HOMELESSNESS AND OPIOIDS:

A ROADMAP FOR SHARING DATA TO ENABLE MORE EFFECTIVE COLLABORATION

CompTIA

Human Services IT
ADVISORY GROUP

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1 Executive Summary

Both homelessness and the opioid epidemic continue to grab headlines. However, little research has been done on the potential causal relationship between opioids and homelessness. How do these challenges exacerbate one another? How do they inform the appropriate response? How does the typical social services department harness information to either prevent homelessness or improve service delivery to the homeless population struggling with opioid addiction?

> Tackling the homelessness and opioid crisis requires a holistic approach working with the entirety of the ecosystem, managing key information and relationships.

Tackling the homelessness and opioid crisis requires a holistic approach working with the entirety of the ecosystem, managing key information and relationships. Through the collaboration of the Human Services Information Technology Advisory Group (HSITAG) community, this paper will examine one aspect of homelessness and the impacts of opioid abuse. Specifically, would access to better information and harvesting of existing data help to evolve service delivery? Top down leadership and a shared commitment of vision across agencies and key stakeholders ultimately is the most important determining factor for a successful data sharing initiative. The types of personal-level data at play for tackling homelessness and opioids addiction are subject to a litany of federal and state laws and regulations that must be carefully navigated. The combination of multiple key stakeholders and a complex regulatory environment requires strong executive guidance and support from decision-makers including Governors, Cabinet officials and agency leads.

While privacy and confidentiality laws understandably present barriers to data sharing, cultural resistance and sporadic collaboration remains the most significant impediment. A lack of knowledge coupled with general concerns over privacy and security leads to a high risk-averse environment that isn't conducive to data sharing initiatives. Creating a clear vision to generate excitement for a more data-centric government that will result in cost savings or improved services will be paramount. This business case will need to be vetted, include clear shared and best practices, and be socialized by leadership to build comfort and buy-in among the risk-averse audience.

Opioid Use Disorder amongst the homeless is not an area that has received a lot of data-intensive focus or targeted funding. Funding streams are more readily available through each of their respective program areas, homelessness or substance abuse/opioids. While the Substance Abuse and Mental Health Services Administration (SAMHSA) and the United States Department of Housing and Urban Development (HUD) remain the primary agencies for funding opioid and homelessness response programs, respectively, there are a plethora of other agencies contributing to the funding stream for these two critical but inter-related issues facing our county. In addition to HUD and SAMHSA, there are other institutions such as the National Institute of Health, the Centers for Disease Control (CDC), the Health Resources and Services Administration (HRSA), private/philanthropic charities, and other public entities that are working toward collaboration on this challenge.

2 Purpose and Scope

Both homelessness and the opioid epidemic continue to grab headlines. While there is significant analysis occurring on the opioid epidemic in terms of eliminating the over-prescription of addictive opioids and understanding the progression to illegal substances such as heroin, little research has been done on the potential causal relationship of homelessness and opioids. For example, the research on homelessness indicates opioid overdoses is very high among this population and in the same vein, homelessness is recognized as a challenge for treating those with opioid addiction. So while the research indicates that there is a definite intersection between these two societal crisis, it falls short of identifying the primary driver for this combination. This lack of clarity creates a challenge for how social services departments harness information to either prevent or improve service delivery to this population.

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Through the collaboration of the HSITAG community, this paper will examine one aspect of homelessness and opioids where access to better information and harvesting data that already exists in multiple systems may help inform and evolve service delivery. While data may exist in Medicaid, Medicare, social services, criminal justice, public health and, education databases, the greater potential exists for communities to more effectively address homelessness among the addicted with a more informed, comprehensive view provided by data sharing.

Within the context of problem definition, current policies and funding, this paper will look at the operational problems we must address to enable data sharing. We will examine the following topics:

1   **What data needs to be shared?**

2   **Who needs access?**

3   **What constraints for sharing exist?**

4   **How to break down barriers?**

5   **Why focus on interoperability?**

3   Statement of the Problem

Unfortunately, the data on homelessness and drug and alcohol dependency is quite dated with census data being self-reported by the homeless individual. However, a 2003 study by the Substance Abuse and Mental Health Services Administration (SAMHSA) estimated that approximately 38% of homeless people were dependent on alcohol and 26% abused other drugs. While this does not represent the majority – it is certainly a very significant portion of the homeless population. Those percentages have likely increased over the past decade and a half – given the meteoric rise in the use of opioids and synthetic drugs such as Fentanyl.

