



Breaking Down Silos: How to Share Data to Improve the Health of People Experiencing Homelessness

JULY 2021



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Acknowledgments

Homebase and the California Health Care Foundation have partnered on this report to help homeless response and health care system providers undertaking cross-sector data sharing to more effectively serve their clients. The authors would like to thank staff from the many agencies and organizations interviewed who shared their experiences (see Appendix C for the full list). The authors would also like to thank Advisory Group members, who contributed guidance, insights, and feedback along the way (see Appendix D for the full list).

About the Foundation

The **California Health Care Foundation** is dedicated to advancing meaningful, measurable improvements in the way the health care delivery system provides care to the people of California, particularly those with low incomes and those whose needs are not well served by the status quo. We work to ensure that people have access to the care they need, when they need it, at a price they can afford.

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Introduction

The homelessness and health care sectors realize the interconnectedness of the housing and health care needs of individuals and communities. Given that housing status is a key social determinant of health, both sectors recognize the role stable housing has in improving and maintaining health, as well as reducing unnecessary emergency room use and hospital admissions. At the same time, research indicates that addressing the health-related needs of people experiencing or at risk of homelessness is crucial to accessing and sustaining housing.

Purposeful collaborations between the health care and homeless systems of care address the important relationship between health care and housing. This report focuses on the various ways in which the two sectors in California are sharing data with each other to better coordinate and support mutual clients within their communities, most often at the county level. Lessons from throughout the state illustrate that data sharing has been pivotal in breaking down silos and coordinating between the two systems to better address clients' needs.

This report was written in the midst of the COVID-19 pandemic, when communities were facing unprecedented challenges. It was found that the communities already collaborating across departments before COVID-19 were better positioned to respond to the pandemic, which required a community-wide, organized, multisector approach. For communities not already sharing data across sectors, the realities required for effective COVID-19 responses helped to highlight the advantages in coordinating with partners in both the homelessness and the health care systems. In other words, the pandemic further added urgency for greater cross-sector collaboration.

Even with dedicated and committed partnerships in place for cross-sector collaboration, data sharing efforts have not occurred without challenges. Communities have mentioned a common set of barriers they have faced, with four primary ones emerging:

- ▶ Privacy issues

- ▶ Relationships and collaboration
- ▶ Interoperability
- ▶ Data quality

This report examines each challenge and a spectrum of potential opportunities to overcome them, with concrete examples from local communities that have had direct experience with cross-sector data sharing (varying in size, geography, and type and stage of data sharing efforts). While there are no uniform ways to address the common challenges, communities have creatively employed strategies and taken advantage of opportunities to continue pushing forward data sharing efforts. These opportunities prove to be most effective when tailored to each community's own needs, structures, relationships, and motivations.

This report is intended to serve as a guide to those at any stage of undertaking cross-sector data sharing efforts, including those ready to start such efforts for the first time. While the report is situated in the midst of the COVID-19 pandemic, the hope is that lessons and insights gained during this time can carry forward for years to come. From conversations with counties, Continuums of Care (CoCs), health systems, and trusted advisors, one piece of advice came through most saliently: Just get started.

Methodology

This report pulls from research on data sharing projects in communities throughout California and nationwide, surveys of health care and homelessness providers throughout California, and interviews with county representatives and provider organizations.

Homebase spoke with staff and/or reviewed literature of prominent data sharing initiatives across 15 California counties with promising practices and 14 states across the country. These communities were identified through findings from two surveys the authors conducted of a wide array of health care and

homelessness providers. The health care and homeless service organizations chosen to be highlighted varied in geographic region, size, and scope of data sharing activity. In California, Homebase targeted communities in Southern, Central, and Northern California regions. For a full list of interviewees, please see Appendix C.

Why Homelessness and Health Care Providers Share Data

The homelessness crisis in California is unprecedented. Never before has the state faced so many people living without stable housing or supportive services. The main driver for health care and homeless organizations to exchange data has been to address the crisis, especially through efforts such as the Whole Person Care Pilot programs and collaborations aimed at improving care for those who frequently touch both the health care and homeless systems of care — while reducing the costs of the two systems so they can serve more people.

The authors' surveys and interviews found that homelessness and health care providers have many motivations for sharing data about people experiencing homelessness. Chief among them is coordination of care. Communities have recognized that many departments, systems, and organizations have interacted with the same people without coordinating, which has often resulted in duplication of efforts and inefficiencies in delivering services and care. As such, they have launched data sharing to support care management, track those receiving care, and facilitate communications among a disparate set of providers.

Once there is recognition that the same people touched the social services and health care sectors in various ways, the need to coordinate care between health care and homeless systems becomes apparent: to work together to better address the needs of mutual clients to reduce the high health care costs associated with emergency room visits and hospitalizations, especially for the most vulnerable populations, as well as to help people who do not use health care services get appropriate preventive or responsive care. Ensuring people have a roof over their heads is one important way to reduce unnecessary health care visits and has

The term “**data sharing**” encompasses a broad scope of activity. For the purposes of this report, data sharing encompasses any effort to ensure that data about people served are communicated across organizations or sectors in some way. It can be as simple as getting on a telephone and discussing information about a client multiple people are helping. It can be as complicated as creating a central database that pulls in data about people from disparate systems and stores them in a centralized location that many have access to.

This report takes a broad view of data sharing in order to learn how different communities in California and across the country exchange information to help people experiencing homelessness who have chronic health conditions. The scope of the inquiry looked at a range of types of data sharing, including:

- ▶ In-person meetings where people from different sectors verbally share and discuss those they mutually serve
- ▶ Data matching, which includes identifying whether a single person is touching both the health care and homeless systems
- ▶ Shared spreadsheets, which might be exchanged by two organizations to enable data matching for more than one person at a time
- ▶ Shared care platforms, which are used by multiple staff from multiple agencies to enter data directly into a database, app, or tool about the people they mutually serve (e.g., many communities have created care management portals to centralize and coordinate care)
- ▶ Central repositories, which pull data from disparate databases into one shared central system that all providers have access to (or limited access to, depending on privacy concerns)

been a leading incentive to collaborate across the two sectors.

Interviewees also pointed to many additional beneficial outcomes of data sharing from both the health and homeless response systems of care.

The **homeless system of care** (or homeless service sector) includes federal, state, and local agencies, nonprofit and community-based organizations, service providers, funders, and other groups working to support people experiencing homelessness. A Continuum of Care (CoC) is the umbrella term for the group of organizations and agencies that collectively coordinates homeless assistance activities and resources in a community. At the data sharing level, the CoC is the structure that often coordinates cross-sector collaboration.

The **health care system** (or health care sector) spans various levels and types of organizations. They include hospitals, Federally Qualified Health Centers, health plans, behavioral health providers, and local Health Care for the Homeless organizations. Most of the data sharing discussed in this report is shared at a county or local level.

Benefits to the health care system include:

- ▶ Reduced emergency department admissions
- ▶ Reduced inpatient hospital stays
- ▶ Advances in screening for people with mental health and substance use disorders
- ▶ The ability to locate patients for follow-up medical treatment
- ▶ Better care coordination for frequent users of acute care services
- ▶ Provision of care to infrequent users who would otherwise not be identified in the health care system
- ▶ Ability for health providers to more effectively advocate for housing for people with complex or severe medical conditions

Benefits to the homeless response system include:

- ▶ Access to clients' public benefits information (e.g., CalFresh, CalWORKS, Medi-Cal)
- ▶ A trusted partner to call and discuss a client's case
- ▶ Improved ability to keep track of clients
- ▶ More robust health information to assist with prioritization decisions in the Coordinated Entry System (CES)
- ▶ Maximized resources and increased trust overall within communities
- ▶ Greater ability to manage health care for people with complex issues
- ▶ Stronger systems in place to respond to emergencies (e.g., communities with preexisting data sharing across the health care and homeless systems benefitted greatly by being able to quickly respond and house the most vulnerable during Project Roomkey)

Coordinated entry and prioritization. Communities use a process called the Coordinated Entry System (CES) to ensure that people experiencing or at risk of homelessness are prioritized for homeless services and resources based on severity of need. Through CES, people are matched to available resources most suitable to meet their needs. Within each community's CES process, people experiencing homelessness are prioritized for housing and community resources based on factors agreed upon by the community, which usually take into account the severity of service needs, considering factors such as risk of illness, death, and/or victimization; history of frequent use of crisis services; and significant physical or mental health challenges, substance use disorders, or functional impairments. Much of the health-related information that feeds into prioritization is self-reported, and people may underreport certain conditions or disabilities for various reasons. Receiving health data directly from health care providers in addition to self-reported data could provide a fuller understanding of the severity of clients' needs, thus enabling CES to prioritize people more accurately.

What Was Learned: Emerging Stories

While the focus of this report is on California initiatives, before diving into takeaways from California, Homebase conducted a national environmental scan of communities across the country that have undertaken cross-sector data sharing to set the context. (See Appendix A for details about cross-sector data sharing outside of California). It was found that although each community approaches data sharing differently, a number of common attributes across state- and countywide programs emerged:

- ▶ Addressing social determinants of health (SDOH) is a key driving factor underpinning communities' efforts to pursue cross-sector data sharing.
- ▶ Communities tend to start small (e.g., with non-identifiable Homeless Management Information Systems and health information), then add more data as consent forms are signed and additional departments join in.
- ▶ The most successful communities embrace centralizing their cross-sector data sharing, either through a data warehouse or central repository, in some cases beginning with merging existing Homeless Management Information Systems (e.g., Chicago, Connecticut).
- ▶ In the most successful cases, communities utilize existing cross-sector partnerships to begin data sharing efforts. In some communities, while there may be an initial distrust or data privacy concerns, existing cross-sector relationships can help overcome early hesitations. For example, a long-standing relationship between a county's Department of Health and its Department of Social Services would serve as a helpful backdrop for coordinating care.
- ▶ Some communities use academic and university partners to help with the data pulls (e.g., King County, Chicago, New York City).
- ▶ Establishing a shared Master Person Index helps track clients across multiple systems.

A **Master Person Index (MPI)** allows users to match a person to their stored data records. In cross-sector data sharing, it works to identify people in two separate systems by providing them an MPI number that can be matched across the two systems while still maintaining confidentiality.

Overall, communities across the country have either piloted cross-sector data sharing or have adopted programs county- or statewide to enable greater collaboration, to achieve more effective care, and to lower the costs of caring for the most vulnerable people in our system. California is in the forefront of some of those efforts.

California Leads the Way

While a variety of data sharing models are emerging nationally, many California communities have developed some of the most successful approaches to health care and homeless system cross-sector data sharing in the country.

A key reason for this is that California's Medicaid program (Medi-Cal) is implemented on a county level, unlike other Medicaid programs implemented at the state level. The fact that California has 58 counties has provided communities the opportunity to develop a variety of different approaches to collaborate across sectors when piloting programs.

California also has a history of using data sharing to better serve vulnerable populations. Over the past five years in California, several important policy efforts have taken shape that have led to the development of pilot programs for cross-sector data sharing, including past and upcoming initiatives and programs like Health Homes and Whole Person Care (WPC), the statewide Homeless Data Integration System (HDIS),¹ and growing adoption of health information exchange (HIE) efforts across the state. California continues to value the importance of cross-sector collaboration

and data sharing as a means to improve outcomes for those who need access to both health care and housing.

