



# Data Integration Best Practices for Health Centers & Homeless Services



## ABOUT CSH

CSH is the national champion for supportive housing, demonstrating its potential to improve the lives of very vulnerable individuals and families by helping communities create over 335,000 real homes for people who desperately need them. CSH funding, expertise, and advocacy have provided \$1 billion in direct loans and grants for supportive housing across the country. Building on nearly 30 years of success developing multi and cross-sector partnerships, CSH engages broader systems to invest in solutions that drive equity, help people thrive, and harness data to generate concrete and sustainable results. By aligning affordable housing with services and other sectors, CSH helps communities move away from crisis, optimize their public resources, and ensure a better future for everyone. Visit us at [csh.org](https://www.csh.org).

## ACKNOWLEDGMENTS

Our most sincere thanks to all the health centers and homeless service providers for participating in the focus groups and responding to the survey. Your thoughtful insight, innovative work, and perseverance are inspiring.

## Contents

<b>About CSH</b>	<b>1</b>
<b>Acknowledgments</b>	<b>1</b>
<b>Purpose and Background</b>	<b>3</b>
<b>Social Determinants of Health (SDOH) in Brief</b>	<b>3</b>
<b>Data Collection</b>	<b>4</b>
Recommendations	5
SDOH Screening Practices	5
PRAPARE and Standardized Screening	5
International Statistical Classification of Diseases and Related Health Problems (ICD-10) Coding	6
Recommendations	8
<b>Continuums of Care (CoC) and Community Assessments</b>	<b>9</b>
Health Center Relationships with CoC and Other Homeless Services	9
<b>Data Uses</b>	<b>10</b>
Leveraging Social Determinants of Health	10
Communication and Performance Management Tools	12
<b>Data Sharing and Integration</b>	<b>13</b>
The Supportive Housing and Health Outcomes Data Gap	13
Privacy Concerns and Data Sharing Infrastructure	14
Recommendations	15
<b>Conclusion</b>	<b>15</b>
<b>Appendix – Promising Practices/Sustained Solutions</b>	<b>16</b>

### Publication disclaimer

This project is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) award **U30CS269350600** totaling \$ \$625,000 with 0 percent financed with non-governmental sources. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS, or the U.S. Government. For more information, please visit [HRSA.gov](https://www.hrsa.gov).

## PURPOSE AND BACKGROUND

Health centers use data and technology to improve health outcomes of patients, speed administrative processes, and collect patients' health and housing histories. Uses include integrating care coordination software into daily operations and services, and sharing data between other health centers through regional health information exchanges. These efforts often include data from agencies or systems outside of health care and contribute to improving patients' social determinants of health (SDOH).

For small and large health centers alike, data has played a significant role. Many still struggle to collect, analyze, and interpret data for meaningful program improvement. Clear policies, consistent practices, and regular use of data can shift a health center's view of data as a hurdle to a tool in decision making and care. Likewise, improving collection, usage, and sharing of data may provide a more complete picture of a patient's service history and better deliver needed services.

In 2019, the Corporation for Supportive Housing (CSH) released a U.S. Department of Housing and Urban Development (HUD) data matching policy brief.<sup>1</sup> It outlined the reasons and methods for matching health system data with Homeless Management Information Systems (HMIS) data. Building on that work, CSH and the National Health Care for the Homeless Council (NHCHC) led two focus groups at NHCHC's October 2019 Summit in Nashville. In total, 22 participants representing 19 health centers attended. After the focus groups, we sent an online survey to those unable to participate, three additional organizations responded. The focus groups and survey asked for observations on how health center grantees are accessing and using homeless, housing, and other non-health data sources. This report includes those observations and provides background on the homeless services system, its data collection infrastructure, and recommendations on how to establish and improve relationships with other sectors within a Federally Qualified Health Center (FQHC) context.

This guidance will help health centers evaluate and make decisions regarding data collection, utilization, and sharing to improve health outcomes for vulnerable patients.

## SOCIAL DETERMINANTS OF HEALTH (SDOH) IN BRIEF

Social Determinants of Health are the social, economic, and environmental factors that affect the overall health of a person. It is widely understood that SDOH factors like living environment, education, access to health care, and economic stability are strong predictors of health outcomes. Published studies suggest housing, especially supportive housing, is a critical SDOH intervention for health outcomes leading to lower health care costs and reduced use of emergency services,<sup>2</sup> other

***“Everything we do  
with medical care is  
sabotaged by the  
lack of housing.”***

**NORTHEAST VALLEY HEALTH  
CORPORATION**

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<sup>1</sup> “HUD Policy Brief: Understanding the Impact and Potential for Health Centers,” CSH, January 2019, [https://d155kunxf1aozz.cloudfront.net/wp-content/uploads/2019/01/CSH\\_HUD-Policy-Brief\\_DataMatching.pdf](https://d155kunxf1aozz.cloudfront.net/wp-content/uploads/2019/01/CSH_HUD-Policy-Brief_DataMatching.pdf) (<https://tinyurl.com/u4trm2c>).

<sup>2</sup> Jack Tsai, Lillian Gelberg, Robert A. Rosenbeck, “Changes in Physical Health After Supported Housing: Results from the Collaborative Initiative to End Chronic Homelessness,” *Journal of General Internal Medicine* 34 (2019): 1703-1708. <https://doi.org/10.1007/s11606-019-05070-y>.

studies stress the importance of SDOH to improve prenatal health and many chronic conditions.<sup>3 4</sup>

Services addressing SDOH must reach out beyond the health center to address individual, social, and structural factors of health. Health professionals and service providers have made progress in leading SDOH work in recent years. Relevant approaches like street-based medicine, permanent supportive housing, and food insecurity screenings are common, highlighting the focus of health care providers on the social, economic, and physical factors central to health. Unfortunately, though these approaches employ programs targeting SDOH, many providers report feeling behind when it comes to screening for them. Frontline providers especially do not feel thoroughly prepared and trained to screen for SDOH, and staff confidence in screening tools is low.<sup>5 6</sup>

## DATA COLLECTION

Through the focus group and survey responses, FQHCs and other stakeholders provided a glimpse of the kinds of data collected, how, when, and by whom. The processes differ between agencies, as do the specific questions asked, and how the data is ultimately stored, shared, or analyzed. The challenges experienced by providers, however, seemed consistent. For example, overwhelmingly respondents and focus group attendees observed that there is too much data collected at multiple stages of service. FQHCs reported a number of different collection instruments they must administer to all patients. During one focus group, participants made a list readily. State Medicaid-required tools, local Continuum of Care (CoC) housing and vulnerability assessments, agency-specific tools, and others create confusion for both the patient and provider. Instead of fulfilling their intended purpose to connect people with resources, the mountain of paperwork is more often a barrier. Providers expressed concerns that these tools weigh down the patient and provider with time and energy. Providers use one tool for intake, another for housing, another for health, and another on patient departure and follow-up. These tools will often repeat certain questions consisting of sometimes difficult and personal detail, which may be traumatizing or re-traumatizing to patients retelling their stories.

