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Assessment #2

Innovative Uses of Technology to Address the Needs of Justice-Involved Persons with Behavioral Health Issues

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Alexandria, Virginia

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I. Introduction

Communities across the country are struggling to address the disproportionate number of individuals with mental illness in jails. In the United States each year, approximately 1 million detentions in county jails involve persons with serious mental illnesses.¹ Incarcerated individuals with mental illness are more likely to have experienced homelessness, prior incarcerations, and substance abuse than inmates without a mental illness.^{2,3} According to a 2012 inmate survey by the Bureau of Justice Statistics (BJS), an estimated 44 percent of jail inmates reported being told by a mental health professional that they had a diagnosable mental disorder, and 20 percent reported taking prescription medication for those mental health or emotional problems at the time of their offense.⁴ The survey also found that 15 percent of prisoners and 26 percent of jail detainees had symptoms of serious psychological distress as measured by the [K6 screening tool](#), which is substantially higher than the 3 percent rate of serious psychological distress observed in a national survey of non-institutionalized adults using the same K6 screening tool.⁵ States, counties and local jurisdictions are establishing mechanisms to divert these individuals from the justice system and designing programs to meet their complex service needs.

With a rising number of individuals with mental illness becoming justice involved, behavioral health services are facing unprecedented challenges. First, national data indicate that public behavioral health service budgets are still recovering from the Great Recession. From Fiscal Year (FY) 2001 to FY 2008, state mental health agencies averaged expenditure growth of 6.9 percent per year, but from FY 2008 to FY 2014, growth in expenditures averaged only 1.6 percent per year.⁶ Second, the behavioral health workforce is experiencing severe shortages of appropriately trained personnel, high turnover rates, and aging professionals.⁷ And third, the Mental Health Parity and Addiction Equity Act and the Affordable Care Act, laws that provide inclusion and insurance coverage for mental and/or substance use disorders, have exponentially

¹ Ascher-Svanum H, et al. (2010). Involvement in the US criminal justice system and cost for persons treated for schizophrenia. *BMC Psychiatry*, 10:1-10.

² Cloyes K., Wong B., Latimer S. & Abarca J.. (2010). Time to Prison Return for Offenders with Serious Mental Illness Released from Prison: A Survival Analysis. *Criminal Justice and Behavior* 27 (2): 175– 187. DOI: 10.1177/0093854809354370

³ Mallik-Kane K. & Visser C.A.. (2008). *Health and Prisoner Reentry: How Physical, Mental, and Substance Abuse Conditions Shape the Process of Reintegration*. Washington, DC: Urban Institute.

⁴ Beck AJ., Berzofsky M, Caspar R, & Krebs, C. (2013). Sexual victimization in prisons and jails reported by inmates, 2011–12 (NCJ 241399). Washington, DC: U.S. Department of Justice and the Bureau of Justice Statistics. Access June 14, 2016 at <http://www.americanjail.org/medical-conditions-mental-health-problems-disabilities-and-mortality-among-jail-inmates/>

⁵ Blackwell DL, Lucas JW, Clarke TC. (2014). Summary health statistics for U.S. adults: National Health Interview Survey, 2012. *National Center for Health Statistics. Vital Health Stat* 10(260).

⁶ NRI (2015). *State Mental Health Agency Revenues and Expenditures Survey: FY 2014*.

⁷ SAMHSA. (2013). *Report to Congress on the Nation’s Substance Abuse and Mental Health Workforce Issues*. Accessed July 22, 2016 from <http://store.samhsa.gov/shin/content/PEP13-RTC-BHWORK/PEP13-RTC-BHWORK.pdf>

increased the demand for services. Estimates from the Department of Health and Human Services indicate that 62 million persons have benefitted by the ACA and parity acts, and that an estimated 3.9 million people previously covered in the individual market without a mandatory benefit will gain coverage for treatment of either mental illness, substance use disorders, or both.⁸ Budget constraints, workforce shortages, and an increased demand for services all require that public services agencies abandon “business as usual” models and instead develop creative, innovative solutions to improve the outcomes of persons with mental illness with justice system involvement.

The Sequential Intercept Model is a conceptual framework for communities to use when considering the interface between the criminal justice and mental health systems.⁹ The Model describes five interception points at which interventions can be designed to avoid individuals falling more deeply into the criminal justice system: law enforcement, initial detention, jails/courts, reentry from jails/prisons/forensic hospitalization, and community corrections (probation or parole). Numerous counties across the United States have engaged in Sequential Intercept Mapping as a collaborative strategic planning exercise between the mental health and criminal justice service agencies to identify immediate steps to promote improved service delivery in their communities. Sequential Intercept Mapping promotes stakeholder collaboration by identifying existing efforts from pre-arrest through community supports at re-entry, highlighting strengths and gaps, and designing solutions. The goals are to aid communities to develop effective systems of care that bridge criminal justice and mental health services.