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To provide additional context, data indicates that more than one-half a million people in the country were reported homeless in 2018 by the U.S. Department of Housing and Urban Development (HUD).[1] For this same timeframe, opioid deaths in this country exceeded rates of 115 per day.[2] Given the staggering rates for both homelessness and opioid deaths and the intersection between these two populations, it follows that finding effective solutions to address homelessness will have a positive effect on opioid abuse and death rates. While arguments can be made on either side of the debate as to whether substance abuse is the cause or the effect of these individuals becoming homeless, it is nevertheless a societal challenge that must be addressed.

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[1]   The 2018 Annual Homeless Assessment Report (AHAR) to Congress
[2]   U.S. drug overdose deaths continue to rise; increase fueled by synthetic opioids, CDC News Release Thursday, March 29, 2018, 1:00 p.m.

To that end, it is noteworthy to mention that in 2019, homelessness in the US increased for the second consecutive year. This stresses both our medical and first responder community as homeless people suffer from the same illnesses as other individuals but at rates three to six times higher. Also, on average, people without homes are three to four times more likely to die, and on average die 30 years sooner. According to the most recent annual survey by the U.S. Conference of Mayors, the top causes of homelessness were (1) lack of affordable housing, (2) unemployment, (3) poverty, (4) mental illness and the lack of needed services, and (5) substance abuse and the lack of needed services.

While no clear solution to homelessness exists – there are two prominent models that have emerged in response to the need for housing for persons with co-occurring substance abuse and unstable housing. The first model – called Linear - emphasizes abstinence from substances as an explicit goal. In this model, substance use treatment is an integral first step to obtaining permanent, stable housing. The second model – called Housing First – takes the view that the provision of subsidized and in some cases free housing should occur first. In this model, case management services are sometimes offered to residents and it emphasizes a "low threshold" with personal choice about whether to address substance abuse and mental health problems.

In this white paper, – we are advocating for widespread data sharing across the various agencies that bear responsibility for providing support and services to those impacted by homelessness and opioid abuse. Because of the sensitive nature of the issue – there are likely some real and/or perceived constraints on the ability to share information that would provide better insight on the severity of the problem and perhaps suggest which of the two models – Linear or Housing First – represents the most effective path towards ameliorating the homelessness issue while influencing the opioid abuse and death rate.

4   Current Policies on Opioids and Homelessness

In March of 2019, the Centers for Medicare and Medicaid Services (CMS) published their roadmap "Fighting the Opioid Crisis". As one of the largest payers of healthcare services, and certainly a payer highly relevant to the homeless population via the Medicaid program, CMS has a vital role in addressing the opioid epidemic and their roadmap focused on three key areas: Prevention, Treatment and Data. To date, their data efforts have been concentrated on data to show where Medicare and Medicaid opioid prescribing is high to help identify areas for additional interventions.

CMS has stated their intention to move to data analysis to provide insight into doctor, pharmacy, and patient use of prescription opioids and effectiveness of treatment. This data analysis will include efforts to:

- Understand opioid use patterns across populations
- Promote sharing of actionable data across the continuum of care
- Monitor trends to assess the impact of prevention and treatment efforts.

While the CMS Opioid Crisis Roadmap does not include a focus on the homeless population, two vulnerable populations are called out as models for innovative study: children and pregnant women. This focus can serve as an example for other vulnerable population such as the homeless.

Similarly, the National Interoperability Collaborative (NIC) has published its Opioid Use Disorder Prevention Playbook.[3] In their words: "We recognize that any effective prevention approach should be built on a foundation of evidence about the effectiveness of its strategies, along with measures of its outcomes. That foundation is currently lacking, however. Indeed, research for the playbook found an absence of data definition, collection and analysis about opioid use that inhibits movement toward more-informed decisions about how to get to the roots of this national crisis."

"We recognize that any effective prevention approach should be built on a foundation of evidence about the effectiveness of its strategies, along with measures of its outcomes."

The NIC playbook emphasis that an essential part of any effective prevention approach is improved information-sharing, integration, interoperability and collaboration across the multiple disciplines that are a part of the solution to the opioid crisis. While their playbook, similar to CMS, does not focus on the homeless population; the policies, practices and techniques they suggest for other populations vulnerable to the opioid crisis may also be leveraged for the homeless population.

As noted by the National Health Care for the Homeless Council in May of 2017, housing is a major social determinant of health, and lack of housing has been shown to negatively impact physical and behavioral health among individuals experiencing homelessness. Addiction can cause and prolong homelessness, and the experience of homelessness complicates one's ability to engage in treatment. They note that the limited treatment options and fragmented health care delivery systems present significant current program and policy obstacles to the access and utilization of health care services for the homeless with substance/opioid use disorders as follows:

- **Strict criteria for grant-funded substance abuse programs:** Often, policy changes or rigidity of programs could mean that patients are recommended or referred to programs that they are ineligible for, diminishing hopes for opportunities for recovery.