These assessments pose a serious challenge to data sharing. Some require double entry of the same data points into two or three different systems. That is unsustainable at the health center level and burns out staff. To shift some of the administrative burden away from case managers, some health centers have brought on data entry staff tasked only with transferring, transcribing, and uploading data to disparate and unconnected systems. Others with the technical capacity and cooperative communities have created “links” between systems. There too, complicated data use and sharing agreements and privacy concerns often slow or stop these links, making them less effective and potentially expensive to maintain.

Data may serve and benefit both the patient and the broader system, allowing clinicians to coordinate care with other colleagues and policy makers, lawmakers, and researchers to gain the understanding to make positive

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<sup>3</sup> Erin Westphal, “Managing Chronic Disease in an Evolving Healthcare Environment: Community-based organizations increasingly are addressing social determinants of health, and preventing more expensive medical interventions,” *Generations* 43, supplement 1 (2019): 4-7.

<sup>4</sup>Breanna Lathrop, “Moving Toward Health Equity by Addressing Social Determinants of Health,” *Nursing for Women’s Health* 24, no. 1 (2020): 36-44.

<sup>5</sup> Laura Beaune, Anne Leavens, Barbara Muskat, Lee Ford-Jones, Adam Rapoport, Randi Zlotnik Shaul, Julia Morinis, Lee Ann Chapman, “Poverty and Pediatric Palliative Care: What Can We Do?,” *Journal of Social Work in End-of-Life & Palliative Care* 10 no. 2 (2014): 170-185. <https://doi.org/10.1080/15524256.2014.906375>.

<sup>6</sup> Bryanna Schwartz, Lisa E. Herrmann, Jamie Librizzi, Tamara Gayle, Kevin Waloff, Heather Walsh, Alexandra Rucker, Nicole Herrera, Priti Bhansali, “Screening for Social Determinants of Health in Hospitalized Children,” *Hospital Pediatrics* 10 no. 1 (2020): 29-36. <https://doi.org/10.1542/hpeds.2019-0092>.

changes. To improve data collection, it is important for the patient, case manager, outreach worker, and management to understand the value of data collection first: why a data point is collected, and how it benefits the patient and program in a clear and deliberate way.

### **Recommendations:**

- *Inventory and crosswalk questions from the different tools, including purpose of question and types of improvements or monitoring the organization or clinician may do with responses;*
- *Check for duplicate or similar questions to eliminate; and*
- *Create paper and electronic versions to satisfy multiple surveys at the same time and indicate to which question a response belongs.*
- *Develop a framework and policy for data collection that lays out in detail the data collection and recording process of the organization, specifying collection tools, data uses, and roles for staff.*

The Appendix at the end of this report offers specific community examples where agencies implemented these recommendations in a sustained way and outlines for the reader concrete first steps to get started.

### **SDOH Screening Practices**

Health centers are well-positioned in the health care continuum to screen for risk and for actionable needs such as housing, access to food, substance use services, supplemental income, and insurance coverage. While the methods of SDOH screenings vary across health centers, almost all of those surveyed reported having a protocol for screening. At a minimum, health centers are embedding questions about housing status in their intake procedures (e.g., “Where are you staying right now?”, “What is your current housing situation?”). Others report agency-specific questionnaires that assess for housing and other factors like looking at social and family history, incarceration, substance use, and interventions in which they have participated in the past. Largely, health centers are integrating standardized resources for SDOH screening into their Electronic Health Records (EHR).

***“Once staff see why documentation is important—in its ability to prove the need for housing and show a greater need—it changes the whole conversation. From an advocacy standpoint, it is essential to see the need.”***

**TRIAD HEALTHCARE NETWORK/  
CONE HEALTH**

### **PRAPARE and Standardized Screening**

According to the 2019 Uniform Data System (UDS) reporting from health centers, 980 health centers screen for SDOH, and of those 387 (39%) report they have adopted the National Association of Community Health Centers’ (NACHC) assessment tool, PRAPARE (Protocol for Responding to and Assessing Patients’ Assets, Risks, and Experiences). From the focus groups and surveys, 7 of the 19 participating health centers have indicated they also use PRAPARE. PRAPARE is a standardized assessment tailored to help providers better understand patients’ specific SDOH.<sup>7</sup> Of those using PRAPARE, most access it as a module within their EHR, allowing each member of a

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<sup>7</sup> “PRAPARE,” *National Association of Community Health Centers (NACHC)*, accessed March 2, 2020, <http://www.nachc.org/research-and-data/prapare>.

care team access to non-health information. NACHC offers templates compatible with widely used EHRs and templates for general computing software.<sup>8</sup>

A major tenet of SDOH screening is that it must emphasize “actionable variables.” These are indicators that point to conditions that health centers can treat, refer to another partner, and follow-up on with the patient. In an SDOH screening context, these variables need not be overtly medical, but will influence a patient’s health and health conditions. These screenings take valuable time and energy, often requiring follow-up appointments and expanding access to care, such as improved treatment planning, referrals, and warm handoffs to external agencies or specialists. For those health centers with a co-located housing team or housing partners, screening tools embedded in EHR can be particularly helpful. Of health centers surveyed, the most streamlined and effective screening approaches involve SDOH modules (e.g., PRAPARE) that automatically trigger links to relevant case management resources.

### International Statistical Classification of Diseases and Related Health Problems (ICD-10) Coding

Many health centers use the SDOH ICD-10 codes to track and record risk factors, though not adopted as widely as other documentation methods. ICD-10, the standard medical classification tool listed by the World Health Organization (WHO), includes more than 14,000 codes. These codes represent many kinds of symptoms, diseases, and medical conditions. “Z-codes,” a subset of ICD-10, are for “[f]actors influencing health status and contact with health services,” and supplement primary diagnostic codes. Z-codes ranging from Z55 to Z65 describe SDOH and labeled as “Persons with potential health hazards related to socioeconomic and psychosocial circumstances.”<sup>9</sup>

If used correctly and consistently, Z-codes can provide a more comprehensive view of patients’ needs than medical charts alone. Over time, they can be a very effective tracking tool for social history. In a population summary and across health centers, Z-codes are powerful indicators of trends and prevalence of SDOH in a community.