Additional proposed or upcoming policies seek to further encourage and strengthen communities' cross-sector data sharing efforts, including a new initiative for Medi-Cal — California Advancing and Innovating Medi-Cal (CalAIM) — that recognizes housing as health care. (See "Policy Opportunities" section on page 23 for a deeper discussion of CalAIM and other upcoming policy that could impact California's data sharing efforts.)

Whole Person Care. WPC was a five-year project (originally 2016–20 and extended through 2021 due to the COVID-19 pandemic) initiated by California's Department of Health Care Services (DHCS) that focused on high-risk and high-utilizing Medi-Cal patients. Through a federal Medicaid 1115 waiver, DHCS provided flexible federal and state funding to pilot programs led by counties to improve health and housing outcomes for targeted populations. With a \$3 billion investment across 25 county pilots (and one city),² each local WPC pilot has worked to seamlessly coordinate care across different sectors, including public health care systems, clinics, behavioral health providers, social service agencies, Medi-Cal managed care plans, sheriff/probation departments, homeless services providers, and food pantries. Each community effort identified the target population(s) it would focus on, including:

- ▶ People experiencing homelessness or "precariously housed"
- ▶ People with medically complex situations
- ▶ People with alcohol or substance use issues
- ▶ People involved in the criminal justice system
- ▶ Frequent users of emergency services or crisis health care

Approximately half of the pilot programs in California counties identified people experiencing homelessness as a specific population they would target. Through Whole Person Care, DHCS set the stage for the overarching goal of data sharing — to promote community-wide collaboration across sectors. Under WPC, pilot projects are required to assess each client's health, housing, and social needs and to coordinate care in real time to improve outcomes. Because WPC is part of an 1115 waiver, counties could spend Medicaid dollars on infrastructure and services typically not covered under traditional Medicaid, including cross-sector IT data systems. The state requires participants to form new partnerships and to share data. Cross-sector data sharing efforts undertaken by WPC Pilot programs have led to many of the successes highlighted in this report.³

Medicaid Section 1115 waiver. A provision under Medicaid that authorizes experimental, pilot, or demonstration projects at the state or local level. Projects must promote the purposes of Medicaid but 1115 waivers allow for flexibility and creativity to design projects to better serve Medicaid populations. Successful projects started through a Section 1115 waiver are often adopted as federal policy when evidence shows their value.

California Communities in Action

Many of California's 58 counties have focused on data sharing as a central means to enable collaboration between the health care and homeless systems of care. Three of the communities stand out, as they have not only taken on cross-sector data sharing, but they have done so by fundamentally shifting their way of operating in their communities. *All three communities — Alameda, San Diego, and Sonoma Counties — have created new or different systems of interdepartmental collaboration and coordination, implemented centralized data sharing to better serve high-needs community members, and adopted a more expansive view of data sharing that goes beyond health care and the homeless system of care.*

ALAMEDA COUNTY SOCIAL INFORMATION EXCHANGE. To better serve the thousands of people experiencing homelessness across the county, Alameda County wanted to develop a **Community Health Record (CHR)** that provides a curated and real-time view of events and developments in clients' experiences within the health care and homeless system of care. To do so, the county created the Social Health Information Exchange (SHIE) to securely collect and integrate people's medical, mental health, housing, incarceration, crisis response, and social services information. The SHIE is a central repository that stores data from an ever-growing list of participating organizations and allows the data, under all relevant privacy rules, to be accessible across these sectors. The SHIE helps with overall care management and also has an alert system that notifies participating providers when their client is admitted to the emergency department / inpatient or booked into jail, as well as when they are discharged from the hospital or released from jail, helping ensure providers don't lose track of their clients over time.

The county collaborated with internal and outside counsel to develop the data sharing agreements between the partner agencies. They also developed policies and procedures, a data security management plan, and the consumer consent sharing releases. In the first phase of development, all participating providers are bound by HIPAA (Health Insurance Portability and Accountability Act), so the Community Health Record lets them share a robust amount of health-based information. To protect sensitive information, although consumers can consent to have HIV and mental

health information shared, it is not a requirement for HIPAA covered entities. Unlike many communities, the county has included clinical mental health data in the information exchange, even though it requires consumer consent. Alameda is piloting an opportunity for non-HIPAA covered entities in the next phase of the CHR. It will require consumers to provide full consent before data can be shared in the CHR, including all protected personal health information. With consumer consent, these providers can begin on a level playing field (with client consent), giving them a more robust picture of the care and barriers their clients face.

One of the greatest benefits from the SHIE has been for hybrid housing agencies (those covered by HIPAA) that normally are not able to see how their clients move through the health care system. Alameda County anticipates that once the pilot is deemed successful, other noncovered entities will have access to HIPAA-protected data, allowing them to better serve their clients. It has resulted in a fundamental shift in how housing service providers work in the county. For example, in the past, they simply would not be able to find a person who was previously living on the street but then disappeared. Now they can go into the Community Health Record and see if the person was admitted to the hospital, living with a family member, or returned to a shelter.

As the project continues, the county is using the rich information collected through the Social Health Information Exchange to undertake data analysis through an equity lens.

HIPAA covered entities. Under the HIPAA rule, organizations with access to personal health information (PHI) are considered "covered entities," which means HIPAA privacy rules apply to them. As the homeless system of care is structured, most housing and shelter providers are not considered covered entities. For providers to view PHI, clients must explicitly consent to allow providers to see their personal information.

SAN DIEGO COMMUNITY INFORMATION EXCHANGE. The San Diego [Community Information Exchange \(CIE\)](#) began as a pilot, with the purpose of centering the patient and of coordinating care across sectors for people experiencing homelessness. University of California San Diego Health, Father Joe's Villages, City of San Diego Fire/Rescue and paramedics, and the Regional Task Force on the Homeless (RTFH) — San Diego's Continuum of Care — and other San Diego thought leaders launched the project, with success demonstrated through initial return on investment through a reduction in EMS (emergency medical services) transports. CIE was then folded into the 2-1-1 San Diego infrastructure in 2016. While the CIE began as a direct response for immediate needs seen on the ground, it has since turned into an elaborate case coordination and collaboration system that allows information sharing, referrals, and prioritization of care.

The CIE platform shares client-level data and facilitates community case planning and care team communications. The CIE began with a cohort of homeless service providers, then expanded to senior services, veterans organizations, and others. It now involves homeless service providers (about 25% to 30% of those who participate); health care organizations including health plans, hospitals, and Federally Qualified Health Centers (FQHCs); and other social service organizations and faith-based organizations that focus on issues ranging from food insecurity to transportation needs.

A key component of the success is the strong partnership with the RTFH, which manages the Homeless Management Information System (HMIS) in San Diego. The partnership established a shared release of information, allowing an individual's consent to apply to HMIS and CIE activities simultaneously. Data integration feeds from HMIS share valuable data points to support a more comprehensive CIE client profile, creating the opportunity to leverage the data to help highlight [housing instability \(PDF\)](#) inequities and opportunities for systems change.

Creating a shared language for all entities involved in the CIE was essential to ensure true community care planning. Participants have emphasized the importance of having a robust stewardship infrastructure that includes all partners involved, as well as having 2-1-1 — a long-term trusted partner — as the backbone for building trust for data sharing and local partnerships. Under a social determinants of health framework, the CIE team developed

a [Comprehensive Social Continuum Assessment \(CSCA\) \(PDF\)](#), which helps providers look at clients as whole people with various factors influencing their experiences. As a multisector collaboration, the CSCA looks at three primary constructs across 14 domains, which creates a shared language about the risk faced by clients in each domain. The data also allow for seeing trends over time for these individuals, in order to better provide patient-centered care.

The CIE integrates data from many sources including HMIS and FQHC's electronic health records populating a comprehensive, longitudinal client record. The early partnership with RTFH addressing homelessness has led to deep integrations of technologies and client consenting processes that have positively impacted the region at multiple levels, including data analytics at the community level, changing the way service providers work together, and offering people a more trauma-informed experience seeking services.

On the health care side, FQHCs are active users of the CIE, with a handful of health plans signed on as well. The extent to which health plans are bought into the CIE framework varies, but the most invested partners have reengineered workflows, leveraging the CIE to help with complex members. While some health centers started with read-only access to CIE records, some are contributing patient-level data through system integration. Partners entering data are not sharing "big-ticket" items such as unit utilization and inpatient admission, which could help with the cost-benefit analysis. Behavioral health data in the CIE are self-reported but not vetted due to continued legal concerns with 42 CFR Part 2. (For more information on privacy rules and regulations, see "Appendix B. Privacy Primer — Relevant California and Federal Laws".)

The CIE allows for warm handoffs instead of traditional referral options, and many organizations have adopted CIE frameworks as part of their own shift toward more person-centered care. CIE staffers have witnessed situations where it's benefitted client care. For example, when a homeless service provider saw that a client was missing, an alert immediately came from a jail, and the provider coordinated with discharge to return the person two days later. Several working groups and affinity groups are being convened to better understand the broader population health and system performance impacts of the CIE.

The San Diego CIE demonstrates that community collaboration efforts can be incredibly fruitful in coordinating care and changing the culture around traditionally siloed social systems. Communities around California can learn from San Diego in implementing a truly client-centered, community-driven approach to data sharing and care coordination.

ACCESS SONOMA. Sonoma County has become a statewide model for data sharing between homelessness and health care systems. Its success has, in large part, come from having a big-picture vision for its work. Sonoma emphasizes culture change in its data sharing efforts, not simply focusing on the technical aspects but moving to fundamentally change the approach to how government should work with vulnerable populations. By ridding itself of the notion that a person “belongs to” a particular department or set of providers, Sonoma shifted the narrative to seeing each person as the community’s client.

Accessing Coordinated Care and Empowering Self Sufficiency (ACCESS) Sonoma is a countywide initiative — formed by an interdepartmental multidisciplinary team — that focuses on the critical needs of residents experiencing physical and mental health challenges, economic uncertainty, housing instability, substance use disorders, criminal justice engagement, and social inequity. Born from a Board of Supervisors resolution, ACCESS Sonoma has strong leadership, a pool of funding from all the departments involved, and buy-in from the county’s safety-net programs. All this has contributed to the county having a sense of collective responsibility for mutual clients. Individual leaders also played a large role in Sonoma’s success. Representatives from Sonoma County shared that it is important to have a leader who can carry the water and advocate internally and with the community to make the vision a reality.

As a result of strong collaboration and partnership, the ACCESS Sonoma platform was designed to meet the needs of the ACCESS Sonoma team. Recognizing that each input system is different, the platform was designed around the vision of the ACCESS Sonoma initiative and what the other systems could interface with. It uses enabling technology to report, identify, and manage people. While ACCESS Sonoma does not pull a large amount of HMIS data into its central data warehouse, it pulls the most important data needed to coordinate care, such as voucher and housing-eligibility information from clients. Since ACCESS provides its own care coordinators, case manager data are not specifically pulled from HMIS.

Sonoma’s leaders emphasized that communities should simply start, regardless of what stage of the process they are at. If communities face barriers or challenges to fully implementing Sonoma’s model at a large scale, they can always begin on a smaller level. For something as intricate as care coordination, it’s important to be creative and open to nonideal solutions. Under this philosophy, Sonoma is working with four or five other counties in California to share data across CoCs — meeting folks where they are and helping them get started.