- **Lack of available resources or programs:** Once a patient has met all requirements; space in the programs may not be there, leading to loss of hope and distrust in the system.

- **Lack of enabling services:** These may include transportation services, lack of flexibility around work schedules, and childcare.

- **Cost of treatment:** Associated costs of treatment (i.e. copays/premiums), as well as a potential loss of coverage, can all present challenges to deliver care.

- **Reduced access or provision of doctor-supervised prescriptions:** Reduced dispensing of pills to treat chronic pain may also increase self-medication, or use of street drugs (i.e. heroin) for some individuals who are homeless.

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[3] The Opioid Use Disorder Prevention Playbook – National Interoperability Collaborative, February 2019

Potential solutions to the identified barriers were also identified that require system-level changes:

- **Program requirements:** Enhanced response to crisis and support for parity laws are reasonable ways to overcome barriers related to strict eligibility criteria including a shift from program-first to person-first ideology, such that it is not whether the individual meets requirements, but rather when the individual is ready, makes the decision, or self-initiates to enter a program, that it is readily accessible without inhibitions.

- **Maintaining housing and utilizing resources:** Finding or remaining in stable housing while actively using can be challenging for many individuals. The Housing First approach to establish stability is known to greatly affect health and success of recovery. Some recovery housing works with patients driving the decision-making process or living among peers. Utilizing housing case managers or continuums of care programs can help identify these types of local resources.

- **Abstinence-based vs. harm reduction treatment:** It is important to provide choice on recovery paths, and a "one size fits all" approach may introduce challenges and unsuccessful recoveries. When offering substance use programs, principles of patient centeredness, flexibility, and building trust are crucial. Programs that treat the whole person using integrated care and offer harm reduction approaches can be effective methods. When housing is unstable and abstinence may be too drastic of a lifestyle change, harm-reduction practices are an alternative option for success at recovery while living on the street. Medication-Assisted Treatment (MAT) is the use of medications in combination with counseling and behavioral therapies to provide a whole-patient approach to the treatment of opioid use disorders. MAT is an evidence-based treatment model that helps individuals recover from addiction and improve health and stability. MAT also provides treatment to persons experiencing homelessness that is patient centered, integrated and takes a harm reduction approach.

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State level resources that combine policy guidance and data analysis are also emerging. In an effort to address the opioid epidemic throughout the state, the California Department of Health Care Services (DHCS) is implementing the California Medication Assisted Treatment (MAT) Expansion Project. As part of this project, they created a new online resource to bolster the ongoing response to the opioid crisis: Addiction Free CA. The website hosts an interactive data dashboard, project resources, and treatment provider locator to support the California Medications for Addiction Treatment (MAT) Expansion Project. Again, the policies for the general population as well as other vulnerable populations spelled out here represent valuable input in thinking about the opioid crisis in the homeless population. While the MAT Project does not focus on the homeless population, it does include a focus area to provide recovery housing and peer support for individuals experiencing homelessness with an opioid use disorder in Riverside and San Francisco Counties.

Data collection and data access to some mental health and behavioral health sources may be caught up in current events beyond the systemic program policy barriers noted above, as in the recent call by New York Governor Andrew Cuomo regarding gun laws which included a mental health database. Given the divisive politics around gun regulation, including "Red Flag" proposals, should such databases be created, access may be tightly restricted to data sources deemed to be in the purview of law enforcement or related to topics such a gun control which are political hot buttons. This may be an example of one barrier to leveraging disparate data sources for behavioral health/opioid addiction in the homeless population.

Another data source that provides an opportunity as well as potential controversy is housing programs. New York City's "Right to Shelter" law and associated processes and data regarding sheltering the homeless would offer basic census and statistical data that could be leveraged in battling the opioid crisis amongst the homeless. However, Right to Shelter proposals may also contain controversial components that could limit access and leverage. In California's case the proposal contains a likely contentious element: forcing people to accept shelter. The rationale behind this component is based on a recent federal court decision, Martin v. Boise, which essentially says cities can't arrest people for sleeping on public property unless they also provide adequate indoor shelter; leaving municipalities open to lawsuits if the homeless outnumber shelter beds. While Information Technology professionals and techniques are well-positioned to leverage data from disparate sources, data access and data governance issues must be overcome to leverage these resources.