#### COMMON ICD-10 “Z-CODES”

- **Z56.0**, *Unemployment*
- **Z59.0**, *Homelessness*
- **Z59.5**, *Extreme poverty*
- **Z60.5**, *Target of perceived adverse discrimination and persecution*

Z-codes are intended as secondary diagnostic tools not used for billing purposes; however, insurance providers are increasingly advocating for their use as a means of service coordination. For example, United Healthcare (UHC) received over two million claims for social barriers in the form of Z-codes between 2016 and 2018, and requests all providers use the appropriate SDOH codes on claims they submit.<sup>10</sup> From a payer

<sup>8</sup> National Association of Community Health Centers, Association of Asian Pacific Community Health Organizations, Oregon Primary Care Association, “PRAPARE Implementation and Action Toolkit,” *National Association of Community Health Centers (NACHC)*, (2019), [http://www.nachc.org/wp-content/uploads/2019/09/NACHC\\_PRAPARE\\_ALL.pdf](http://www.nachc.org/wp-content/uploads/2019/09/NACHC_PRAPARE_ALL.pdf).

<sup>9</sup> <https://www.icd10data.com/ICD10CM/Codes/Z00-Z99>

<sup>10</sup> <https://www.cdc.gov/nchs/data/icd/social-determinants-of-health.pdf>

perspective, codes trigger referrals to social and government services that address SDOH and prevent poor and costly health outcomes. So central are SDOH to UHC's operations, they have led a national effort to improve and expand Z-codes to include more risk factors not included in ICD-10. There are concerns the existing Z-codes are too general, so UHC "has made a recommendation to expand the ICD-10 codes to be more comprehensive," in order to "strengthen our ability to work together...to help more people."<sup>11</sup> In 2019, the American Medical Association endorsed this effort, highlighting the importance of documenting SDOH across sectors and stakeholders.

Patients with complex cases or who are experiencing homelessness often receive services from providers from different sectors. Each will require questionnaires and measures that can accumulate and exhaust both screeners and patients, disrupting the patient-clinician interaction. Further, self-report SDOH measures, such as PRAPARE, can be difficult for patients experiencing homelessness. It is a challenge to use screening tools to assess need in a way that is accurate, valid, and trauma-informed all at the same time without first building trust. Even with the right tools, without proper training and retraining of staff and gaining staff buy-in, quality and informative data collection that will help the client and the system will be nearly impossible.

Our focus group reported that one of the most significant barriers to SDOH screening is staff buy-in regarding the value of data collection. In some cases, this is due to limited service resources, which promotes the perception that there are not enough interventions to warrant the screening in the first place. Limited buy-in and use of data perpetuates the idea that data is irrelevant or unimportant. Some front-line providers feel SDOH data is not critical to immediate needs or the patient's presenting condition and is an obstacle to overcome or bureaucratic task to complete. For example, if a medical doctor in their individual capacity cannot address housing in a session, why spend time focusing on it in the clinic or documenting it in a patient's record?

Diagnostic codes used in patient records describe clinical conditions, meaning conditions that pose an immediate medical concern. As a result, staff are uncertain about the use of Z-codes. This especially affects non-medical staff who do not normally record any diagnostic codes.<sup>12</sup> For a health center to benefit from quality and usable data, a culture shift in recognizing the importance of data for long-term care is necessary. Leadership must have

***“By combining medical data with self-reported SDOH data, the codes trigger referrals to social and government services to address an individual's unique needs, connecting them directly to local and national resources in their communities.”***

**UNITED HEALTHCARE & THE  
AMERICAN MEDICAL ASSOCIATION**

***“We enter what is necessary because SDOH screening is cumbersome— if [it] only took 2 minutes rather than 15, we'd be more interested. Patients share information in other ways than in surveys.”***

**COMMITTEE ON THE SHELTERLESS**

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<sup>11</sup> United Healthcare Services Inc., “2019 Social Determinants of Health ICD-10 Codes,” *UnitedHealthcare*, (2019), <https://www.uhcprovider.com/content/dam/provider/docs/public/resources/other-resources/2019-SDOH-ICD-10-Codes.pdf>.

<sup>12</sup> Centers for Medicare and Medicaid Services (CMS) and National Center for Health Statistics (NCHS), “ICD-10-CM Official Guidelines for Coding and Reporting FY 2019,” *CMS*, accessed March 3, 2020, <https://www.cms.gov/Medicare/Coding/ICD10/Downloads/2019-ICD10-Coding-Guidelines-.pdf>.

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## PROMISING PRACTICES

**Unity Health Care**, a health center in DC uses a combination of housing questions and Z code reporting to maintain an accurate record of patients' up-to-date housing status. This is a streamlined, time-sensitive approach to identifying SDOH.

**Hennepin Health Care for the Homeless** in MN leverages their EHR SDOH capabilities by administering screening measures at intake, which automatically sends a referral to partner agencies based on needs. Leveraging EHR capabilities avoids lapses in care and to follow-up post-referral.

conversations with staff at all levels regarding the importance of data and its use within the organization from point of care to system level. It must also formalize SDOH-screening processes in policies and procedures to support the software and hardware solution. The more detailed the trainings, processes, and policies are, the more likely they will be adhered to and the technical solution used to its fullest capacity.

Health centers routinely use limited resources to provide essential services. Though some EHRs can integrate clinical tools, screening methods, and billing and insurance, the systems are not often affordable. However significant the challenges, SDOH screening is a necessity for integrated care. ICD-10 codes, like PRAPARE and other assessments, can initiate referrals for patient care based on identified risk factors (e.g., homelessness, low-income, substance use).

### Recommendations

- ***Weigh time-risk factors for your health center's screening processes.***
  - Are standardized SDOH screening tools too time intensive for your staff capacity?
- ***Establish a screening standard for staff at all levels.***
  - How is staff trained on SDOH and screening? How do staff identify risk factors at intake and load data into the EHR?
- ***Have agency-wide conversations around SDOH screening and tracking.***
  - Why is this data important? Is it valuable? Do we have the capacity to act upon captured risk factors? What action do we take? Who acts? When?
- ***Ensure your health center is aware and up to date on national guidelines around data tracking.***
  - 2019 ICD-10 guidelines allow for and encourage non-clinicians on a patient's care team to document Z-codes, lessening a major barrier to standardizing Z-codes as a method of SDOH documentation.

## PROMISING PRACTICES

**New Horizon Family Health Services** in South Carolina has a fixed presence in local CoC housing determination case conferencing. This provides a critical health perspective in considerations of prioritization, acuity, and housing intervention.

**Washtenaw County, MI Frequent Users Systems Engagement (FUSE)** initiative brings housing, and health systems together to target frequent utilization of crisis systems for interventions in housing navigation, case management, and primary care services. This project started with a data match process between hospitals, shelters, and behavioral health providers.