Research shows that people with mental illnesses are at greater risk for arrest than the general population, mostly for low-level misdemeanor crimes.¹⁰ Once incarcerated, they are less likely to post bail, tend to stay longer, are at high risk for recidivism after release, and are more likely to have parole revoked.^{11, 12} The Sequential Intercept Model relies on people moving through the criminal justice system in predictable ways. Ideally, most people with mental illnesses will be intercepted at early points, with decreasing numbers at each subsequent point. The deeper that people fall into the system, the harder it is to reverse the personal trauma of justice system involvement.

⁸ Beronio K, PoR, Skopec L & Gleid S. (2013). Affordable Care Act Will Expand Mental Health and Substance Abuse Disorder Services Benefits and Parity Protections for 62 Million Americans. Dept. of Health and Human Svcs, Office of the Asst. Sec. for Planning and Evaluation.

⁹ Munetz M. & Griffin P. (2006). Use of the Sequential Intercept Model as an Approach to Decriminalization of People with Serious Mental Illness. *Psychiatric Services*, 57(4), 544-549.

¹⁰ Fisher W. et al. (2011). Risk of arrest among public mental health service recipients and the general public. *Psychiatric Services*, 62(1), 67-72. Doi: 10.1176/appi.ps.62.1.67

¹¹ Subramanian R. et al., (2015). *Incarceration’s Front Door: The Misuse of Jail in America*. New York, NY: Vera Institute of Justice. Available from:

<http://archive.vera.org/sites/default/files/resources/downloads/incarcerations-front-door-report.pdf>

¹² Kim L, Becker-Cohen M, & Serakos M. (2015). *The Processing and Treatment of Mentally Ill Persons in the Criminal Justice System*. Washington D.C.: The Urban Institute. Available from: <http://www.urban.org/sites/default/files/alfresco/publication-pdfs/2000173-The-Processing-and-Treatment-of-Mentally-Ill-Persons-in-the-Criminal-Justice-System.pdf>

Some common themes quickly emerge when one reviews local communities' completed Sequential Intercept Maps.¹³ Many communities cite a need to improve data sharing between core service agencies and clear communication strategies among collaborators. Effective communication and sharing information between law enforcement, criminal justice, mental health service providers, and other social service agencies (for example, housing and healthcare) is also cited as key to effectively meeting the needs of persons with mental illnesses who are at risk of, or are currently involved with the justice system.¹⁴

As states and counties struggle with workforce shortages and tight budgets for behavioral health services, the use of technology offers new opportunities for effective service interventions for justice-involved persons with a mental illness. This report highlights exemplary programs at the state and county level that are successfully leveraging the use of technology to expand service and program capabilities. The featured programs were chosen because they are using technology to maximize communication and data-sharing among stakeholders at various interception points along the Sequential Intercept Model.

The programs featured in this report were chosen because they are using technology to maximize communication and data sharing among mental health and criminal justice agencies.

II. Overview

The aim of this paper is to assist states and counties that have identified service gaps and needs in their particular continuum of services, and are seeking solutions to advance service-level change and promote recovery. The examples provided herein are intended to stimulate thinking about what is possible and how other communities have used technology in new ways to meet historical challenges. These technologies can also be impactful at other intercept points besides those that the featured programs are targeting. They vary in complexity, with some technologies meeting a specific goal and others more complex in targeting multiple issues. We encourage the reader to consider how these new approaches can be adapted for existing systems of care.

The first interception point described by the Model, Intercept 1, occurs at the time that an individual with a mental disorder comes to the attention of police. However, recent public policy approaches are shining a light on the importance of an "Intercept 0", which can involve all of the prevention and early intervention strategies that communities engage

¹³ Counties' completed Sequential Intercept Maps are publicly posted and are readily accessible via an Internet search.

¹⁴ Council of State Governments. (2002). The Criminal Justice / Mental Health Consensus Project. New York: Council of State Governments. Available from: <https://csgjusticecenter.org/wp-content/uploads/2013/03/consensus-project-full-report.pdf>

before an individual comes in contact with law enforcement.¹⁵ Examples of these strategies include school prevention, healthcare, crisis services, housing shelters, etc.

The [Camden ARISE](#) (Administrative Records Integration for Service Excellence) project provides insights from combined public data systems, including criminal justice, health care, and housing, to help drive better decisions about allocation of resources and address the root causes of recurring public problems. The Camden Coalition’s Health Information Exchange identifies specific individuals at risk and provides care teams to intervene and interrupt the cycle of recurring hospital admissions and criminal justice contacts. We feature the Camden Coalition HIE and ARISE projects as state-of-the-art examples of using technology to impact Intercept 0, as well as the entire service system.

Even when optimal mental health service systems and effective pre-arrest diversion programs are in place, some individuals with serious mental disorders will come in contact with law enforcement (Intercept 1). Post arrest procedures may involve collaboration with the public mental health system to screen individuals for mental illness and jail diversion alternatives involving mental health treatment (Intercept 2). Virginia and Oregon are two states that have designed Bed Registries to assist mental health agencies to quickly find facilities that have beds available for acute care psychiatric inpatient hospitalization and residential crisis stabilization. The two states’ approaches to tool development is quite different; however the intent of each is the same: to enable the rapid search for an appropriate bed for someone in crisis needing inpatient level of services. We identify bed registries as technology examples that are utilized at Intercepts 1 (initial encounter), 2 (after initial detention or at pre-trial diversion) or 3 (during jail incarceration or post-trial diversion).