5 Data Sharing

Program administrators and data stewards have a critical role to play in addressing the homelessness and opioid epidemics. While not thought of as front-line workers in these issues, these individuals are uniquely poised to shape strategy to bridge critical data that is currently dispersed across a myriad of agencies. Information that could inform a case worker of the likelihood that their client will suffer from homelessness or opioid use is buried across numerous agencies' servers, siloed and unharnessed to be used for broader insights.

Homelessness and opioid abuse affect people in a wide variety of individual ways, increasing the complexity of any appropriate response. The inherent difficulty in tackling these intertwined epidemics is due to countless individualized circumstances and unique reasons that lead to an individual becoming homeless or addicted. Data stewards alone often lack the necessary information and governance authority to comprehensively identify challenges, assess needs and apply appropriate services to meet individualized demands most effectively. Critical information is dispersed among a variety of stakeholders at varying levels across multiple jurisdictions. The ability for stakeholders to cooperatively share siloed data, while applying advanced analytics to this aggregated information can drastically improve the ability to address needs on an individualized level, shape policy and practice, and allow for targeted interventions which more effectively utilize scarce resources.

5.1　Solution Details

In the following section we will discuss what data needs to be shared, constraints for sharing the data, information regarding breaking down barriers for sharing as well as interoperability,

5.1.1　What needs to be shared and who needs access

Tackling the homelessness and opioid crisis requires a holistic approach working with the entirety of the ecosystem managing the key information and relationships. For example, data systems around opioids touch a wide range of systems including public health, hospitals, Medicare/Medicaid, prescription drugs, prison systems, veterans' administrative systems, etc. Similarly, for dealing with homelessness, Continuum of Care (CoC) lead agencies and Homeless Management Information System (HMIS) administrators must interact with veterans services, jails, prisons, hospitals, emergency rooms, law enforcement agencies, etc. Program administrators also must rely on city, county and federal agencies to share and coordinate the use of their data.

For instance, the Mayo Clinic outlines 13 common paths to opioid addiction, from general concerns such as poverty and unemployment to more defined paths such as dealing with chronic pain or having a history of depression.[4] Further, the crisis has quickly moved from prescription drug abuse (e.g. Oxycontin) to the more potent and dangerous Fentanyl and then quickly to Heroin, intersecting as unique cocktails in a wide variety of ways. Simply getting Naloxone, the best anti-overdose medication available, into the hands of first responders has been much of the intervention work thus far. To get upstream in the addiction cycle, better data and faster information processing techniques are needed to pinpoint intervention opportunities more rapidly.

In Massachusetts, the Chapter 55 Act[5] pulled data together across 29 groups in government, higher education, and the private sector. Maryland followed suit with the Chapter 211[6] Act that pulled data from nearly a dozen state agencies. At the federal level, aside from funding these state-level campaigns, the U.S Food and Drug Administration has also recognized the value of "creating a large-scale data warehouse."[7] Health plans and pharmacy benefit managers are working to stem opioid misuse by analyzing claims and utilization data to identify clinicians whose opioid-prescribing patterns might go against clinical guidelines.

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[4]　https://www.mayoclinic.org/diseases-conditions/prescription-drug-abuse/in-depth/how-opioid-addiction-occurs/art-20360372

[5]　https://chapter55.digital.mass.gov/

[6]　http://mgaleg.maryland.gov/2018RS/chapters_noln/Ch_211_hb0922T.pdf

[7]　https://www.fda.gov/news-events/press-announcements/statement-fda-commissioner-scott-gottlieb-md-agencys-2019-policy-and-regulatory-agenda-continued

In Virginia,[8] officials responsible for homelessness and veterans services recognized that linking and analyzing their programs' data would allow them to better understand veterans' needs, monitor trends, evaluate programs, and determine which approaches worked best. CoC Programs and the smaller service organizations they work with (i.e. shelters, food pantries, housing agencies, mental health providers, and other outreach agencies) are often hamstrung by limited information. Greater data sharing and access would allow them to better prioritize services for their clients.

Actual data governance in data sharing initiatives has lagged behind official law. Data owners of sensitive and confidential datasets — PDMP, Medicare/Medicaid, hospital systems records, etc. are scattered across public agencies. Given the sensitivity of this information and applicable legal/regulatory rules governing its management, agencies hold tight control over these data sets which can range from public health, law enforcement, criminal justice, education and employment data. Overarching initiatives are often needed to begin to tackle data governance effectively; in Maryland the 'MD THINK'[9] effort is in large part there to help 'streamline common data' around their health data broadly. Further, Maryland has combined that IT governance with specific oversight and enablement teams for large scale issues like the Opioid Operational Command Center[10] (OOCC) which oversees this process for over a dozen relevant agencies.