**Northeast Valley Health Corporation** in CA is cultivating partnerships to share data with hospitals, specialists, and labs, in order to eliminate duplicated tests and incorrect prescriptions. A data partnership with housing providers is also growing, with expanded staff access to HMIS.

## CONTINUUMS OF CARE (CoC) AND COMMUNITY ASSESSMENTS

A key data sharing ally for FQHCs in the community are the local Continuums of Care (CoC). CoCs are a HUD designation for a geographic area with homeless service providers receiving funding from the federal government. These areas may or may not overlap with city, county, or state boundaries. The CoC distributes funding provided by HUD and local sources to providers in the continuum to meet the needs of those experiencing homelessness. The purpose of the CoC is to “promote community-wide commitment to the goal of ending homelessness.”<sup>13</sup>

The CoC organizes the homeless response system into a Coordinated Entry System (CES). CES works to assess the needs of all persons experiencing homelessness in the community. Then, order those needs by a locally determined priority policy to distribute limited housing resources. As part of the policy, HUD requires CoCs adopt and use a single assessment tool across the community. These assessments improve the even evaluation of homelessness and needs to inform fair and prioritized distribution of resources.

### Health Center Relationships with CoC and Other Homeless Services

#### Engaging with CoCs

A community’s CoC lead and HMIS administrator represent the local homeless system. To share and integrate data, each may require a data sharing agreement with a health center, especially if the center is not participating in HMIS. Some CoCs may be reluctant to share HMIS data or may have a restrictive client release of information (ROI). In these cases, engagement and education with CoC boards, leadership, HMIS committees and data administrators will make them aware of the specific uses of HMIS data for case coordination, or identification of SDOH needs.

Many FQHCs engage with their local CoC by serving on the CoC board, participating in HMIS, receiving funding, and going to care coordination and other community meetings. Existing relationships with the CoC can speed data sharing and integration considerably. In the homeless services space, data sharing is becoming a common practice across the country. HUD has signaled their encouragement<sup>14</sup> to share data responsibly with partners to coordinate services, prioritize, and house the most vulnerable persons. As a

<sup>13</sup> “Part 578 – Continuum of Care Program,” *Code of Federal Regulations*, title 24 (2017): 11381-11389, <https://www.govinfo.gov/content/pkg/CFR-2017-title24-vol3/xml/CFR-2017-title24-vol3-part578.xml#seqnum578.1>.

<sup>14</sup> U.S. Department of Housing and Urban Development (HUD), Office of Community Planning and Development (CPD), *CPD-17-01*, (2017): 18, <https://files.hudexchange.info/resources/documents/Notice-CPD-17-01-Establishing-Additional-Requirements-or-a-Continuum-of-Care-Centralized-or-Coordinated-Assessment-System.pdf>.

result, CoCs are increasingly entertaining these data sharing connections. Partnering and actively participating with CoCs can even be the gateway to creating a Frequent Users Systems Engagement (FUSE)-type program. FUSE programs sparked and fueled by data, are sustained by relationships among partners and a commitment to sharing data, analyzing frequent use across systems, and ending the cycles of institutionalization and homelessness. Depending on the community, CoCs tend to have a connection to justice-involved systems, institutions, and stakeholders in addition to the majority of homeless systems data.

### **Important Data CoCs Manage Health Centers Could Also Use**

HUD and CoCs have relied on objective data to evaluate and fund local communities. The System Performance Measures (SPMs) are among the best examples. SPMs are seven priority measures identified by HUD to evaluate a community's homeless response system. SPMs are submitted annually and available publically for anyone to view by community. At a systems-level, these data assist communities in evaluating programs and distributing needed resources. For health centers operating supportive housing programs, data on community needs from the CoC can be useful in determining whether and where a health center should expand capacity.

## **DATA USES**

### **Leveraging Social Determinants of Health**

#### **Internal Use**

Data use is as successful as the policies, processes, and people supporting it. SDOH screening must be matched by the infrastructure and staffing to tailor care based on data. Leadership must put forward a vision for how data is used and acted on by staff at all levels, ensuring the vision is supported by policy and that everyone is trained and understands how to collect information, use systems, and interpret results. Examples and steps to get started are in the appendix at the end of this report.

When fully integrated into EHRs and staff appropriately trained on how to input and access these data, SDOH screening tools will strengthen care coordination and service provision. Often a first step for clinicians is to access SDOH data from an underlying EHR database for individual case review and care. This review of data enhances collaboration with colleagues to best tailor services to a patient. Providers collect, share, and retrieve specific EHR data, including housing, income, and food security to make treatment decisions and referrals. For example, in a health center with robust nutrition staffing, a clinician might use food security data to make an inner-agency referral to a supplemental nutrition program, staff would then access the same historical data from the EHR database. By collecting these types of data and formalizing use and action, a care team within a single health center will have easy and immediate access to SDOH data within the EHR and determine what to do based on results. This process becomes more valuable when an agency has a diverse cadre of inner-agency specialists and providers. Much like how a treatment team assembles for an illness using medical records, EHR SDOH records form the basis to assemble components addressing a patient's risk factors. For health centers with co-located housing, substance use programs, justice advocates, and others, this immediate transactional use of SDOH data is extremely effective.

## PROMISING PRACTICES

**Hawaii Health Information Exchange** is an HIE collaborating with Honolulu’s homeless-health initiative and makes patient records readily available to all participating hospitals and clinics.

**Boston Health Care for the Homeless (BHCHP)** makes the most of its longstanding partnerships to access health information technology. Sharing the server of Boston Medical Center, BHCHP has access to the same advanced EHR, database, and HIE, allowing for seamless exchange of documents and administrative data.

### Inter-Health Center Sharing

Inter-health center data sharing is more complex than sharing internally, but the benefits often outweigh the complexity. Some vendors offer pathways of sharing information with other agencies utilizing the same EHR. In this case, leveraging existing EHR capabilities is a low-barrier approach to data sharing and coordination. For partners using different systems, however, sharing information will take external data sharing capabilities. Resources like vendor-agnostic, cloud-based solutions and Health Information Exchanges (HIEs) provide solutions to link different software. HIEs, increasingly used by health centers, access, store, and share data with member providers. This level of access is crucial for establishing seamless care transitions thanks to available SDOH and medical records easily missed with “traditional” avenues of sharing records. HIE data repositories allow for opted-in health centers to access records in real time, just as with EHR records. Often referred to as “data post offices,” HIEs have the potential to improve health center care communication, service coordination, and system health. These improvements are contingent on use, health center participation, and data quality. In addition to their logistical advantages of instant or near-instant data sharing, HIEs support a trauma-informed approach. If patient records are available via HIE that show recent social history, providers can more quickly have an accurate picture of SDOH and exposure to trauma, allowing them to provide services and interact with patients accordingly. Many health centers have begun accessing HIEs through Health IT vendors, Health Center Controlled Networks (HCCNs), local information partnership initiatives, and through health care-homelessness coalitions. Health centers seeking an HIE relationship may look to partners who refer patients or where patients are referred to. Often these natural connections not only make sense as a starting point, but by inertia are more sustainable and may

lead to other partners eventually joining in. Another route is to ask partners if they already participate in an HIE and seek advice or guidance if that is something that would make sense. Another resource for health centers who do not have a functional HIEs can be vendor agnostic data sharing organizations.