Common Challenges to Cross-Sector Data Sharing

State and national efforts to engage in cross-sector data sharing have uncovered four areas where challenges frequently arise: addressing privacy issues, negotiating relationships and collaboration, overcoming interoperability challenges, and improving data quality. This section examines each of the challenge areas, explains the types of issues that may arise, and identifies opportunities to overcome or minimize the challenges. The “Community in Action” sections highlight how communities have been able to overcome the challenges to advance cross-sector collaborations.

Privacy

One of the primary issues communities face in data sharing is the challenge to fully address client privacy issues. The most successful and robust data sharing programs have developed data privacy policies that build trust between participating organizations and have robust consent policies and systems that build trust with clients. These organizations typically work simultaneously with their legal departments to develop (1) policies that enable them to share data within the parameters allowed by federal and state law and (2) consent policies and protocols as an important way to express each client’s understanding of and commitment to be part of the collaboration.

Not all data sharing requires explicit client consent. In some circumstances — for example, through an 1115 waiver — special terms and conditions set out the ability for agency partners to data match shared clients when it furthers the purpose of the underlying program. Federal and state rules for a number of public benefit programs — Medicaid, TANF (Temporary Assistance for Needy Families), SNAP (Supplemental Nutrition Assistance Program), and WIC (Special Supplemental Nutrition Program for Women, Infants, and Children) — allow agencies to exchange data about shared clients.⁴ However, obtaining client

consent for organizations to share personal data is an underpinning value of all successful collaboratives examined in this report; consent puts the client at their center of whole-person care.

The health care sector is intimately familiar with the limitations that HIPAA outlines on the sharing of personal health information. In contrast, HIPAA rules do not apply to most providers working within the homeless system. Medical information included in the homeless system tends to be self-reported, meaning that people share their health, mental health, and substance use information voluntarily to the service providers who coordinate their care.

Health care partners, governed under HIPAA, cannot share health information about their clients with homeless service providers without client consent. However, while both systems of care should seriously consider the privacy protections of clients and obtain informed consent before undertaking data sharing, communities should also remember that HIPAA was created to promote data sharing. Rather than shying away from data sharing efforts, the most successful communities have dug further to better understand what the precise limitations are and how to address them in order to meaningfully share data. For example, ACCESS Sonoma moved forward by underpinning participant consent in each of its projects.

The **Health Insurance Portability and Accountability Act (HIPAA)** is meant to protect people’s individual medical information and applies to data sharing that includes personal health information. HIPAA was created to enable data sharing, not to prohibit it. It lays out the details about what data can be shared and how to share them.

Communities have had to confront both actual privacy risk and risk aversion from county counsel (lawyers that provide legal services and opinions to the county and county privacy officers) and other lawyers, in addition to addressing and overcoming potential underlying legal challenges to data sharing. In some instances, they are told the risks with privacy are not worth the effort. In other instances, communities dig deeper and put the time and resources into understanding how best to protect privacy and undertake data sharing. Once they addressed the actual risks, they were able to move forward with addressing some of the perceptions around data sharing — determining how to share data effectively and put strong privacy protections in place.

COMMUNITY IN ACTION. In **Ventura County**, data sharing efforts were initiated through the County Executive Office, which oversees many county departments. To begin data sharing across departments, the data sharing team worked with upward of seven lawyers, one for each county department, to overcome each department’s interpretation and perception of privacy restrictions.

Opportunities to Overcome Privacy Challenges

There are a variety of ways county departments and local providers can share valuable client information with each other fairly and legally. Communities have taken different approaches to overcoming the privacy issues that arise when a community desires to undertake cross-sector data sharing. Policy approaches that alleviate privacy- and security-related concerns about data sharing can go far in smoothing collaboration going forward.

Solicit Participant Consent

For many cross-sector collaborations, the most effective way to permit data sharing of health and housing information is to develop a specific participant consent form (often referred to as a “release of information,” or ROI) that explicitly states that to be part of the program, clients had to consent to data sharing with both housing and health systems.

COMMUNITIES IN ACTION. In **Ventura County**, when this type of consent form was first initiated, people experiencing homelessness were wary about signing such a broad agreement. To address their concerns, leaders developed a training program for staff who worked directly with clients. They educated staff about privacy rules and the intention of the program, and went through a series of exercises so staff could adequately respond to client concerns. Once the new training program was in place and staff were more knowledgeable about the privacy issues, they were well positioned to communicate clearly with clients about privacy, along with the reasons for sharing and the benefits clients could receive from the data sharing efforts. With better information, they were able to build trust with clients, who were then much more bought into the benefits of data sharing and collaboration between the health care and homeless systems.

In **Marin County**, a “universal release of information (ROI)” was developed that involves 42 entities from a wide variety of provider partners within the community and the county. One of the primary benefits of the universal ROI is that on an ad hoc basis, providers can pick up the telephone and have a client-specific discussion across different parts of the human services system (for clients who have signed the ROI).

Engage Outside Legal Counsel

County counsel are usually not privacy experts. Rather than require county counsel to acquire the type of privacy law knowledge needed to facilitate cross-sector data sharing, communities can engage expert legal counsel to craft consent forms and data use agreements (including data sharing agreements) that address privacy. With experts in privacy crafting the agreements, county counsel tend to be much more willing to endorse their departments' participation in cross-sector data sharing.

COMMUNITY IN ACTION. In **Santa Barbara County**, it took one and a half years going back and forth with lawyers to establish a memorandum of understanding (MOU) between the multitude of agencies wishing to collaborate and share data. When the Continuum of Care shared the final MOU with health care providers, they were impressed at how thorough it was and believed it was sufficient to allow cross-sector data sharing and privacy protections. Because it was such an intensive effort to get agreement, they also committed to ongoing on-site workplace audits and quarterly privacy and security checklists. Once the health providers saw the protocols in place, they were willing to engage and share data, which ended up being essential at the start of the COVID-19 crisis. Because data sharing was in place, homeless service providers could view client medical records to ensure that those with the highest health risk were prioritized for Project Roomkey.

Engage Leadership Team to Address Privacy Challenges

Leadership from within a community that articulates the value of cross-sector collaboration can also help address privacy concerns and lessen the overall resistance to data sharing. Leadership can come in many forms: people, organizations, and policies.

Sometimes leadership can come from a department or agency lead who has a vision and leads the effort across all partners. Other times, leadership can come through an identified champion, advocate, or staff person who can spearhead the conversation, who understands the delicate balance between the goals of data sharing and protecting people's privacy.

Data Sharing Agreements

There are many types of agreements that communities put in place to facilitate data sharing:

Business associate agreement. A business associate agreement establishes responsibilities around safeguarding protected health information between a HIPAA covered entity and a noncovered entity. A HIPAA covered entity must enter into a BAA when it is sharing data with a partner that is a noncovered entity (such as a social services partner).

Data sharing agreement. A formal contract that establishes what data are being used and how the data will be used. These agreements can be entered into by any organizations or agencies that wish to undertake data sharing. Similar to a data use agreement.

Data use agreement. An agreement that governs the transfer and use of data between two or more entities. These often explicitly state what data will be shared, the way the data will be used, and the limitations placed on the use of data. Similar to a data sharing agreement.

Memorandum of understanding. An agreement between two or more parties that is not legally binding but that outlines the responsibilities and commitments between the signatories. Can be an agreement between all types of organizations, agencies, or individuals.

Organized health care agreement. An agreement entered into by more than one HIPAA covered entity (e.g., hospital or Federally Qualified Health Center) that establishes that they are partnering to work together. Often used when hospitals and physician practices agree to partner to care for patients.

Release of information. An authorization required by the Department of Housing and Urban Development (HUD) that expresses a client's consent to allow their personal data to be shared among providers and others within the homeless system of care.

Someone who knows when to bring in external partners to help move the conversation forward can be advantageous. In organizational partnerships, leadership can come from an organization committed to change and willing to direct and lead the collaboration efforts.

Some communities have found it particularly helpful to have or cultivate a compliance or privacy officer who can see the value of data sharing. For example, Marin County pointed to their compliance and privacy officer's involvement in Whole Person Care as a key reason for success. While some of this success has been up to individual leaders, communities can take initiative to secure the buy-in of these important leaders. As cross-sector data sharing projects begin, engaging privacy experts early on as goal setters and cocreators may help facilitate and shape their support for the project.

COMMUNITIES IN ACTION. In **Sonoma County**, a privacy and compliance officer who supported the cross-sector data sharing efforts took a leadership role in overcoming the privacy hurdles. The Department of Health Services did their homework, hired outside privacy experts, and took the issue to the county Board of Supervisors. The supervisors adopted a resolution in support of the cross-sector data sharing. The resolution applied across all departments, sending a policy message to each that the county as a whole endorsed cross-departmental data sharing.

The **Marin County** compliance and privacy officer was an active proponent of the county's Whole Person Care Pilot program and directly worked to enable data sharing and data integration across programs. As a result of significant effort, the county has a 32-entity ROI for client consent and is working to develop a care coordination platform to serve people more effectively across sectors.

Leverage Policy Frameworks

In addition to staff leadership, communities have been able to take advantage of impactful policies already in place — either departmental policies, local efforts, or state and federal policies that recognize the value of data sharing. While HIPAA is often cited as a barrier to data sharing, in reality it was intended to protect health care coverage when people lose or change jobs — making it easier for health data to be portable with the person while still protecting patient privacy. Other local and state policies can trigger similar opportunities. Some communities in California have been particularly successful at interpreting policies (including statutes and/or regulations) to create a rationale or incentive to undertake cross-sector collaboration.

COMMUNITIES IN ACTION. In **Los Angeles County**, under the auspices of AB 210 (Chapter 544 of 2017), the County Executive Office created a partnership to serve some of the highest acuity people in the county to share data, increase care management, and help obtain housing access for those who need it most.

Following the passage of AB 210 (Chapter 544 of 2017), **Riverside County** set up a homeless multidisciplinary team that meets monthly to collaborate on helping those with the most complex cases. Rather than occurring in an electronic system, Riverside engages in “data sharing” in person through case conferences. Line staff from partner organizations who know the nuances of a client's situation use the meetings to collaborate on how to best serve the client and commit on the spot to next steps. The result has been more efficient care coordination for people with complex needs who otherwise would have been bounced back and forth between departments. To address privacy concerns, the Department of Social Services took a state countywide letter and worked with legal counsel to develop a specific release and new confidentiality agreement.

AB 210 (Chapter 544 of 2017) allows counties to create a multidisciplinary team to expedite the process by which homeless adults access housing and supportive services, including through sharing confidential information. While the bill did not waive privacy rights conferred by state and federal laws, it paved the way for a structure to support cross-sector collaboration when working with people experiencing homelessness.

Define Collaboration Parameters

Another opportunity to overcome privacy challenges is to start small and build trust slowly. Even in communities that adopt universal consents that allow for broad sharing of personal information, the law limits what can be shared about mental health and substance use. Sharing data with additional cross-sector partners (child welfare, criminal justice, social services) raises additional concerns (e.g., some communities raised the possibility of law enforcement using the data to further criminalize homelessness).

In the face of these concerns, communities are encouraged to start small and share only the data they are comfortable sharing. Rather than not share any data, communities can begin by outlining clear parameters to share limited amounts of personal health information (with consent). For example, in the case of San Diego's Community Information Exchange, providers limited sharing data relating to mental health and substance use to include only self-reported data.