Due to the complexity of the issue, States have been appointing these sorts of commissions and task forces and allocating specific funding and powers for those groups to execute. Without any dedicated leadership team with the authority to wrangle appropriate data together effectively, any response effort for tackling issues like homelessness or opioid addiction will either fall flat or potentially drive towards erroneous conclusions. How that data is shared, and at what level it is connected is the main question facing government administrators as they cannot proactively know which data elements will be the most predictive beforehand.

A 2015 study of Massachusetts Chapter 55 Act found that while it produced some positive effects, even when getting access to these hard-to-reach datasets "better surveillance systems are needed locally and nationally to provide more accurate data about opioid abuse," the researchers said[11], "Improved [data] can help increase diagnosis and treatment of these disorders." Even with the coordinated datasets, the latency of public health and other critical data means that governing authorities have been slow to respond to a quickly morphing crisis. The wide-ranging entrances to the crisis coupled with the myriad of treatment options available means that recognizing the moment of risk and providing personalized treatment outreach is more critical than ever.

8   https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2017/04/data-sharing-helps-reduce-number-of-homeless-veterans
9   http://dhs.maryland.gov/mdthink/
10 https://beforeitstoolate.maryland.gov/oocc-agencies/
11 https://www.upi.com/Health_News/2018/10/26/In-Massachusetts-nearly-5-percent-of-people-over-11-abuse-opioids/4761540583987/?ur3=1

5.1.2 Constraints for sharing data

Privacy concerns are a legitimate consideration that limits the sharing of data around opioids and homelessness. For instance, the legal guidance around the Health Insurance Portability and Accountability Act[12] (HIPPA) ensures that entities "protect the privacy of individuals' health information while allowing covered entities to adopt new technologies to improve the quality and efficiency of patient care." While HIPAA allows the creation of data aggregation systems, there must simultaneously be an extremely rigorous patient data protection scheme alongside. Another consideration for this type of information is 42 CFR (Code of Federal Regulations) Part 2 which protects the privacy of substance use disorder (SUD) patient records by prohibiting unauthorized disclosures of patient records except in limited circumstances.[13] The confidentiality protections of Part 2 are vital for SUD patients to avoid discrimination and negative consequences.

For certain types of sensitive and personal data, consent and disclosure procedures must be considered if they are not already required by law. Regardless of how local groups decide to begin coordinating data for analytics, constituents will still expect reasonable disclosure about how that work is getting done. Implementing proactive user consent for cookie tracking on digital platforms, creating open comment periods for proposed integration work, hiring third party risk assessors, and more are all ways to ensure constituents stay well informed. Government must also consider the potential risks for misuse or abuse of data.

Further complicating things in this area is that since many opioids users are homeless or involved in the criminal justice system, consent over the use of the data is even more challenging.

In addition to legal and policy considerations, the technical mechanics of how patient data is siloed within each agency or stakeholder presents significant barriers. Data systems are often not interoperable. There is a lack of standard data collection, accessibility, and integration practices for various types of data, including electronic medical records, social determinants of health data, behavioral data, toxicology data. Real-time data collection also presents additional technological and accessibility challenges.

Whatever the reason, siloed data limits the ability of social services to have a holistic view of their patients and clients. With limitations in the availability and completeness of data coupled with the challenges of integrating multiple data sources across multiple stakeholders and jurisdictions, governments are inefficiently directing resources and, in many cases, ineffectively serving its citizens.

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[12] https://www.hhs.gov/hipaa/for-professionals/security/laws-regulations/index.html
[13] http://dhs.maryland.gov/mdthink/

5.1.3   How do you break down the barriers for data sharing?

Top down leadership and a shared commitment of vision across agencies and key stakeholders ultimately is the most important determining factor for a successful data sharing initiative. This includes strong guidance and support to encourage stakeholder cooperation from decision makers including Governors, Cabinet officials and agency leads. Data sharing initiatives must start with the building of trust and buy-in from leadership across the ecosystem. Enabling providers of end-point services while uniquely protecting personal-level data in each instance will be a central function and a valuable place for policymakers to weigh in for their own constituencies.

The types of personal-level data at play for tackling homelessness and opioids addiction are subject to a litany of federal and state laws and regulations that must be carefully navigated. Data sharing agreements between agency systems often require, at a minimum, a several months long multistep process between parties. Steps include navigating relevant privacy and data sharing rules, revising possible existing sharing agreements, and tasking legal counsel with drafting and iterating data use license agreements (DULA) or memorandum of understanding (MOU).