### At the Systems Level and Intersectional

The CSH 2019 data matching brief<sup>15</sup> focused on service use crossing between health systems, HMIS, and justice systems. Thanks to communities across the country matching and integrating data across these sectors, we know high utilization of crisis services is a shared occurrence in these sectors. Unfortunately, those in institutional settings and homelessness fall through the cracks and do not have access to the services needed to disrupt cycles of homelessness, health issues, and justice-involvement. Data coordination at the systems level is an effective way of identifying those vulnerable persons with high-utilization histories to prioritize services. Cost analyses are then

<sup>15</sup> “HUD Policy Brief: Understanding the Impact and Potential for Health Centers,” CSH, January 2019, [https://d155kunxf1aozz.cloudfront.net/wp-content/uploads/2019/01/CSH\\_HUD-Policy-Brief\\_DataMatching.pdf](https://d155kunxf1aozz.cloudfront.net/wp-content/uploads/2019/01/CSH_HUD-Policy-Brief_DataMatching.pdf) (<https://tinyurl.com/u4trm2c>).

possible at multiple levels to make the case for more resources resulting from savings addressing frequent users' needs.

Examples of effective practices range in breadth and depth:

1. In-person partnerships, such as ongoing case conferencing and collaborations;
2. One-time data matches between different information systems;
3. Memorandums of Understanding (MOU) or ongoing data sharing agreements between health and non-health agencies for ongoing referrals and care coordination; and
4. Full interaction of health, housing, justice data, and state benefit eligibility systems via built-in interoperability frameworks.

### Communication and Performance Management Tools

Health centers who participated in the focus group and surveys shared how challenging compiling data for analytic purposes can be. Health centers stated that they need a reliable process for storing and retrieving useful data in a timely manner. Aggregating and analyzing summary data from an EHR or similar system is useful for health centers reporting HRSA-required Uniform Data System (UDS) measures and population tracking. Measures and trends help inform program and policy decisions, and can assist as a costing tool for administrative purposes. With healthcare systems shifting to value-based payment models, health center access to affordable technology for integrating, analyzing, and acting on patient and administrative data is necessary.

Data warehouses are a useful tool for storing and accessing large quantities of health and non-health data and measuring trends. Warehouses are relational databases designed to store data sets from different sources, matching records on personal identifiers. Sources may include clinical data, SDOH data, and demographic information. With health IT changing rapidly, cloud-based and accessible models of aggregating data are available and customizable for organizations with differing staff capacities.

Warehouses are an ideal solution for larger health centers with a solid information technology (IT) capacity. Smaller health centers may look to county or state partners, which typically lead data warehouse and cross-sectional integration efforts. By pulling data from multiple health centers, the homeless system, and perhaps even justice-involved systems, communities more seamlessly coordinate limited resources and prioritize frequent users for housing. Health Centers interested in exploring access to data warehouses can also begin by locating resources through state or regional HCCNs.<sup>16</sup> Many HCCNs allow member access to warehouses in their pursuit of quality improvement.

### PROMISING PRACTICES

#### Colorado Coalition for the

**Homeless** in Denver screens for SDOH at intake and uses the data to tailor treatment plans and referral initiation for internal and then external services.

#### Baltimore Health Care for the

**Homeless** has been a consistent HMIS partner with the local CoC. Staff sit on the CoC board, enter patient information into HMIS for housing prioritization, and execute MOUs for data sharing with other participating agencies to improve cross-sector coordination.

<sup>16</sup> Health Resources and Services Administration. "FY2019 Health Center Controlled Networks (HCCN) Grant Awards." Accessed June 17, 2020 <https://bphc.hrsa.gov/program-opportunities/funding-opportunities/hccn/awards>.

## DATA SHARING AND INTEGRATION

### The Supportive Housing and Health Outcomes Data Gap

Permanent Supportive Housing (PSH) tailors services and living situations to an individual's needs. Whether in the community in market-rate housing with mobile wrap-around services brought to residents, or in a single-site building with similarly situated residents with services onsite<sup>17</sup>. The link between supportive housing and better health outcomes seems logical. Numerous studies do support this link, though results vary and rarely capture the complete picture. The Health Resources and Services Administration's (HRSA) 2019 UDS Data Manual<sup>18</sup> has even added a data point in line 21a in table 4 to report on the number of patients who reside in supportive housing. While this addition is welcome and encouraging, analysis of health center patients is difficult on a national scale without disaggregated data across demographics.

In a report<sup>19</sup> from the National Academies of Sciences, Engineering, and Medicine, the Committee on an Evaluation of Permanent Supportive Housing Programs for Homeless Individuals reviewed 25 studies exploring effects of supportive housing on health and community outcomes. The Committee's review of the evidence of the impact of supportive housing for health outcomes found that those offered supportive housing and tailored medical and case management services retained housing at higher rates than peers in control groups did. Both randomized

### PROMISING PRACTICES

**Baltimore Health Care for the Homeless** uses a data reporting and analytics tool for aggregating, organizing, and reporting health center data to drive improvement and mitigate service gaps.

control trials (RCTs) and observational studies supported the Housing First and PSH models for those with chronic illnesses to achieve and maintain housing stability and independence. Importantly, the Committee notes that before these studies were conducted, "there was a belief that individuals experiencing chronic homelessness would be unable to maintain themselves in housing because of problems stemming from mental illness and/or substance use."

The findings related to health outcomes in supportive housing are less conclusive. Consistent with CSH's observation on the literature<sup>20</sup>, the Committee determined that "providing supportive housing to individuals with high medical needs who are also experiencing homelessness decreases emergency department use and hospital stays." Beyond emergency services, the Committee was unable to find a firm relationship

between supportive housing and individual health outcomes, including mental health, substance use, and general social well-being. Noting that reduced emergency services uses are important factors, but poor indicators of physical health. Persons experiencing homelessness may go to emergency rooms for reasons other than medical

<sup>17</sup> "Supportive Housing 101," CSH, accessed March 2, 2020, <https://www.csh.org/supportive-housing-101/>.