COMMUNITY IN ACTION. Substance use and behavioral health data are often held to a higher standard of privacy than other types of health care data. In **Riverside County**, the challenge of integrating behavioral health data governed by 42 CFR Part 2 was encountered during a behavioral health screening hotline. The county has a screening access line (as part of a state waiver) that allows the county to screen people for services. In this process, clients share behavioral health information over the phone. In order to protect confidential substance use disorder and behavioral health data, the county entered into a business agreement with providers that outlines the purposes and uses of the data shared on the calls. For the behavioral health treatment components included in the data sharing, Riverside utilizes an atypical ROI that comes with both HIPAA and 42 CFR Part 2, along with trainings for all staff about both. The unique ROI allows the screening entity to discuss behavioral health information shared during the screening process to accomplish a warm handoff with community partners. Those partners not signed onto the ROI do not have access to clients' medical records but can still view HMIS data.

Relationships and Collaboration

Another primary challenge is ensuring strong relationships and collaboration across county departments, which is necessary to execute data sharing between homelessness and health care systems. Due to the siloed nature of systems of care and abstraction into spreadsheets and data warehouses, it is important to focus on sharing data for coordinating care across departments. Ensuring that all parties participating in data sharing will benefit from the effort is key to moving a partnership forward.

Privacy challenges are one reason it is vital to build trust and collaboration between communities. Unidirectional data sharing (primarily homeless service providers sharing data with health care providers) tends to be more common than bidirectional data sharing, where both partners share their data with one another. Patient health information is held to a higher standard (HIPAA) than housing information, and homeless services providers often are not equipped to meet HIPAA privacy standards. Unidirectional data sharing can end up frustrating homeless service providers who share their data with health care providers but do not obtain information about their clients' experiences with the health care system, reducing motivation to share data. It is in the interest of both types of providers to work together and build capacity in the homeless services sector to meet data privacy requirements.

Fractured data systems, regulations, political issues, and misperceptions all create further barriers to collaboration. In addition, service providers and eligibility workers are not always aware of how the process of data sharing is essential for coordinating care — especially in the context of limited resources, funding, and staff capacity.

For both health care and homelessness systems, a reorientation in systems and approach is needed to successfully collaborate. For example, homeless system databases are used by people representing many organizations and are not accessible by health care system providers. With so many different people entering data about the people they serve, there may be less uniformity in the way data are entered. That is

not always the case in the health care system, where most data entry is done by staff from the same health care organization. Another example: Hospital systems often have ongoing contact with their patients while they are under their care. As people move through the hospital, staff enter dates when people exit care through a discharge plan, etc. In the homeless system of care, people experiencing homelessness may not touch the system for follow through, and therefore are not “exited” from the database in real time.

Each system’s rules work appropriately for the kind of care they provide, yet the approach is different between the two systems. To collaborate effectively in their cross-sector data sharing efforts, both systems need to be flexible and to recognize their different, but complementary, approaches. Integration of homelessness and health care systems would further diminish silos and refocus care on centering the whole person.

Opportunities to Improve Relationships and Collaboration

Successful data sharing partnerships underscore the importance of culture shift to support successful collaboration. Among the key strategies to inspire collaboration and secure cross-sector relationships is to communicate a clear vision and purpose for the desired data sharing and to foster cross-departmental relationships. These approaches can ease the process of coordinating care via data sharing, building a strong foundation for ongoing partnership between departments and across sectors of care.

Communicate a Clear Vision and Purpose

Having the right people bought into the data sharing process is essential to move efforts forward. Amid a variety of important and complex projects, it takes strategic effort to establish the long-term value and potential impact of data sharing. To fully buy in, departments and individuals need to understand the potential value of data sharing efforts to their overarching programmatic goals. Since data sharing can have various purposes and benefits, it is critical to understand which of those will resonate with which partners, then communicate clearly how data sharing will achieve the benefits each partner cares about.

Communities can work toward overcoming barriers by clearly articulating the purpose and benefits of their data sharing program. Communities may clarify that data will be used to better target services. In addition to care coordination, data from adjacent systems of care afford service providers a larger-picture view of client needs. Providers can utilize data to more directly tailor services to the clients they serve, even in their day-to-day operations. For instance, in Humboldt County, staff found that developing detailed use cases that specified the circumstances and reasons for data sharing helped overcome misconceptions and allowed them to gain wide support for their data sharing efforts.

COMMUNITY IN ACTION. **Ventura County** is working with a variety of county agencies to implement their data sharing program. To ease community concerns about sharing data across sectors, Ventura articulated a clear vision and purpose for why they are sharing data. They emphasized that the purpose of data sharing was to coordinate care rather than to instate punitive measures (such as from law enforcement). The data sharing helped them to quickly identify eligible people for Project Roomkey and to work with partners to connect them quickly to shelter during the COVID-19 pandemic. Without broad participation of partners, the county would not have had the data needed to determine what the community need was for Project Roomkey.

Center Racial Equity and Systems Change

The communities that have developed the most meaningful engagement and cross-sector collaboration are those that see data sharing as a method to undertake a fundamental shift in how to care for their most vulnerable residents. Given that homelessness disproportionately affects individuals and communities of color, using a racial equity framework for data sharing has helped communities achieve their goals of targeting the most marginalized within their systems.

By centering goals on racial equity, data sharing becomes a mechanism to help shift agency systems and cultures in the way they think about people — those they serve are not a department or agency’s clients, they are “community clients.” Successful communities have devised systems, tools, and processes

to ensure that they are viewing clients as holistic individuals with complex identities and histories at the center of their work. They then treat them with the most seamless and holistic approach possible.

COMMUNITY IN ACTION. Looking at data through a racial equity lens can help reduce systemwide service disparities in both the homeless and health care systems. For instance, in **Alameda County**, all public dashboards display data broken down by race and gender. Data showed intersectional demographic information in ways that helped the county see patterns and the impacts of their policies (e.g., the Black population is much older and is homeless at a much higher rate than other groups). In one instance, the county hospital observed an unusual spike in COVID-19 cases within a specific indigenous population in the Alameda Community (Mam/Mayan language speakers). The SHIE was used to create a holistic picture of that population's demographics (race, ethnicity, residence — zip code and neighborhood) and utilization — type of services accessed, assigned medical homes, assigned health plans — to support targeted outreach efforts. Communities can further expand on this work by looking at racial disparities between clients served, using this data to inform programmatic changes targeting historically and currently underserved groups.

Foster Cross-Departmental Relationships

Communities that have been successful with data sharing built their efforts on cross-departmental relationships between homelessness and health care systems. Many of these relationships draw from cooperation on previous projects, while others simply have leadership that sees the value of cross-sector collaboration. Data sharing projects themselves have contributed to the development of deeper relationships as well as shared responses to the COVID-19 pandemic.

The connection between beginning to share data and structurally establishing an ongoing partnership is beneficial when it is a reciprocal one. Building cross-departmental relationships is essential to overcoming misperceptions of how shared data might be used, including by emphasizing that colleagues across departments and sectors are similarly invested in the

shared goal of better serving clients through coordinated care. Some communities specifically called out opportunities for expansion in this area, such as homelessness partners working with hospital discharge planning, colleges, and LGBTQ+ centers.

COMMUNITIES IN ACTION. In **Santa Cruz County**, collaboration on the county's COVID-19 response led to long-lasting cross-departmental partnerships. The existence of these relationships has aided in data sharing efforts because they laid the foundation for working together across departments. Meanwhile, in **Marin County** it was the other way around — community building as a result of its data sharing project led to strong trust and shared contacts between departments, which were then found helpful in coordinating a comprehensive COVID-19 response. These two communities' experiences illustrate the reciprocity between data sharing efforts and ongoing collaboration between departments.

Successful data sharing efforts across multiple agencies are based on trusted partnerships. In **Seattle** and **King County, Washington**, the public health department joined with the public housing authorities to lead a linkage of health care and housing data based on a shared fundamental belief that housing is health. Setting the value proposition and finding ways that the data linkage and results can assist data collaborators were useful tools to overcoming barriers and keeping the partnership goals aligned and sustained.

Going forward, communities can work on expanding their data sharing to fold in more partners. For instance, some partners expressed a desire to focus attention on cross-sector data sharing with social services programs. They expressed interest in knowing if clients are on services such as CalFresh or CalWORKS, as well as timelines for when clients are up for Medi-Cal redeterminations — all to more holistically understand the client's situation and needs. Communities also raised the possibility that a specific role could be designated in public assistance systems that helps to input data to share with health care and homeless system partners.

Identify Specific Roles and Structures

One potential way to mitigate a lack of — or often fragmented — staff capacity is to create a specific role to carry forward data sharing projects within a community, such as a dedicated staff member in charge of the project. The role can be especially dedicated to project management and coordination or can be split with project managing other community priorities.

Setting up longer-term sustainable structures to move the work forward is another way to overcome staff shortages. The efforts to develop sustainable structures can be led by the aforementioned dedicated staff member or by a team but ideally involves representatives from each partner organization. While setting up a governance committee may require a great deal of initial work, communities have found that the support of such a committee has been helpful in seeing through the efforts. It is especially advisable to have a governing committee that represents all parties involved in the project.

COMMUNITIES IN ACTION. Contra Costa County leadership was convinced by the vision around the county's data sharing efforts, so they hired a program manager to coordinate across programs and enter data more thoroughly. Working with backend HMIS teams as well as direct program staff, the manager has played a key role in bringing the county's data sharing efforts to fruition.

Orange County had a data sharing relationship with Cal Optima (a Medi-Cal health plan) through the Whole Person Care Pilot for a number of years that allowed them to collaborate around a shared set of clients. More recently, the county initiated efforts to expand its data sharing efforts. To get a broader group of local partners comfortable with data sharing, Orange County established a governance committee around its data sharing platform, the System of Care Data Integration System (SOCDIS). SOCDIS integrates all the traditional HMIS data elements and Whole Person Care data. The governance committee includes all the agency members involved in data sharing to advise on privacy, security, and compliance. Orange County also had county counsel and the county privacy officer ensure compliance for data and information sharing.

Use Technology to Support Line Staff

Access to care coordination data sharing platforms that support staff while in the field would allow them to locate people more readily and identify their immediate needs. For example, in Santa Barbara, the public health nurse who provides services at encampments reported that she often doesn't know who she will interact with until she arrives at the encampment, so she can't look up their circumstances before she leaves her office. If she could access their data while she's at the encampment, she could look up a client's health history and be better equipped to provide care in the field. She could also add notes to the system in the moment rather than needing to remember when she returns to the office.

The ability to use a mobile app to geolocate a person's last known interaction with staff would also be impactful. Geolocation would help health workers to locate people who need care; for example, if someone living unsheltered has a colostomy bag, a mobile application could support health care staff to more easily locate the client to follow up and provide any medical care.

Interoperability

The health care and homeless systems of care use different technology platforms to move their work forward. Because of the health care system's complexity, there are many different software systems, tools, applications, and other technologies to help providers do their work, including different software tools to enable data sharing within the health system, such as electronic health records and health information exchange processes. In contrast, the homeless system of care has one primary data system that it uses for coordination and collaboration across all service providers — the Homeless Management Information System (HMIS).

As a result of the different ways the various data systems have been used in the health care and homeless sectors, technological functionality advances and processes working with the two systems are quite different. Enabling the systems to effectively share data

is one of the biggest challenges the two sectors have had to overcome to collaborate effectively. Differences in interoperability of the data systems present a set of challenges and opportunities, while data quality and technology standards present a different set.