Data stewards and data owners must have a clear understanding of the use case before even considering entering a sharing agreement. For any given data sharing initiative, it is vital to clearly articulate the use case including the exact data requested to be shared, the proposed benefits resulting from the sharing arrangement, comprehensive awareness of legal and regulatory responsibilities governing the data, defined limitations on the use and disclosure of the data, and strong privacy and security commitments.

While privacy and confidentiality laws understandably present barriers to data sharing, cultural resistance is also a tremendous impediment. The complexity of understanding which federal and state laws apply to any given type of data will often result in a desire not to share anything. A lack of knowledge coupled with general concerns over privacy and security, lead to a very risk-averse environment that isn't conducive to data sharing initiatives. Education and explanation of the legal parameters that govern how any data set can be shared will need to be thoroughly understood by all parties. Sponsors of broader data sharing will need to have a sound business case, outlining both specific opportunities and the detailed approach for linking data across agencies. Creating a clear vision to generate excitement for a more data-centric government that will result in cost savings or improved services will be paramount. This business case will need to be socialized and vetted by leadership to build comfort and buy-in among a risk-averse audience.

Clear and robust MOUs and DULAs identifying the parameters of the data sharing are essential to addressing concerns over loss of data control or improper use. Formalized, clear legal frameworks governing data sharing should include:

- The purpose and goals for sharing the data
- Description of how the data will be protected, secured, stored, accessed, restricted
- Description of how the data will be used and analyzed
- Clear identification of the data to be shared, how confidential is the data, and who has the legal authority over the data
- Ethical guidelines on the use of the data
- Compliance and disclosures inventory
- Legal and regulatory requirements maintaining privacy, security, confidentiality of data
- Sanctions for improper handling or use of the data
- Timelines for the data use/sharing

In the cases of sensitive data, such as personally identifiable information, it is important to restrict the sharing to only what is necessary to complete the understood purpose of the data sharing. De-identification of personally identifiable data should also be considered if appropriate to the goals of the data sharing.

Sometimes, laws governing data sharing are unclear which results in a more conservative posture by data holding agencies inclined to keep a close hold. Clarity of the law should be the goal for any legislative effort to motivate data sharing. The more explicit the boundaries, principles and guidance for data sharing, the more at ease data stewards will be. Buy in from leadership on a data sharing initiative is also critical in addressing potential legal uncertainty. Executive Orders from governors or official agency guidance from agency leadership can help provide certainty, trust and appropriate guidance for all parties.

5.1.4 Interoperability and Data standards

According to the Healthcare Information and Management Systems Society (HIMSS), "interoperability is the ability of different information systems, devices or applications to connect, in a coordinated manner, within and across organizational boundaries to access, exchange and cooperatively use data amongst stakeholders, with the goal of optimizing the health of individuals and populations." Consistent and shared data standards to create interoperable data systems are foundational to achieving impactful, ecosystem wide data sharing.

5.1.4.1　There are three levels of interoperability

- Foundational interoperability: the ability of IT systems to simply exchange data, which is the most basic level of interoperability
- Structural interoperability: the ability of IT systems to preserve the purpose and meaning of the data in an exchange so that the receiving system can interpret information at the data field level.
- Semantic interoperability: the ability for the exchanging systems to take advantage of the structuring of the data exchange and the codification of the data including vocabulary so that the receiving IT systems can interpret the data. This is the highest level of interoperability and ultimately the general purpose for data sharing.

In the healthcare industry for example, standards development organizations have created numerous well-known standards intended to promote interoperability. However there still lacks widespread adoption of these standards within the healthcare industry. An active collaboration between government, healthcare organizations and IT industry solution providers around standards development and implementation can help drive greater adoption across the health ecosystem.

However, the challenges of homelessness and opioids extend well beyond just healthcare systems. As difficult as it is to align standards for health and human service data systems across health ecosystem silos, trying to interoperate between the health world and law enforcement for example is exponentially more challenging. Achieving universal semantic interoperability across such varied stakeholders will require long term planning, collaboration and effort starting at the highest levels of leadership.

6   Funding

Funding is undeniably a key component in the fight to eradicate homelessness and opioid addiction. To that end, we thought it incomplete to discuss this critical social challenge and potential solutions without adding some insight and examples into the current federal, state and local funding opportunities being leveraged to address this crisis. Given how interdependent successful outcomes are for the various initiatives and programs being funded, it stands to reason improved access to data across the various agencies and organizations would optimize overall efforts.