<sup>18</sup> "Uniform Data System Reporting Instructions for 2019 Health Center Data," United States, Department of Health and Human Services, Health Resources and Services Administration, HRSA. (2019), <https://bphc.hrsa.gov/sites/default/files/bphc/datareporting/reporting/2019-uds-manual.pdf>.

<sup>19</sup> "Permanent Supportive Housing: Evaluating the Evidence for Improving Health Outcomes among People Experiencing Chronic Homelessness," National Academies of Sciences, Engineering, and Medicine, Committee on an Evaluation of Permanent Supportive Housing Programs for Homeless Individuals. *National Academies Press*, (2018), <https://www.ncbi.nlm.nih.gov/books/NBK519591>.

<sup>20</sup> "Supportive Housing & Healthcare Utilization Outcomes State of the Literature," CSH. (2018), <https://www.csh.org/resources/20184/>.

care, like warmth, food, or security. Some studies showed a positive connection with housing and health, but were specific to persons living with HIV/AIDS.

The Committee's evaluation and as part of their recommendations made clear that more data and research is needed to explore the impacts of supportive housing on specific health outcomes. The research need not be RCT, though it should extend beyond self-reported data.

The common theme throughout the Committee's evaluation and evident in CSH's review is that more research must be done with detailed data to explore the connection between supportive housing and health outcomes. The Committee identified a number of gaps, many of which the focus groups and surveys also raised:

1. Inconsistencies in definitions and characteristics of supportive housing in the existing research literature and limited description of key services or minimum standards of PSH;
2. Limited evidence base for screening tools used in allocating housing services assistance;
3. Barriers to collection of data on health outcomes of supportive housing;
4. Need for additional randomized controlled trials (RCTs) or strong quasi-experimental data, which may bolster and refine evidence of the impact of supportive housing and other forms of permanent housing on health outcomes and health care costs;
5. Limited university-agency partnerships that represent lost opportunities to evaluate and monitor health outcomes and costs;
6. Insufficient application of "big data" science to integrated health data systems, homeless management information systems, and other data resources;
7. Need for testing innovations in payment models to support housing and services; and
8. Research focused on societal barriers to promote acceptance of persons who have experienced homelessness as neighbors in communities.

In many of the reports and studies reviewed, few explored the implications of basic demographic identifiers like age, gender, race, ethnicity, and location in relation to health outcomes improvement and housing status. Though health centers may only be required to report the number of supportive housing residents served, they can and should monitor progress of this population in their EHR. They should take note of those patients who have transitioned from homelessness to supportive housing, provide quality and complete data for these individuals, and ensure that supports are in place for this critical transition. Looking forward, data integration is one likely solution to closing the research and data gap. Information contained in HMIS systems for supportive housing programs would greatly enhance understanding of health outcomes and access for this group, along with accurate progress in health and housing.

### **Privacy Concerns and Data Sharing Infrastructure**

Data privacy and its challenges was a central topic in the focus groups. Sharing access to protected health information (PHI) often requires levels of written authorization that is difficult and cumbersome to obtain and maintain. The HIPAA Privacy Rule does allow health centers and other covered entities to use and disclose some PHI without written authorization for care coordination and continuity of care. However, these disclosures are subject to specific rules regarding each agency's relationship to the patient and what health care operation is the PHI informs. Health centers report that often clinicians will rarely share data due to these complex and serious legal concerns.

HIPAA concerns are even more complex when health and non-health agencies share data. Housing services providers, for example, may not be covered entities even though they are an important part of continued care. Therefore, when health centers consider sharing and accessing housing data via HMIS, they run the risk of using

data protected under less stringent guidelines. This point reinforces the importance of written contracts or MOUs, reviewed by an attorney, to establish specific conduits for information sharing between agencies.

### Recommendations:

- Audit health center’s policies and ensure there are standardized procedures for informing patients of their privacy rights.
- Health centers and staff should know the HIPAA guidelines on data sharing.
- Do not be discouraged from data partnerships, despite the red tape.
- Make privacy and patient information a point of conversation in your non-health partnerships.
- Identify key organizational contacts to discuss strategies for effective, safe data sharing relationships.

Effective data capturing, use, and sharing can be the vital tool that guides lifesaving tailored services. However, the line between aggregating patient data and advocating for patient privacy (collecting the least amount of personal information necessary) may raise ethical concerns on sharing. As stewards of PHI, patient privacy and choice must be at the center of health center partnerships. Data sharing infrastructure must be built on prevention of harm before all else.

## CONCLUSION

Health care for the homeless, housing, and emergency services providers have an interest in the improvement of data practices across sectors. Collecting, using, and sharing client data among partners saves time and could even be the difference between life-threatening illness and lifesaving services. SDOH has shifted the focus of health care and homeless services to data-driven decision making and partnerships for care coordination. Yet, barriers to progress still persist. Limited standardized resources, staff, and infrastructure has led to frustration, low buy-in, and duplicative screening measures gathering unnecessary personal information. Traditionally siloed health, housing, and other data systems are still incompatible in many cases, and the legal implications of privacy are a deterrent.

By strengthening cross-sector partnerships, adopting robust technologies, and following standardized approaches for ethical data sharing, agencies along the care continuum for those experiencing homelessness will eliminate gaps in care and provide treatment to those in our communities who are most vulnerable.

***“The dream would be to connect to a [Health Information Exchange] and have HMIS interface with this exchange... Our big barrier is our internal upstart cost to establishing [a] connection.”***

**FATHER JOE’S VILLAGES**

## APPENDIX – PROMISING PRACTICES/SUSTAINED SOLUTIONS

<b>Community</b>	<b>Promising Practice</b>	<b>How they started</b>	<b>How they sustained</b>	<b>First steps to get started</b>
<b>Unity Health Care</b> <i>District of Columbia</i>	<b>Collecting SDOH Information</b> Uses a combination of housing questions and Z-code reporting patients' housing status and other SDOH, the health center streamlines and consolidates time-sensitive questions to identifying SDOH and providing services.	Approaches to tracking non-health data, especially housing, relied on staff capacity, relevancy to immediate needs, and process expediency. Health center collected patient input on more in-depth SDOH testing, but ultimately decided based on capacity and available resources that Z-codes were an appropriate collection method.	Z-codes reported based on simple intake questions to limit burden on patient and provider. The only question necessary to input the secondary diagnosis is, 'what is your current housing situation?' Procedure is to ask this at every visit, providing a longitudinal representation of housing status.	<ul style="list-style-type: none"> <li>• Review patient intake process, are questions currently asked that go to SDOH?</li> <li>• Consider using PRAPARE or similar assessment as part of the intake procedure</li> <li>• Develop policies to ensure SDOH information is collected consistently and uploaded to organizational EHR.</li> </ul>
<b>Colorado Coalition for the Homeless</b> <i>Colorado</i>	Screening for SDOH at intake and using these data to tailor treatment plans and referral initiation for and connection to internal and external services.	In consultation with the local CoC stakeholders, CCH leadership determined Z-codes were not an appropriate documentation method. There was a specific concern that in their community this type of coding "leads to a dead end." With EHR access and capabilities, it was determined the best approach for usable SDOH data is to use a template in their EHR centered on behavioral health.	Health center integrated the EHR behavioral health module upon registration for patients enrolling in behavioral health programs. The information collected allows providers to develop a treatment plan at the point of care or used to develop a case management plan with an internal case management team. Thanks to EHR capabilities, this process is standardized and incorporated into provider workflow when performing intake.	<ul style="list-style-type: none"> <li>• Establish organizational role, and determine a SDOH collection strategy</li> <li>• Z-codes are perhaps more suited to a medical file than a housing plan or case file</li> <li>• Using the technology that you have, ready solutions may already be available</li> <li>• Engage with partners that you refer patients to and receive referrals from: What data do they need/what do you need to serve patients?</li> </ul>

