the Genesee CHIR investigated the existing technology infrastructure and data measurement systems in place amongst their partners in Genesee County. Based upon the diversity of the electronic medical record (EMR) and care coordination platforms currently in use and the associated investment into these software systems and their organizational interoperability, Genesee CHIR members concluded that creating a single CCL care coordination technical platform, while desirable, would be cost prohibitive and years in the-making.

The Social Determinants of Health (SDOH) Screening

To promote the SDOH screening process, the Genesee CHIR created a standard SDOH screening tool. The SDOH screening tool is being used by all three ASCs (Accountable Systems of Care) and one FQHC (Federally Qualified Health Center), encompassing 64 PCMH (Patient Centered Medical Home) practices within the Genesee region comprised of over 120 providers. Many of them have incorporated the SDOH screening tool into their various EMRs or ASC Care Coordination platforms. As a result of screening efforts by physicians, practice embedded care managers, and community health workers, over 30,160 screens have been administered to individual patients in Genesee County through mid-2019.

Information gathered from SDOH screens allows physicians to gain a clearer picture of the patient's health status as well as guide care coordination activities in the practice setting and direct the

strategy of the SIM Clinical Community Linkage Initiative in how to connect individuals most effectively to necessary resources.

The Social Determinants of Health (SDOH) Repository

The Genesee CHIR collects the SDOH screening results from the ASC's participating PCMH practices within a central repository which allows the Genesee CHIR to aggregate and analyze screening results to track SDOH needs identified in the community.

The Community Referral Platform

To support the development and technical integration of the overall community clinical linkages referral processes, the Genesee CHIR has implemented its Community Referral Platform (CRP). The Community Referral Platform supports a closed-loop referral system with a tracking and monitoring mechanism which includes the initiation, follow-up, and outcomes of referrals between participating PCMH providers and the CHIR CCL Hub as well as the CCL Hub and community/social service agencies.

United Way for Southeast Michigan + Henry Ford + Gleaners + HAP Health Alliance Plan

In August 2021 United Way for Southeastern Michigan began a CIE in parallel development with Michigan 211 (subsidiary of the Michigan Association of United Ways). Henry Ford Health System and Gleaners Community Food Bank of Southeastern Michigan will be the first two groups to use the "hub".

The stated goals for the CIE are:

- Better connect at-risk populations with basic needs assistance and other support
- Improve health and social outcomes
- Lower costs for health systems

United Way is testing out new hub to bridge data divide between health and human services .

Grand Rapids-based technology company BrightStreet Group LLC is supporting both the regional and statewide 211 buildouts into the CIE.[22]

[22] https://www.gcfb.org/united-way-tests-out-new-hub-to-bridge-data-divide-between-health-and-human-services-071321/

MiBridges

MiBridges is the MDHHS platform for connecting people to resources.

30,000 resources are accessible via app, 2-1-1, or by connecting with a community navigator within a participating community partner.

MDHHS actively seeks to onboard community partners in 3 ways

- As an Access Partner - Provide computers, tablets, or mobile devices for clients to use MI Bridges and promote MI Bridges
- Referrals for Services - Receive referrals sent from customers using MI Bridges
- Navigation Partners - Provide one-on-one assistance to MI Bridges users and promote MI Bridges.

MDHHS / MI Bridges is working to engage CBOs to act in those roles as well as view agency metrics and MI Bridges referrals.[23] As with others MiBridges collaborates with Mi 2-1-1 [24]for CBO connectivity and an easy access door (calling 2-1-1) into the system.

Michigan Community Network

There is not much public facing information available, but a collaboration exists between Healthify and Blue Cross under the name "Michigan Community Network"

The Michigan Community Network homepage is hosted on the Healthify website and is self-defined as follows: "The Michigan Community Network is a group of payers, providers, and community-based organizations who've come together to spark unprecedented collaboration to meet the social needs of residents of Michigan. Health plans and CBOs throughout the state are connecting to provide whole-person care to the most vulnerable members of the community".[25]

From a 2021 post on the Healthify website there is evidently a CIE effort under way seeking to "empower community organizations [in service of SDOH]", and providing a common platform shared by "health plans and payers, so they can work together to coordinate nonclinical care for their members"[26]

[23] https://newmibridges.michigan.gov/s/isd-partnershiplanding?language=en_US
[24] https://www.mi211.org/
[25] https://get.healthify.us/michigan-community-network-signup
[26] https://www.healthify.us/healthify-insights/the-michigan-community-network-where-social-services-meet-healthcare-to-improve-patient-outcomes

Conclusion

Payers and providers recognize the value of addressing SDOH needs and doing so equitably. The prevalence of CIE efforts provides a reasonable indicator of consensus around CIE as being a good approach. Community Information Exchange, by any name, is the evolving model thought best to address SDOH needs of individual and community through the exchange of structured data.

On the surface this would seem to be primarily a technical/data challenge. Technical challenges from broadband accessibility to interoperability (matching the structure and definitions of so that data can be exchanged) certainly exist, and existed prior to CIE. Just as with existing data exchange, (e.g., Health Information Exchanges, Electronic Health Records, etc.) legal and regulatory hurdles exist. With the addition of SDOH screening, sharing SDOH data, and including a large, unregulated, and non-standardized group of social care providers comes a new set of legal and regulatory hurdles.

Vendors like Unite Us and Aunt Bertha have recognized the need for robust functionality for CIE and closed-loop referral platforms. Traditional EHR vendors, like Epic, also have SDOH/CIE on their radars. Additionally, state systems like MiBridges introduce additional platforms and data sets to consider. Because the current landscape contains considerable existing investment and a multitude of options, the challenge is not one of finding or creating technology, but rather accommodating all of the options.