6.1   General Overview

As was discussed earlier, while there is indisputably a nexus between homelessness and opioid use disorder, this is not an area that has historically been rich with focus or funding targeted specifically to address the combination of homelessness and opioids. Rather, funding streams are more readily available through each of the respective program areas, homelessness or substance abuse/opioids. However, given the significant impact on treatment success that homelessness has on opioid use or how use of opioids impacts homelessness, these program specific funding streams can very often be leveraged to address the individuals who are both homeless and opioid addicts.

To that end, the lead agency within the U.S. Department of Health and Human Services (HHS) for opioid funding is the Substance Abuse and Mental Health Services Administration (SAMHSA). While the funding for homelessness historically has rested with the Department of Housing and Urban Development (HUD), which administers Homeless Assistance Grants to communities that administer housing at the local level.

In June of 2019, the Kaiser Health News reported that over 2.4 billion dollars had been passed out in State grants to fight the opioid crisis just since 2017. They reported, "States received federal funds for opioids primarily through two grants: State Targeted Response and State Opioid Response. The first grant, authorized by the 21st Century Cures Act, totaled $1 billion. The second pot of money, $1.4 billion — approved as part of last year's omnibus spending bill — sets aside a portion of the funding for states with the most drug poisoning deaths." According to the U.S. Department of Health and Human Services (HHS) announcement on September 4, 2019, HHS will provide "an additional $1.8 billion in funding to states to continue the Trump administration's efforts to combat the opioid crisis by expanding access to treatment and supporting near-real-time data on the drug overdose crisis." Noteworthy on this announcement is the focus on data.

Unlike the opioids epidemic, information from advocates for the homeless such as the National Alliance to End Homelessness cite budget cuts with HUD that reduce the ability of that federal oversight agency to effectively ameliorate this societal problem. In fact, the Alliance is urging Americans to advocate for Congress to "add $3 billion for Homeless Assistance in FY 2020. This represents a $364 million increase over the FY 19 level and would end homelessness for 70,000 additional households." The size of the increase speaks volumes for the funding challenges of this group making it all the more enticing to leverage other sources, where possible.

While SAMHSA and HUD remain the primary agencies for funding opioids and homelessness, respectively, there are of course a plethora of other agencies contributing to the funding steam for these two critical issues facing our country. There are other institutions such as the National Institute of Health (NIH), the Centers for Disease Control (CDC), the Health Resources and Services Administration (HRSA) and many other public entities and collations in addition to private/philanthropic charities,

7   Conclusions and Recommendations

The rates of homelessness and opioid abuse in the country are staggering and the resulting societal impact is enormous. With the incident rate so pervasive, the underlying causes so deep-seated and effective solutions still quite elusive, continued and enhanced federal funding is undoubtedly a critical ingredient in solving these individual and intertwined public crises. However, funding for programs to support the homeless or those battling opioid abuse will always face the same challenges as other social programs—there will never be enough. As such, the critical path forward is not only identifying solutions that support those already impacted, but more importantly, it is identifying effective solutions to prevent homelessness and opioid abuse. By stemming the tide of those becoming homeless or abusing opioids this approach will offer the best opportunity to begin to eradicate these conditions. A key element of such a solution is using shared data to not only understand these conditions and contributing factors but how to predict and implement effective intervention to avoid homelessness and/or opioid abuse.

7.1   Call to Action

We must find a way to adequately mitigate this epidemic in order to prevent further deterioration within our communities. The impact on our communities is multi-faceted from the impact on child health and welfare to the burden placed on our country's medical and public first responder services. The epidemic and intersection of both homelessness and opioid abuse is so incredibly detrimental to the overall wellbeing of our nation. While advocates, administrators and policy makers alike are working hard to solve this issue, we implore those involved in seeking solutions to recognize and embrace the use of shared data as a key component to stabilization and prevention. Sharing data and then analyzing the aggregated information available across the spectrum of involved agencies offers an opportunity to increase the toolkit availability for tackling the drivers for homelessness and opioid abuse and improve the detection of the relationship between them. Moreover, this additional insight could lead to identifying additional solutions and or funding that might be leveraged or redirected to more effective -long-lasting outcomes for treatment and stabilization as well as early prevention and intervention.

7.1.1   What to do and how to do it

Adopting strong collaborations across the entire ecosystem and addressing support and solutions for homelessness and opioid abuse - particularly those interested in the intersection of homelessness and opioid abuse - will offer ready partners for data sharing. To address both the addiction and homelessness earlier in the cycle, better data and faster access to information will be essential to effectuate appropriate prevention and intervention. Very positive strides have been noted when data sharing initiatives have been exercised. Making this a systemic part of the support and solution ecosystem offers opportunities to cascade the benefits of data sharing beyond targeted initiatives and pilots. Leveraging funding to develop more commissions and task forces with an overarching purview to help champion effective governance for multi-agency participation and data sharing; models that can then be replicated and embraced by policymakers, advocates, government agencies, local communities and practitioners. With a systemic adoption of data sharing as a recognized essential element for solving these crises, current constraints and barriers can more easily be identified and addressed with common purpose.