Policy supporting interoperability for health care systems has existed since the federal Department of Health and Human Services set up the Office of the National Coordinator to focus on interoperability in the health care system. As a result, more movement toward interoperability has occurred in the health care sector compared to the homeless sector. While health information technology systems are still far from fully interoperable, the health care industry has taken on the issue by, for example, creating systems that allow electronic health records (EHRs) to query each other.

In contrast, most HMIS software was not originally designed for interoperability, but rather as a single shared platform — an insular system for all organizations in a community's homeless system of care to store and share data among themselves. HMIS's lack of interoperability has challenged homeless service providers when they want to use databases for their internal organizational systems that are incompatible with their HMIS. For example, organizations that serve a broader population of people (i.e., not just people experiencing homelessness) may be tracking and administering to their clients through other internal software programs, and different funders often require the use of specific databases. Because most HMIS are not interoperable, program staff have had to enter data into two different systems, once into HMIS and again into their own internal software system, resulting in more time spent on administrative data entry than time working directly with clients.

The same challenge arises with data sharing when the HMIS is not designed to be interoperable with other cross-sector systems. Without the functionality to share HMIS data with the health care system, communities wishing to collaborate have sometimes had to do manual data matching.⁵

Opportunities to Address Interoperability

Technological advances enable disparate systems to share data more readily. While not all database systems have evolved at the same pace, interoperability can be achieved in a number of ways — including through building a central data warehouse, upgrading systems to include more contemporary interoperability functionality, and creating new, external shared platforms that allow for collaboration.

Create a Centralized Data Warehouse

Historically, HMIS vendors did not share data outside the homeless system of care. When data sharing opportunities arose, many of the HMIS systems were not built to be interoperable with other software systems, which limited the ability for health and homeless systems to intersect in a meaningful data sharing arrangement. This can be overcome by creating a centralized data warehouse to store data from both sectors.

COMMUNITY IN ACTION. Contra Costa County's Health Services Division manages a centralized data warehouse through its internal IT team, rather than through a vendor. As part of the Whole Person Care Pilot program, Contra Costa implemented a new HMIS that could be fully integrated with the data warehouse. Working with the vendor, the county IT team developed a nightly file exchange process to bring the HMIS data into the warehouse and a patient-matching algorithm to allow for bidirectional data sharing between the health system's EHR and HMIS. Once the EHR information is pulled into the central repository, care team data — including case manager name, title, and contact information — flows into the HMIS to make it available to homeless service providers. At the bottom of each client's data record in HMIS is any contact information for case managers in the health system, making it easy for homeless service providers to contact their health care counterparts to discuss the client's situation. HMIS data available in the EHR include housing programs the patient is actively engaged with and contact information.

Enhance Technological Functionality

Technological developments in the tools that homelessness and health care systems use can help ease the process of bidirectional data sharing. Creating new features and functionalities in shared care platforms can lower barriers for providers to input data to be shared, easing concerns of needing to enter the same data into multiple systems.

COMMUNITY IN ACTION. The **Santa Cruz County** Whole Person Care Pilot program developed a cross-sector care coordination tool that both health care and other service providers can access called Together We Care. Health care sector stakeholders expressed concern about signing on to yet another platform. To resolve some of the skepticism, Whole Person Care staff created single sign-on functionality in the data platform so health care providers could easily view care coordination information. The technological development eases the process for health care providers to view data, thus enabling bidirectional data sharing with participation from health care.

Use a Shared Care Platform and Use Cases

Sometimes, when neither system can provide a suitable platform to anchor the data sharing, it can be helpful to establish a shared third-party platform to hold the data. Housing the data in a third-party platform can also make all parties feel that they co-own the data, rather than one system subsuming others. It can help ease cross-sector concerns about one sector over-compromising to fit the other's standards.

In addition, outlining specific use cases can help garner partner support for a mutually beneficial data sharing relationship. Homelessness and health care providers can get together and brainstorm situations where it would be helpful for both systems to share client data (e.g., knowing when a shared client has entered or exited a hospital and/or shelter, so case managers understand what their health care needs are).

COMMUNITY IN ACTION. In **Humboldt County**, North Coast Health Improvement and Information Network (NCHIIN) used a grant from the Office of the National Coordinator (ONC) on cross-sector data sharing. They reached out to the county Department of Health and Human Services to identify the best programs to undertake a pilot. The county originally believed that their HMIS could serve as the central database but quickly discovered it lacked the needed functionality to be a coordination platform. While the county's HMIS provides good demographic data and information about the services clients are receiving, it is primarily used for reporting to HUD. When HMIS proved not to be a viable option, NCHIIN reached out to a fairly young start-up company, Activate Care, which provided the technological platform to undertake care management. While upholding HIPAA compliance, NCHIIN was able to engage multiple cross-sector partners to use the shared care platform by developing a series of use cases exemplifying how such a platform would improve their work and the care offered to clients.

Data Quality

Health care partners shared that data quality and accessibility issues in HMIS make it challenging to share data across the two sectors. HMIS data fields may be incomplete, data entered may not be accurate, and data standards may be different across the two sectors.

In HMIS, key data elements are frequently text-based and stored in open-ended "notes" fields. For example, HMIS users often put detailed and important information about the people they serve in the notes field, rather than in data fields that require specified input options. In one Bay Area community, telephone and email contact for their clients was stored in "notes" rather than in specific data fields, which made it difficult to collaborate when the county was preparing to contact people experiencing homeless who were eligible for priority placement in hotels due to COVID-19 vulnerability risk.

Health care and IT partners also expressed that many HMIS fields have little to no data validation. If users enter data in the wrong place or in the wrong format, the system is not programmed to reject the entry and

require the user to enter the information correctly. A simple example is a field requiring a telephone number, but the system allows a user to type in letters. It is only when the provider tries to call the client that they discover they cannot because there is no telephone number in the system.

Data validation ensures the accuracy, clarity, and details of data before using them. The goal is to have clean, reliable, and accurate data. Technological tools and programming rules can be used to validate data. User training can also assist with accuracy, ensuring that users enter data in the appropriate format.

In some cases in HMIS, there is little uniformity about how data are entered. For example, in order to match people across systems, some health care databases required a full Social Security number, when available. In the partner HMIS, however, users were only entering the last four digits of clients' Social Security numbers. When the two partners wanted to data match to see if their clients overlapped in any way, they were unable to because they could not match people without all nine digits.

Other data quality issues that make it challenging to effectively data share include:

- ▶ Duplicate entries in the database for the same person
- ▶ Undated or untimely data entry
- ▶ Vendors making constant updates to the system without informing users, including modifying data fields

Without strong data quality in each of the data systems, the benefit of data sharing is lessened, as the technologists on the receiving end of the data have to spend significant time and resources going through the data to make them comparable.

Opportunities to Improve Data Quality

Strengthening data quality in the systems used to share data can facilitate community efforts to collaborate across sectors. On the HMIS side, methods to enhance cross-sector data sharing efforts include developing data standards, improving data validation, undertaking more robust education, and implementing training for new users to the system. When technology or resources are not available to make those changes readily, sharing a limited set of data across partners can ensure that data — even a minimal set — can enable cross-sector collaboration.

Develop HMIS Data Standards

With more efforts to undertake cross-sector data sharing, it may be worthwhile for the homeless system of care to develop and adopt HMIS data standards beyond those that HUD currently mandates. Some communities collect and store more data in HMIS than HUD requires, and many of those data are ripe for sharing between the health care and homeless sectors. Through local policy or via contracts with the many organizations that work with the HMIS vendor, the community could collectively develop a set of broad HMIS data standards for data fields that enable care coordination between homelessness and health care systems that build upon HUD's existing ones. The standards could establish requirements for robust data validation, interoperability, and greater transparency.

Improve Data Validation

Data validation can be accomplished manually, through programming, or through a combination of both. For example, programs can be designed with rules that prevent a user from entering inaccurate information (e.g., displaying an error message when letters are entered into a telephone number field). In some communities, partners from the health care sector contributed dedicated IT staff to help clean up the data elements from HMIS in order to facilitate data matching with their local health care data. Homeless system providers almost always lack the staff capacity to do this on their own, so health care providers with more resources and/or expertise are much better positioned to undertake data quality efforts for the collective good of both systems. While manually

validating data can be time-consuming and requires dedicated staff, the investment at the initial data sharing stage can improve the efficiency and quality of data sharing over time.

COMMUNITY IN ACTION. In **Contra Costa County**, data teams from the Health Care for the Homeless Program and the Health, Housing, and Homeless Division undertook efforts to review HMIS data and validate many of the data elements, to match data in the health system. While time-consuming, the efforts were worth the investment. With strong data matching, not only were they able to collaborate more effectively for their Whole Person Care Pilot program, but when faced with the COVID-19 pandemic, they were well positioned to quickly identify the most vulnerable in the homeless community to test or temporarily house.

Initiate Education and Training

Cross-system data sharing requires consistent data entry and quality data in both systems. The simplest solution that communities use to achieve those goals is education and training. Helping on-the-ground staff understand why data quality is important for data matching and cross-system care coordination and how to improve the quality of the data they input results in data quality improvement that enables smoother data sharing. These efforts should be paired with policies and procedures for routine testing and cleaning of data to ensure that the education and training interventions are successful.

COMMUNITY IN ACTION. **Orange County** recognized that effective cross-sector data sharing would require a data dictionary to help ensure the data being shared were useful. The county provided information about the data they were sending, told health system partners that “we need your data to look something similar to our data,” and then provided a data dictionary with examples to make clear how to translate data between the two systems. The county provided the health system database administrators with a series of bulleted questions, time frames, and other needs. When administrators didn’t have the answers, they passed the requests to line staff who were manipulating the data directly. When they finally contracted for data sharing, they were able to formalize the specified outcomes into their latest contract amendment because they had a shared language early on.

Start Out Small

In some instances, the effort needed to improve data quality may be more time-consuming than it’s worth. While data quality issues can feel insurmountable, cross-sector partners may choose to limit the data they share. For example, starting with identifying those who interact with both the homeless system and the health care system has proven valuable. For health care providers who see a person in the emergency department, a flag on that person’s record indicating they are homeless enables that provider to reach out to their local Health Care for the Homeless partners or be more deliberate about finding the patient a safe place to go upon discharge, including by contacting their partner homeless service provider to make a warm handoff.

For the small but important population of people experiencing homelessness seen only in emergency departments for all their care, limited data sharing may result in people falling through the cracks. Local communities that find themselves limiting data sharing will want to ensure that whatever limitations they impose, the system still allows for bidirectional data sharing, ensuring that people are getting all the services across both systems they are entitled to receive.

COMMUNITY IN ACTION. For the **City of Sacramento**, the organization leading the area’s Whole Person Care Pilot program, it was clear early on that they could not undergo bidirectional data sharing through their shared care platform. Rather than give up, they worked with service providers to determine the bare minimum of client information someone on a care team would need to know: where the patient is and what their needs are. They then revised many of the fields in the shared care plan over time to decrease the data entry needed while still providing all users access to key information about a client’s care.

Policy Opportunities: New Efforts in Place or on the Horizon

There are a number of policy opportunities, either currently being implemented or on the horizon in California, that can further efforts to share data across sectors. The on-the-ground efforts of Whole Person Care (WPC) Pilot programs and other vital data sharing efforts illustrate the impact policy has already had on data sharing across the homelessness and health care sectors. The pilot programs were extremely successful in helping communities address the needs of some of their most vulnerable patients. While the WPC Pilot programs are phasing out by the end of 2021, they have set the groundwork for future policy efforts that build off their progress.