<b>Community</b>	<b>Promising Practice</b>	<b>How they started</b>	<b>How they sustained</b>	<b>First steps to get started</b>
<b>Hennepin Health Care for the Homeless Minnesota</b>	<b>Using SDOH for Referrals</b> Leveraging their EHR SDOH capabilities by administering screening measures at intake, partner agencies receive referrals automatically based on needs of patients.	Hennepin HCH has a long-standing partnership with Hennepin County Public Health and the Minnesota Department of Health, which makes access to the EHR possible. By enabling the EHR's SDOH features, screening for risk factors embed easily into standard workflows.	Physician's standard workflows now include SDOH screening by requiring it in annual physical exams. Patients are asked if they would like to be referred to an appropriate resource, triggered by SDOH items (e.g., food insecurity), and with approval, a referral is automatically logged.	<ul style="list-style-type: none"> <li>• Work with clinical staff to integrate SDOH collection and reporting into routine procedures</li> <li>• Incorporate opportunities for referrals and build a network</li> <li>• Inquire about opportunities to work with county/state agencies to leverage data sharing and integration capabilities one organization alone would not typically possess</li> </ul>
<b>New Horizon Family Health Services South Carolina</b>	<b>CoC Housing Prioritization</b> With consistent participation in CoC housing determination case conferencing, the health center provides a critical health perspective on acuity and housing need when prioritizing patients.	This partnership has taken time and including promoting health care and health center awareness among the housing community. New Horizon Family Health Services has been the only medical voice at the CoC table for more than five years and has steadily made the HCH model more known and accessible, especially to housing providers who have historically looked to hospitals to understand what health looks like in a community.	Thanks to this established communication stream between housing and health providers, medical case managers have the opportunity to offer insight to help amend housing setting. Representatives from health care teams are also welcome in housing determination case conferencing to provide perspective. Though it continues to be an uphill battle to advocate from a health standpoint, the value of New Horizon as a community partner sustains the paths of communication.	<ul style="list-style-type: none"> <li>• Engage with the local CoC, at a minimum attending community and board meetings, and actively voicing a health center perspective</li> <li>• Attend case conferencing and share, as appropriate, information that assists patients experiencing homelessness</li> <li>• Advocate for patients experiencing homelessness who may not meet all housing prioritization criteria of the CoC to be included in CES prioritization policies</li> </ul>

<b>Community</b>	<b>Promising Practice</b>	<b>How they started</b>	<b>How they sustained</b>	<b>First steps to get started</b>
<b>Washtenaw County Frequent Users Systems Engagement (FUSE) Michigan</b>	<b>Cross Systems Integration</b> Initiative bringing housing and health systems together to target frequent utilization of crisis systems for interventions in housing navigation.	Existing provider relationships in Washtenaw County across the CoC and strong cross-sector partnerships from community mental health champions laid the foundation for rich care coordination. Leveraging these assets, Washtenaw County was able to apply and participate in Social Innovation Funding from CSH to make formalized coordination possible. A relationship of University of Michigan’s Complex Care Management Program assisted in the data matching to identify the frequent users for whom the FUSE initiative intends to serve.	Ongoing weekly meetings, conferencing, and care coordination between cross-sector partners makes it possible to discuss referrals and maintain or adjust care plans. An outreach coordinator helps identify or locate housing navigation resources. A case manager also assigned to address physical/behavioral health, linking resident with primary care, mental health, and substance abuse treatment programs (i.e., local HCH providers).	<ul style="list-style-type: none"> <li>• Review and consider a <a href="#">FUSE approach</a></li> <li>• Identify and engage a FUSE Champion</li> <li>• Engage and strengthen ties with the CoC</li> <li>• Raise awareness to the FUSE approach</li> <li>• Start with a one-time match between health center and HMIS data, if possible; often this is an opportunity to show “proof of concept” to other stakeholders to show multiple systems serve the same patients</li> </ul>

<b>Community</b>	<b>Promising Practice</b>	<b>How they started</b>	<b>How they sustained</b>	<b>First steps to get started</b>
<b>Northeast Valley Health Corporation</b> <i>California</i>	<b>Data Sharing and HMIS</b> Data sharing partnerships with hospitals, specialists, and labs eliminate duplicated tests and incorrect prescriptions. A data partnership with housing providers is also growing, with expanded staff access to HMIS.	NEVHC’s HCH program is one of 14 primary care, preventative care, and specialized health care locations in their region. Being a part of a well-known network provides leverage to data sharing negotiations. Its current sharing partnerships are still developing. It has signed several agreements with area hospitals to continue to expand the ability to see shared electronic data. The need for this kind of access was made obvious; data shows that a significant amount of complex homeless or housing insecure patients use hospital resources before HCH or PCP services.	Current agreements allow physicians and care teams in different health systems to share test results, screenings performed, prescription information among other things for care coordination and eliminating duplication of services. Most recently, NEVHC has obtained access to HMIS to fill in housing and services information and context. Substance use and mental health data remains a barrier, as well as justice-system data. NEVHC is able to use existing partnerships as a foundation for new data sharing agreements, expanding ability to share information with external partners and systems.	<ul style="list-style-type: none"> <li>• Engage with the local CoC, at a minimum attending community and board meetings, and providing a health center perspective</li> <li>• Being a known partner to the CoC may allow an easier time discussing access to HMIS either as a read-only user or a read/write use</li> <li>• Go into discussions with the CoC knowing what role the health center could or should play within CES and as an HMIS user</li> <li>• Review if conducting community assessments for patients and being an additional entry point to CES is appropriate and fits within the mission of the health center, health centers may see patients experiencing homelessness that the CoC may not</li> </ul>