Providing a strong foundation through research, data harvesting, additional funding, and collaboration will empower the initiative to adequately and effectively work towards limiting, preventing, and eventually eliminating homelessness and opioid abuse as much as possible. Increased funding and better research will make it so that all organizations are better equipped to manage the opioid crisis. Education efforts will allow the cultural attitude and beliefs surrounding homelessness and the opioid crisis to evolve, hopefully cultivating a community-minded effort to deal with these closely related issues.

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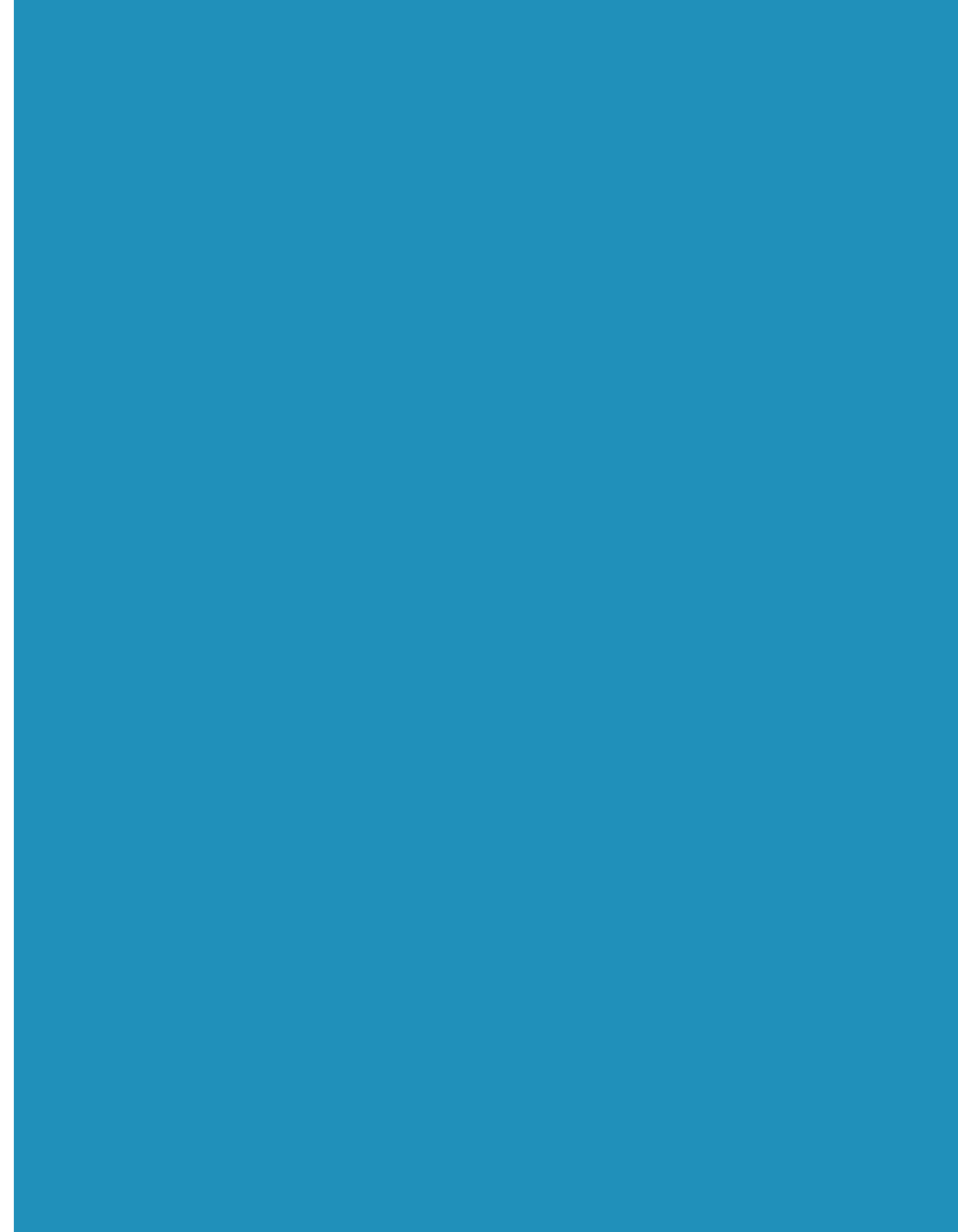
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