California has recently proposed or initiated policy changes to embrace at a state level more robust data sharing efforts and cross-sector, cross-community collaboration through Medi-Cal. The CalAIM initiative presents new opportunities to expand health care and homeless system data sharing through improved systems, broader coalitions, and collaborative efforts. Furthermore, in 2021, the state has developed a statewide Homeless Data Information System that has the promise for cross-sector data sharing across multiple state systems, in addition to displaying aggregate data statewide that can be filtered by community. Additionally, recent budget and legislative proposals to advance a statewide health information exchange may create opportunities for greater data sharing efforts.

CalAIM. California Advancing and Innovating Medi-Cal is a multiyear initiative by the DHCS designed to improve quality of life and health outcomes of Medi-Cal members through implementation of broad delivery system, program, and payment reforms.

The initiative has three primary goals:

- ▶ Identify and manage member risk and need through whole-person care approaches and addressing social determinants of health

- ▶ Help make Medi-Cal more consistent and seamless by reducing complexity and increasing flexibility
- ▶ Improve quality outcomes, reduce health disparities, and drive delivery system transformation and innovation through value-based initiatives, modernization of systems, and payment reform⁶

To achieve these goals, CalAIM's key proposals include developing managed care plans and patient-centered population health strategies.

Managed care plans will be required to provide enhanced care management (building on WPC pilots and other efforts) to people experiencing homelessness, one of seven mandatory high-risk populations that plans must identify and serve. Enhanced Care Management is intended to provide high-touch, on-the-ground, and face-to-face engagement and should recognize the unique challenges of unsheltered people as they attempt to navigate and access the medical and behavioral health care delivery systems, as well as social services.

CalAIM also includes support for flexible wraparound services, including housing supports, called "In Lieu of Services," which take the place of more costly medical services.

In Lieu of Services (ILOS). Federal Medicaid law allows states to substitute nonmedical services for traditional medical care. Under California's proposed CalAIM pilot project, ILOS are optional services that pilot programs can cover under Medicaid. They are intended to be flexible wraparound services. Examples of ILOS include housing transition and sustaining services, recuperative care, short-term nonmedical respite, home- and community-based wraparound services for beneficiaries to transition or safely reside in their home or community, and sobering centers.

HDIS. Beginning in 2020, California began collecting and integrating data from each of the 44 local HMIS systems into a state **Homeless Data Integration System**. The state’s vision for HDIS is to create a technology platform for centralized aggregation of the data collected by all regional homeless systems of care “to make data-driven policy decision aimed at preventing and ending homelessness in California.”⁷

The system is administered by the state’s Homeless Coordinating and Financing Council (HCFC), which is housed within the Business, Consumer Services and Housing Agency — a sister agency to the California Health and Human Services Agency. HDIS receives identified client data required by HUD from each homeless system of care’s HMIS and pulls it into a statewide deidentified cloud database of homeless client service activity. Because of the efforts required by HDIS to have all 44 HMIS vendors participate, they have all created some interoperability between their systems and the newly established HDIS.

In future iterations, HDIS will also pull client data from other state programs (e.g., CalFresh, foster care) to provide a more holistic picture of state and locally provided services. The state plans to use the information to produce deduplicated estimates of the number of people experiencing homelessness in California, enable cross-jurisdictional analysis of homeless systems of care, identify patterns of service use, evaluate the impact of services, and identify gaps in services. The hope is to allow for cross-sector data sharing beyond the homeless system of care and to share data with other systems, including Medi-Cal, which would help California to better address the needs of individuals and families experiencing homelessness.

Health Information Exchange. There is proposed legislation and a new budget allocation in California to enable a statewide exchange of health-related data among health care providers and consumers. While HIEs already exist in California, there are a number of gaps in how the systems function. A recent paper from the California Health Care Foundation by Manatt Health identified a number of shortcomings of the

current systems, including clinical data fragmentation, exclusion of certain sectors in the exchange of information (including public health, behavioral health, and social services), and complex and onerous rules and regulations.⁸

Policies that support expanded HIE that include robust cross-sector data sharing will better help people with complex health and social needs benefit from HIE systems. Efforts are underway in California to address these challenges through policy.

Opportunities for Policy

The state Homeless Data Information System, health information exchange advancements, and Medi-Cal’s CalAIM Initiative present opportunities for California to improve cross-sector collaboration between the health care and homeless systems. These efforts have the potential to be big and bold, fundamentally changing the ways the state supports some of its most vulnerable residents. The upcoming or proposed policy changes can be strengthened to ensure that people experiencing homelessness who have ongoing health conditions are placed front and center as the efforts unfold. To that end, the authors recommend looking at the state HDIS, health information exchange, and Medi-Cal’s CalAIM initiative.

Homeless Data Information System

As California develops data systems to better understand homelessness through a statewide lens, the opportunities for cross-sector collaboration will grow. HDIS presents great potential for cross-sector collaboration. With HDIS, the state can and should lead the way by doing its own cross-sector data sharing between Medi-Cal and HMIS. Like Sonoma County, the state could identify the patients in the community who interact with both the health care system and HMIS. A simple aggregate report or dashboard could begin to tell the story of how people are touching both of these important safety-net systems. Through initial HDIS efforts, the state already has the HMIS data and the technology system in place to support the continued establishment of this cross-sector data sharing.

The state should also create a funding stream to support CoCs to develop or enhance greater capabilities in HMIS — particularly efforts that facilitate interoperability and improve data validation. The federal government allocates only a small percentage of federal homelessness dollars to fund work on HMIS. Creating a state funding source that CoCs could access to improve the functionality and capabilities of their HMIS could address some of the major technological challenges that arise with cross-sector data sharing.

Through state policy, HCFC could lead the community to collectively develop a set of broad data standards for all HMIS software used in California. The standards could establish requirements for robust data validation, interoperability, and greater transparency.

Health Information Exchange

Because of a variety of events, including the COVID-19 pandemic and the CalAIM rollout, the need to improve health information exchange in California has become apparent and urgent. Earlier this year, CHCF commissioned a report called *Why California Needs Better Data Exchange: Challenges, Impacts, and Policy Options for a 21st Century Health System*,⁹ which looked at the challenges and opportunities for data exchange across four critical scenarios for California, including the need to provide care for complex patients such as those at risk of or experiencing homelessness. Many key challenges were also uncovered in this report, such as (1) the exclusion of other sectors like the homelessness system of care from health information technology (HIT) and health information exchange funding and policy conversations that can leave systems like HMIS behind on developing interoperability capabilities, and (2) the complex and onerous data exchange rules and regulations that prevent providers from legally sharing data with the broader care team.

While data exchange in health care is far from perfect, the progress was shaped by major federal policy initiatives. The HITECH (Health Information Technology for Economic and Clinical Health) Act of 2009 provided funding for the adoption of EHRs and HIE and created the Office of the National Coordinator (ONC), which

regulates EHR vendors and sets technical interoperability standards. No parallel initiatives or guidance exists to support CoCs in working with their HMIS vendors to achieve interoperability.

California's creation of HDIS is a step toward further government action to create pathways for data exchange. The state can build on this progress by establishing financing programs that support local cross-sector data exchange, such as what the HITECH Act did for HIE. As shown throughout this paper, local communities often are best positioned to undertake such efforts, with deep cross-sector relationships. Local pilot programs, with financial support, can help test the waters for statewide application. The communities highlighted throughout this report show that some already have experience with cross-sector data exchange and have processes or infrastructures in place that can provide a foundation for wider efforts across California.

Also noted in this report, one of the primary issues that communities face in data sharing is overcoming complex privacy rules, regulations, and consent requirements. California's broad consumer privacy policies add to that complexity. The state can support communities' ease of data sharing across sectors by participating in efforts to harmonize the rules across the different systems, while reconciling those policies with federal requirements.

Medi-Cal's CalAIM

The CalAIM proposal formally recognizes that people experiencing homelessness have not been well served by the traditional approach to care and also recognizes that housing is health care, an unprecedented position in California that has the potential to uniquely leverage resources to strengthen the state's social safety net. Setting the groundwork for data exchange is a critical component to ensure that rollout is successful. Through a series of convenings with safety-net leaders, the California Health Care Foundation has put forward a roadmap¹⁰ for implementing HIT and HIE needs for two components of the CalAIM program that focus on housing and case management: Enhanced Care Management and In Lieu of Services.

Among these recommendations are several additional suggestions on privacy rules and consent forms that align with the needs featured in this report — with potential for far-reaching impacts for people in the health care system also experiencing homelessness. In considering these recommendations, it will be critical to build relationships with and involve multiple sectors, especially the homeless systems of care, in planning and implementation.

The first is the recommendation to develop cross-sector working groups between housing, health care, and the criminal justice systems as part of the CalAIM initiative. In most instances where such workgroups have developed in local communities, including partners representing multiple sectors has enhanced the collaboration. Recognizing that people's health care and experiences with homelessness are also impacted by interactions with the child welfare, social services, and the criminal justice system is essential to ensure people's intersecting needs are met. The broader approach to collaboration exists in the communities highlighted herein for their exemplary cross-sector data sharing.

Second, policy guidance should require that homeless service providers be part of the development of shared care plans that involve people experiencing homelessness or at risk of homelessness. There is a wealth of experienced providers in the homeless system of care who have worked intimately with the target populations to be served under CalAIM. The CalAIM program should seek out and incorporate their insights about opportunities and challenges working with people experiencing homelessness.

California is in a unique position and moment in time to address some of the fundamental challenges that communities face when undertaking cross-sector collaboration.

Conclusion

The abundance of efforts in California to undergo cross-sector data sharing illustrates the deep desire to better serve Californians with the greatest needs. The Whole Person Care Pilot program inspired many communities to develop robust data sharing efforts instrumental in helping them forge long-term collaborations. Yet there is much more to be done, both in improving processes already in place and in expanding efforts to each and every community in California.

With pending policy that would capitalize on Whole Person Care and expand cross-sector collaboration through Medi-Cal's proposed CalAIM initiative, communities that have yet to fully invest in cross-sector collaboration are poised to do so with support from the state.

There are a number of common elements of successful cross-sector data sharing efforts. Most communities recognize that there is a cohort of clients who have complex needs and who touch multiple systems of care. Through data sharing efforts and other methods of partnership, communities may develop the ability to see and care for people with complex needs through a whole-person lens, rather than by segregating their care by department. Collaboration leads to a common understanding that there is value in cross-sector data sharing for both health care sector staff and homeless system providers. Many of the most successful data sharing efforts include organizations willing to try new things, take risks, and not accept the current way of serving clients through highly siloed systems.

As CalAIM rolls out, communities around the state can take advantage of the policy frameworks and funding from the state to initiate or advance existing data sharing efforts. Keeping in mind the ultimate goal of improving service delivery and care coordination, below are a few steps communities can take to assess data sharing possibilities:

- ▶ Reach out to partners in the health care and homelessness sectors to scope out what data sharing efforts have historically and currently occurred within the county.
- ▶ Take a step back and brainstorm what the goals and potential gains of data sharing would be for the county, and how efforts to share data could work in conjunction with other efforts.
- ▶ Follow the examples of the many “communities in action” highlighted in this report, based on which stories and situations resonate most with the respective county.