<b>Community</b>	<b>Promising Practice</b>	<b>How they started</b>	<b>How they sustained</b>	<b>First steps to get started</b>
<b>Hawaii Health Information Exchange</b> <i>Hawaii</i>	<b>Using Health Information Exchanges</b> The area HIE allows patient records to be readily available to all participating hospitals and clinics as well as Honolulu’s homeless-health initiative, to speed care and provide seamless services with patient history automatically exchanged.	Physicians of emergency medicine and urgent care identified the significant health and social needs of Honolulu’s homeless population, becoming champions of homeless-health partnerships. This team formed a nonprofit organization, H-4, which has received support from state and local organizations to provide health care, housing, and integrated enabling services. The priorities of Hawaii’s HIE, including improving public health, was an obvious match with H-4.	Care team members within H-4 are able to access real-time patient information. This partnership underpins the quality care coordination for patients transitioning between participating hospitals and health centers. Priorities of Hawaii’s HIE include improving efficiency and reducing costs through effective use of clinical data. A partnership with H-4 continues to help realize these priorities.	<ul style="list-style-type: none"> <li>• Assess whether an HIE already exists in your area; connecting with county or state partners may assist in the search</li> <li>• If one already exists, consider if the types of organizations and data being shared is an appropriate fit for your organization</li> <li>• If one does not exist, engage with convening groups like a Primary Care Association (PCA), local health coalitions, and local or state government agencies to gauge interest and receive guidance on laying the groundwork for a new HIE.</li> </ul>

<b>Community</b>	<b>Promising Practice</b>	<b>How they started</b>	<b>How they sustained</b>	<b>First steps to get started</b>
<b>Boston Health Care for the Homeless Program</b> <i>Massachusetts</i>	<b>Using Health Information Exchanges</b> Boston HCH Program (BHCHP) makes the most of its longstanding partnerships to access exceptional health information technology. Sharing the server of Boston Medical Center, BHCHP has access to the same advanced EHR, database, and HIE, allowing for seamless exchange of documents and administrative data.	BHCHP's physical proximity to one of Boston's largest medical centers became a major factor in its health IT plan. In 2001, Boston Medical Center established a program, "HealthNet," for Boston's community health centers to access the same EHR. Through cabling beneath the street between BHCHP and Boston Medical, BHCHP is now able to access the same EHR technology as its larger partner. Through this approach, BHCHP also benefits from other health IT assets, including an advanced HIE. With information flowing through the underground cabling, BHCHP has sharing capabilities with other community health centers connected to the exchange by private network.	Embedding access to the shared EHR and HIE into standard workflow allows BHCHP to continually improve coordination for patients coming in and out of external health center or hospital systems. Sustained communication and partnership between local entities is simpler through this shared technology. At least 15 clinics or medical centers in Boston are a part of the exchange. BHCHP, along with all other opted-in agencies, continue to benefit from shared access to health information by spending less time on forms and paperwork, identifying most appropriate services and interventions, ultimately lowering costs.	<ul style="list-style-type: none"> <li>• Engage area acute care providers, very likely the same patients served by the health center are also served by hospitals</li> <li>• Lay out the kinds of data or documentation that could be shared across organizations to assist with patient coordination</li> </ul>

<b>Community</b>	<b>Promising Practice</b>	<b>How they started</b>	<b>How they sustained</b>	<b>First steps to get started</b>
<b>Baltimore Health Care for the Homeless Maryland</b>	<b>CoC Partnership/HMIS Participation</b> By being a consistent HMIS partner with the local CoC, by using HMIS, and by sitting on the CoC board, staff may provide advice and perspective to assist with policy development, housing prioritization, and data sharing with other participating agencies to improve cross-sector coordination.	Baltimore HCH has long been committed to developing quality health care and access to housing for patients experiencing homelessness. This commitment has been the foundation of numerous partnerships with non-health entities, such as HUD, with whom HCH developed a housing and health care program for homeless individuals diagnosed with HIV/AIDS. Committed to housing first principles, scattered-site housing developed in 2005, solidifying HCH's role as a quality provider at the intersection of health and housing. As a recipient of HUD funding and operator of housing units, a seat at the CoC table was necessary. Years later, HCH's CEO sits on the board of the local CoC, and staff have access to HMIS for optimal care coordination.	Multiple representatives of Baltimore HCH participate in ongoing CoC planning meetings and conversations around housing prioritization. HMIS access adopted as a part of HCH's workflow, due in part to requirements for recording housing and vulnerability information. Where many health centers struggle with staff capacity for housing data maintenance, HCH has dedicated program staff to input data into HMIS. HCH's current strategic plan focuses on broadening partnerships with CoC members, reaching out to developers and city officials to create more affordable and permanent supportive housing. A commitment to housing as health care drives HCH as a leading stakeholder across sectors.	<ul style="list-style-type: none"> <li>• Engage with the local CoC, at a minimum attending community and board meetings, and providing a health center perspective</li> <li>• Being a known partner to the CoC may allow an easier time discussing access to HMIS either as a read-only user or a read/write use</li> <li>• Go into discussions with the CoC knowing what role the health center could or should play within CES and as an HMIS user</li> <li>• Review if conducting community assessments for patients and being an additional entry point to CES is appropriate and fits within the mission of the health center, health centers may see patients experiencing homelessness that the CoC may not</li> </ul>

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<b>Baltimore Health Care for the Homeless Maryland</b>	<b>Data and Performance Management</b> Using a data reporting and analytics tool, the health center created a centralized platform for aggregating, organizing, and reporting health center data to drive improvement and mitigate service gaps.	In 2014, after completing an internal performance analysis on screening activities at Baltimore HCH, they identified major discrepancies in the location of screening results in the EHR. Concerned by these discrepancies, it was determined that it was necessary to invest in a population health management system and focus on quality improvement.	The data reporting and analytics tool was implemented in late 2014 and, starting in 2015, monthly quality reports on both medical and non-medical measures became available, giving HCH the ability to focus on quality improvement. Investing in this population health management system continues to allow Baltimore HCH to share internally provider-level quality reports in addition to aggregate population outcome data. After adopting this resource, the quality improvement team expanded, hiring the position of Chief Quality Officer to health center leadership. With more permanent, dedicated staff and the ability to produce reports around performance and existing gaps, quality management is not only accessible, but is sustainable.	<ul style="list-style-type: none"> <li>• Start with reporting already available with current systems to assess data quality on critical measures related to SDOH</li> <li>• Identify and inventory data quality issues, discrepancies, or missing data</li> <li>• Work with IT, medical, and non-medical staff to determine root cause of error, whether process, role, or technology based.</li> <li>• Make reporting already available routinely available to staff groups, and convene a table to review reports and recommend changes to process to improve and monitor quality</li> </ul>