Advice from Communities in Action

Communities that have had the opportunity to undertake cross-sector data sharing between health care and homeless systems have a great deal to share. Collectively, they shared a number of key takeaways:

Just do it. Get started. Don’t wait to have everything perfect and in place. Even small steps can have meaningful impact in improving health care and housing outcomes for people and can set the foundation for larger data sharing information exchange systems. Start out small if you need to. But do something.

Be patient. Don’t lose patience before you have a chance to see successes. It might be three steps forward and two steps back. Alameda County went through years of engaging partners and negotiating before it was able to put its systems in place. Some partners dropped out and never came back. Others were wary, but in the end became part of the cross-sector data sharing efforts.

Don’t be afraid to make people uncomfortable. For a long time, the perception has been that it is not okay to share data. As communities have learned over the years, that is not true. Provide details, develop use cases, help explain the intentions and values of data sharing, and share the strong protections you can put in place. Engage with organizations who support the efforts, and ultimately others will come along.

Remember how complex the systems are. It might not be easy to do cross-sector data sharing. Be willing to adjust or even pull back goals and expectations rather than stop the project because of seemingly insurmountable barriers. Downsize expectations or take on a small piece. One staff person said that it’s all about “relentless incrementalism.” But if you have the will and capacity to go big, go for it.

There are a wide range of models for cross-sector data sharing. There is not one cookie cutter solution to cross-sector data sharing. There are a range of models — county-led, nonprofit-led, funded by Whole Person Care, funded by large local grants, etc. Develop the model that works best for your community, your location, and the people willing to be at the table and engage.

Appendix A. National Examples — Communities in Action

National models offer innovative approaches to data sharing between health care and homeless systems. They span project type and geographic region, and offer lessons learned and potential paths forward for California communities seeking to implement similar data sharing programs. Beyond that, these examples may serve as models for what a cultural shift to focus on data sharing may look like for a health care / homeless response system partnership.

SEATTLE, WASHINGTON: DATA ACROSS SECTORS FOR HEALTH AND HOUSING. King County's Data Across Sectors for Housing and Health (DASHH) program, led by Public Health — Seattle and King County (PHSKC), integrates housing and Medicaid and Medicare data to improve the health and well-being of low-income public housing residents, the majority of whom are insured through Medicaid or Medicare. The data sharing effort involves multiple agencies and is based on trusted partnerships between the Health Care Authority, PHSKC, and the Seattle and King County housing authorities, the two largest public housing authorities in the county.

Initially funded by the Robert Wood Johnson Foundation's Data Across Sectors for Health program, DASHH developed data use agreements, data sharing agreements, and new releases of information to undertake data integration. The comprehensive data sharing has been invaluable in helping all parties understand data from the disparate systems.

In addition to interdepartmental and interagency data sharing, the DASHH data set is available in aggregated form through a dynamic, web-based dashboard featuring filters for condition, housing subpopulation, and time period.¹¹ Using the dashboard, public health and housing agencies can identify prevalent chronic conditions and analyze health care utilization trends among public housing residents.

The DASHH program has provided valuable insights into future policy planning, program evaluation, and case management. To date, the integration between public housing and public health has led to the development of prevention programs to address specific housing needs (e.g., through the deployment of community health workers). It was instrumental in the coordination of a swift response for people at risk of COVID-19.

STATE OF MICHIGAN. The Michigan Department of Health and Human Services (MDHHS), along with the Coalition Against Homelessness, sought to change the way the state delivered services in order to help people rather than simply administer programs. As such, they advocated that the state adopt integrated service delivery to achieve a more person-centric care model. The goal was accomplished in part by the 2017 merger between the Michigan Department of Health and the Department of Human Services, which became the MDHHS. Core principles of the new department included "people not programs," "root causes not symptoms," and "engage the community."

Targeting "high utilizers," or very frequent users of medical services who are experiencing homelessness, MDHHS decided that cross-sector program collaboration would be the lifeblood of their new system. The state was well positioned to undertake cross-sector work between homelessness and health care systems because all counties used the same HMIS vendor to support their local Continuums of Care (CoCs). In effect, they already had an HMIS data warehouse. The state brought together funding from across all programs to fund one statewide system.

MDHHS also engaged its Office of Privacy and Security, which became very active in the project. The office spearheaded the data use and data sharing agreements. It developed a robust ROI for people covered through HMIS, which is renewed annually. The ROI broadly covered all kinds of data sharing and did not have opt-out provisions for highly sensitive data (e.g., HIV/AIDS, substance use).¹² Either the individual opts out of the consent or agrees to have all their data shared — even sensitive information.¹³

Rather than creating a data sharing warehouse, the state focused on data matching. The HMIS vendor sends to MDHHS a monthly list of first names, last names, and Social Security numbers of everyone in their system. The HMIS data indicate if the person is active in HMIS, housed, etc. The vendor then runs a data match of that list against its master patient index to see if the person is on

Medicaid. For those in the Medicaid data warehouse, the vendor runs the people in HMIS against their Medicaid utilization and expenditure data to identify who is or is not enrolled in Medicaid, actively participating, etc. The vendor places an indicator into the Medicaid data warehouse for enrollees in the homeless system of care.

Through data sharing efforts, MDHHS learned that not all high utilizers were enrolled in Medicaid, but it also found more children than expected who were high Medicaid users and were also homeless. The data match allowed the state to quickly prioritize housing those children. The pilot project has been eye opening for the state, and CoCs have modified priorities as they have learned more through the data match.

BOSTON, MASSACHUSETTS: BOSTON HEALTH CARE FOR THE HOMELESS. Building on a history of collaboration among the Social Determinants of Health Consortium, the Boston Health Care for the Homeless Program (BHCHP) received a \$750,000 grant from December 2016 to 2018 to coordinate care across diverse agencies to better serve people experiencing homelessness, improve access to services that address SDOH, and reduce avoidable emergency department and hospital utilization by 20%.¹⁴ They hired a law firm that drafted an organized health care agreement, the release of information, and the business associate agreement. Nearly all patients consented to participate.¹⁵

The program used HMIS to house the data warehouse, creating a separate section of the database controlled by BHCHP (the majority of HMIS is controlled by the CoC). To better understand clients' needs and service usage, data from all participating agencies were drawn into the SDOH Coordinated Care Hub, including Medicaid claims, electronic health records, local emergency department data, and data from the City of Boston. BHCHP reviewed the data every month so that nurse navigators and case managers could more easily reach patients.

Evaluators reviewed the pilot and identified a number of successes. The program resulted in a 23% reduction in the average number of emergency department visits, a 4% reduction in the average number of inpatient admissions, and a 72% increase in time elapsed between inpatient admissions. In terms of housing, 21 of the 50 active participants (42%) were housed, including eight (16%) who started housed and remained housed and 13 (26%) who were unhoused and became housed.¹⁶

The program developed into the Community Partners project, with 1,200 patients and is still ongoing. Data activities include electronic notification systems and the use of the warehouse to aggregate information such as claims data. The program tracks housing outcomes in real time and updates housing information daily. In addition, BHCHP is now looking at breakdowns by race/ethnicity and disability with the claims data coming in from Medicaid. In line with its mission, it aims to look with a racial equity focus at how the program affects marginalized populations.

YELLOWSTONE, MONTANA: UNITED WAY. In Montana, United Way Yellowstone began a data sharing program motivated by upstream factors such as compounding needs for people who both experienced homelessness and had complex medical issues. With a \$60,000 grant over 12 months (2018–19) in partnership with the Montana Healthcare Foundation, United Way Yellowstone identified high utilizers of community services via data sharing between health care, homeless services, housing, criminal justice, child welfare, and emergency systems.¹⁷ It also worked in partnership with the Corporation for Supportive Housing (CSH) to analyze common data sources using CSH's Frequent Users Systems Engagement model.¹⁸

With the shared data, United Way Yellowstone studied patterns of systems utilization for existing affordable housing locations and resources, especially among the most vulnerable populations (in this case encompassing seniors, persons with disabilities, and families with children). It used the information to identify possible funding sources and to further coordination between new supportive housing and services, in addition to establishing permanent supportive housing services for people in Billings, Montana. United Way Yellowstone is now working with communities across Montana to potentially replicate the data sharing model, spanning the Missoula, Great Falls, Butte, Helena, and Bozeman areas.

ALLEGHENY COUNTY, PENNSYLVANIA: DEPARTMENT OF HUMAN SERVICES. In 2001, the Allegheny County Department of Human Services (DHS) began an effort to create a central repository of human services data, eventually growing to incorporate data from overlapping systems such as the Allegheny County Jail, Adult and Juvenile Probation, the county medical examiner, city and county housing authorities, and the Pennsylvania Department of Public Welfare. The driving goal was improving care coordination within human services and between departments. It also incorporated historical data for a fully multidimensional picture of people's experiences across the many systems.

It can display the data in a "client view" portal and generate reports that are client-specific, provider-specific, and/or program-specific. Case workers and clients can access the data online. Allegheny's data warehouse has frequently been pointed to as a national best practice in part because of the numerous community-level benefits it has led to. On the client side, individuals and families can access aggregate provider and service data to make decisions. For planners and program staff, the warehouse enables better decisionmaking. Educational and research institutes, including the RAND Corporation, the US Centers for Disease Control and Prevention, and Carnegie Mellon University, have used the county's warehouse to conduct studies. In addition, representatives from Allegheny DHS spoke to the power of data sharing in telling an integrated story about people and their needs when making a case to increase funding. More funding would allow for added flexibility in programs and a greater ability to serve the community.

CHICAGO, ILLINOIS: COMMUNITY HEALTH PEER LEARNING PROGRAM. In Chicago, a desire for better integration of housing, health, and human services delivery systems at a national level led to a variety of data sharing pilots. One program, funded by the Community Health Peer Learning Program, was a partnership with the University of Illinois Hospital and Health Sciences System (UI Health) and All Chicago Making Homelessness History. The project sought to improve care coordination by communicating homeless status from an HMIS and UI Health's electronic health record (EHR).

The partnership was able to leverage the deep technical expertise at the University of Illinois at Chicago. Although it was a planning grant, All Chicago and UI Health were able to develop and test a prototype system that could communicate housing status between the HMIS and an EHR while adhering to patient health information protections. The program envisions that data integration can lead to better coordination and care for the most

vulnerable homeless that seek health care services. The ultimate goal is for improved health outcomes and housing stability among participants.

CONNECTICUT COALITION TO END HOMELESSNESS AND THE CONNECTICUT DEPARTMENT OF HOUSING. The Connecticut Coalition to End Homelessness and the Connecticut Department of Housing established an HMIS/Medicaid data sharing program that targets Medicaid enrollees who use housing services. The goal is to track which populations are using housing services and have the greatest unmet need, leading to the improvement of health through housing. In partnership with New York University, Coordinated Access Networks, the attorney general's office, and the Connecticut Hospital Association, the program matched Medicaid data with HMIS data.

The first match occurred 10 years ago with support from the Corporation for Supportive Housing and focused on a criminal justice reentry program. Data sharing with the corrections department led to a huge revelation regarding the overlap between homeless and incarcerated people. The data sharing led to a coordinated effort to prevent a revolving door between homelessness and the criminal justice system.

2004 HMIS DATA AND TECHNICAL STANDARDS. The Privacy and Security Standards section of the [2004 HMIS Data and Technical Standards](#) describes how data are to be collected and safeguarded in HMIS. The standards apply to a "covered homeless organization" (CHO), which is any organization that records, uses, or processes protected personal information (PPI) for an HMIS. Any CHO that also is covered under HIPAA is not required to comply with the privacy or security standards in the HMIS notice if it determines that a substantial portion of PPI about people experiencing homelessness already is protected health information (PHI) under HIPAA rules.

The standards mandate the collection of PPI by lawful and fair means with the knowledge and consent of the individual, where appropriate, and further require that a notice be posted for consumers that describes the general purposes for which PPI will be used. While not strictly required by the standards, local CoC policies typically mandate that consumer information can be collected in an HMIS and shared with other partner agencies only if the consumer authorizes that in a release of information. Further, the 2020 HMIS standards instruct that consumer consent should be procured if information is shared with other agencies.

Appendix B. Privacy Primer — Relevant California and Federal Laws

Insurance Portability and Accountability Act

The [Health Insurance Portability and Accountability Act \(PDF\)](#) is the primary federal law that addresses health information privacy. It applies to “covered entities,” which include health care providers, health insurers, health care clearinghouses, and business associates. The HIPAA Privacy Rule establishes when and how PHI held by covered entities can be accessed and disclosed. It establishes standards for privacy, security, and standardization of electronic transactions that restrict the use or disclosure of people’s PHI. Covered entities can share PHI with third parties so long as they have direct consumer authorization to do so. HIPAA provides detailed rules about what constitutes consumer authorization.

Health Information Technology for Economic and Clinical Health Act

The HITECH Act strengthened HIPAA to provide additional protections and privacy restrictions on PHI. It extended HIPAA’s coverage to include “business associates,” people or other entities that perform certain functions or activities that involve the use or disclosure of PHI on behalf of, or provide services to, a covered entity. Because of HITECH, HIPAA coverage now extends to any entity that “creates, receives, or transmits” PHI on behalf of a covered entity or on behalf of a business associate, including contractors of business associates. HITECH further expanded HIPAA requirements regarding notification of affected people when health information is compromised.

Confidentiality of Substance Use Disorder Patient Records: 42 CFR Part 2

Confidentiality of Substance Use Disorder Patient Records, [42 CFR Part 2](#), protects the confidentiality of substance use disorder (SUD) patient records by restricting the circumstances under which Part 2–covered programs or other lawful holders can disclose such records. Covered entities under Part 2 are federally assisted programs that “hold themselves out” as providing diagnosis, treatment, or referral for treatment for an SUD. Covered information includes all

records relating to the identity, diagnosis, prognosis, or treatment of any patient. In general, Part 2 programs are prohibited from disclosing any information that would identify a person as having or having had an SUD unless that person provides written consent, as specified under Part 2.

Homeless service providers that provide referrals to SUD treatment are not typically deemed Part 2–covered entities unless (1) substance use disorder diagnosis, treatment, or referral is their primary function and (2) the service provider promotes itself to the community as providing those services. Thus, service providers that refer consumers to SUD treatment as an incidental service or as one primary function of many may not be covered entities under Part 2.

Confidentiality of Medical Information Act

The [CMIA \(PDF\)](#) is a California law that protects the privacy of a person’s medical information (in electronic or paper format) from unauthorized disclosure by limiting disclosures by providers, health plans, and contractors. CMIA extends privacy protections to PHI. Covered entities include health care providers, health service plans, and individuals and businesses that contract with those entities for work that involves access to medical information. The CMIA’s basic prohibition against disclosure provides that “no provider of health care, health care service plan, or contractor shall disclose medical information regarding a patient of the provider of health care or an enrollee or subscriber of a health care service plan without first obtaining an authorization unless an exception applies.” The CMIA also mandates specific consent requirements for covered entities. Entities covered under the CMIA are typically also covered under HIPAA.

Lanterman-Petris-Short Act

The [LPS Act](#) is a California law with the stated purpose of ending the inappropriate, indefinite, and involuntary commitment of people with mental health disorders. It also establishes a right to prompt psychiatric evaluation and treatment and sets out strict due process protections for mental health clients. In addition, the

LPS Act contains patient consent requirements for the disclosure of mental health information. Information covered under the LPS Act includes records obtained in providing psychiatric and mental health treatment to voluntary or involuntary recipients of services. The LPS Act mandates that in communications between qualified professionals providing services or referrals (or in conservatorship proceedings), the consent of the patient or their guardian/conservator shall be obtained before information or records may be disclosed by a person employed by a facility to a person not employed by the facility who does not have the medical or psychological responsibility for the patient's care. Entities covered under the LPS Act are typically also covered under HIPAA.

California Health and Safety Code § 1280.15

California Health and Safety Code § 1280.15 mandates that covered entities — clinics, health facilities, home health agencies, and hospices shall — prevent unlawful and unauthorized access to medical information. Covered information includes patient medical information protected under the CMIA, as described above. Entities covered under § 1280.15 typically are also covered under HIPAA and the CMIA.

Appendix C. Table of Interviewees

GEOGRAPHIC AREA	NAME	ORGANIZATION
Alameda, CA	Cristi Iannuzzi	Alameda County Health Care Services Agency
Contra Costa, CA	Alison Stribling and Linae Young	Contra Costa County Public Health
Fresno, CA	Doreen Eley	Fresno Housing Authority
Humboldt, CA	Kelly Escudero, Martin Love, and Jessica Osborne	Humboldt Independent Practice Association, North Coast Health Improvement and Information Network
Los Angeles, CA	Daniel Reti	Los Angeles Homeless Services Authority
Marin, CA	Charis Baz	Marin Department of Health and Human Services
Monterey Park, CA	Carmen Katsolov and Jocelyn Smart-Sanchez	Monterey Park Blue Shield
Monterey / San Benito, CA	Roxanne Wilson	Coalition of Homeless Service Providers
Orange, CA	Nicole LeMaire, Natalie Dempster, Zulima Lundy, and Melanie McQueen	Orange County Health Care Agency, Office of Care Coordination
Riverside, CA	Marcus Cannon and Rhyann Miler	Riverside University Health System
Sacramento, CA	Lisa Chan-Sawin and Alexis Sabor	Transform Health — Sacramento Whole Person Care
San Diego, CA	Luke Mellis, Meili Hau, and Megan Partch Kris Kuntz and Karis Grounds	Father Joe's Villages San Diego Regional Task Force on the Homeless; 2-1-1 San Diego
Santa Barbara, CA	Lucille Boss, Kimberlee Albers, and Jett Black-Maertz	Santa Barbara CoC
Santa Cruz, CA	Lynn Lauridsen	Santa Cruz Health Services Agency
Sonoma, CA	Barbie Robinson, Tina Rivera, and Carolyn Staatts	Sonoma Department of Health Services
Ventura, CA	Tara Carruth	Ventura County CoC
Connecticut	Linda Casey	Connecticut Coalition to End Homelessness
Chicago, IL	Beth Horwitz Stephen B. Brown	All Chicago Center for Health Information Technology, Illinois Public Health
Boston, MA	Keely Benson and Elizabeth Reardon Mary Takach	Massachusetts Technology Collaborative Boston Health Care for the Homeless
Michigan	Paula Kaiser VanDam and Lynn Hedges	Michigan Department of Health and Human Services
Allegheny, PA	Kathryn Collins	Allegheny County Department of Health
King County, WA	Annie Pennucci Amy Laurent	King County Housing Authority Public Health — Seattle and King County

Appendix D. Advisory Group Members

NAME	ORGANIZATION
Dana Bailey	Stanislaus County Community Service Agency
Jackie Bender	California Association of Public Hospitals and Health Systems
Ashley Brand	CommonSpirit Health
Amanda Clarke	California Health Care Safety Net Institute
Lynnell Fuller	Stanislaus County Community Service Agency
Cristi Iannuzzi	Alameda County Care Connect, a Whole Person Care Pilot and Alameda County Health Care Services Agency
Margot Kushel	University of California, San Francisco
Daniel Reti	Los Angeles Homeless Services Authority
Ané Watts	Anthem Blue Cross

Endnotes

1. "Homeless Data Integration System," State of California.
2. Counties participating were Alameda, Contra Costa, Kern, Kings, Los Angeles, Marin, Mendocino, Monterey, Napa, Orange, Placer, Riverside, San Bernardino, San Diego, San Joaquin, San Francisco, San Mateo, Santa Clara, Santa Cruz, Shasta, Solano, Sonoma, Ventura, the Small County Consortium (Mariposa, Plumas [later withdrew], San Benito, and perhaps others) and the city of Sacramento.
3. For additional information on data sharing in the Whole Person Care Pilot programs, see Keira Armstrong, Mark Elson, and John Weir, *Catalyzing Coordination: Technology's Role in California's Whole Person Care Pilots*, California Health Care Foundation (CHCF), April 2019.
4. Khaliyl Lane, *Maximizing Linkages: A Policymaker's Guide to Data-Sharing*, Alluma, April 2019.
5. The lack of interoperability also can be a barrier to data sharing for policy initiatives in the health care sector that require collaboration for vulnerable patients (WPC and the proposed CalAIM being the most significant such initiatives). Many health systems are considering independently setting up their own data sharing hubs outside of HMIS or electronic health systems because many of the data governance structures and standards needed for broad centralized data sharing efforts are not addressed directly when new policies or programs are introduced. Homeless system staff working on behalf of a Continuum of Care have shared their concern that if separate systems are established, service providers would need to enter data into more than one data sharing hub in their community (for example, ones hosted by the local hospital and a managed care organization), adding more work and creating disparate systems. Homeless system providers also raised concerns that health plans may be developing systems in silos without the opportunity for input and coordination with potential partners and experts in the local homeless system of care. Homeless system staff urged health care systems to coordinate with the larger communitywide efforts rather than create their own separate solutions.
6. "California Advancing and Innovating Medi-Cal," California Dept. of Health Care Services, accessed on February 16, 2021.
7. "Homeless Data Integration System (HDIS)," State of California.
8. Jonah Frohlich, Eric Bartholet, and Jonathan DiBello, *Why California Needs Better Data Exchange: Challenges, Impacts, and Policy Options for a 21st Century Health System*, CHCF, February 2021.
9. Frolich, Bartholet, and DiBello, *Why California*.
10. Jonah Frohlich, Kevin McAvey, and Jonathan DiBello, *CalAIM and Health Data Sharing: A Road Map for Effective Implementation of Enhanced Care Management and In Lieu of Services*, CHCF, May 2021.
11. *King County Data Across Sectors for Housing and Health, 2018* (PDF), King County, April 2018.
12. The state includes only physical health data, not mental health and/or substance use data, from its Medicaid utilization and expenditures into the shared data system. It doesn't pull behavioral health data into the data warehouse, and HMIS does not share that data, which meant that the issues around privacy regarding substance use disorder data have not been implicated in the data sharing efforts.
13. As an aside, they shared with the authors that virtually all clients agreed to the broad language of the ROIs, which meant they could share substance use disorder information that often is protected by 42 CFR Part 2.
14. Boston Health Care for the Homeless Program, presentation, July 2019.
15. Boston Health Care for the Homeless Program, presentation, April 2018.
16. Boston Health Care for the Homeless Program, presentation, July 2019.
17. "Helena Housing and Regional Health Care Initiative," Montana Healthcare Foundation.
18. The Coalition for Supportive Housing initiative *Frequent Users Systems Engagement (FUSE)* "helps communities break the cycle of homelessness and crisis among individuals with complex medical and behavioral health challenges who are the highest users of emergency rooms, jails, shelters, clinics and other costly crisis services."