Intercept 3 promotes prompt access to mental health service linkage for persons with mental illness that are in jail. Special jurisdiction courts, such as mental health courts, limit punishment and instead focus on problem solving strategies and linkage to community treatment, in order to avoid further involvement in the criminal justice system.¹⁶ The [SAMHSA GAINS Center](#) maintains a database of more than 360 adult and juvenile mental health courts across the United States.¹⁷

Maryland, Illinois, and Maricopa County in Arizona are using data-linking technology to identify which inmates at the county jail have previously received mental health treatment. These programs are featured as examples at Intercept 3. Secure data sharing capabilities assist the jails by identifying newly booked detainees who may be in need of

¹⁵ Abreu D. Stepping Up: Examining Treatment and Service Capacity and Identifying State and Local Policy and Funding Barriers. Webinar presented August 15, 2015 for the National Association of Counties. Available from: <http://www.naco.org/events/stepping-examining-treatment-and-service-capacity-and-identifying-state-and-local-policy-and>

http://www.naco.org/sites/default/files/event_attachments/Examining_percent20Treatment_percent20and_percent20Service_percent20Capacity_percent20- percent20August_percent2020.pdf

¹⁶ Scott D. et al. (2013). Effectiveness of criminal justice liaison and diversion services for offenders with mental disorders: A review. *Psychiatric Services*, 64(9), p. 843-849.

¹⁷ <http://www.samhsa.gov/gains-center/mental-health-treatment-court-locators>

immediate mental health treatment, or may be candidates for a specialty diversion court. The data system benefits community agencies by alerting them when their clients are in jail. Upon discharge, continuity of care between incarceration and community-based services is increased and lapses in treatment can be avoided.

The time of community re-entry (Intercept 4) offers an opportunity to connect individuals with mental illness to needed services to avoid the cycle of recidivism so often experienced by those who become justice-involved. At this intercept, we feature New York's video-conferencing program, which was implemented to streamline housing linkages by enabling a dialogue between inmates and community providers to explore housing options and availability. Previously, these encounters only occurred after discharge, which delayed continuity of service.

People under continuing criminal justice supervision in the community (i.e., probation or parole) are the focus of Intercept 5. For these individuals, failure to attend required treatment appointments may result in the revocation of probation and a return to jail.^{18, 19} Another group of individuals, those mandated to receive outpatient competency restoration services, are also at risk of non-compliance and the potential consequence of an inpatient admission. Nevada is piloting a video-conferencing program, impacting Intercept 5, where residents of rural areas can receive their legal process training for competency restoration on an outpatient basis, thereby avoiding the high costs of an inpatient stay and allowing the individual to stay close to their natural support system in their home community.

Historically, all defendants referred for competency restoration services have been committed to inpatient facilities. In recent years, some states have developed community-based competency restoration services.²⁰ The Nevada program may serve as a model to greatly reduce costs for these services in rural areas, or areas where there is a shortage of personnel to administer legal process training sessions.

¹⁸ Skeem JL, Emke-Francis P, Loudon JE. (2006). Probation, mental health, and mandated treatment: a national survey. *Criminal Justice Behavior*. 3:158-184.

¹⁹ Council of State Governments. (2012). *Improving Outcomes for People with Mental Illnesses Involved with New York City's Criminal Court and Correction Systems*. Accessed July 22, 2016 from: http://www.nyc.gov/html/doc/downloads/pdf/press/FINAL_NYC_Report_12_22_2012.pdf

²⁰ Fitch WL. (2014). *Forensic Mental Health Services in the United States: 2014*. A report from the National Association of State Mental Health Program Directors, Alexandria, VA. Accessed from: <http://nasmhpd.org/content/forensic-mental-health-services-united-states-2014>

III. Methodology

The paper was conceptualized during a call between NRI staff and the National Association of state Mental Health Program Directors (NASMHPD) Forensic Division Executive Committee in January 2016. A few committee members discussed potential projects from their respective states where technology is being used as a means to streamline forensic services. During the initial discussion, several people expressed concern about the difficulties that their states have experienced when trying to implement innovative technological solutions. The barriers that emerged were real: legal barriers with information sharing, HIPAA concerns, security of electronic information, funding constraints, and limited technological knowledge of existing staff to maintain systems. Each state (and county's) ability to overcome these barriers differed due to financial and technical capability, and also due to service system cultural readiness to embrace and prioritize technological advancement. These ideas are explored throughout this report.

From February to June 2016, NRI staff researched examples of technological solutions that fit the project goals through literature review, internet searches, and talking with state behavioral health agency and local program staff. The primary source of information for the majority of the innovations featured in this report is interviews with key staff in exemplary programs. The interviews were structured to solicit input on the following topics:

1. Problem that was being faced
2. Goals of the program
3. Target population(s)
4. Experiences with implementation (timeframe, cost, etc.)
5. Obstacles and solutions
6. Strengths of the program
7. Weaknesses or gaps
8. Utilization and/or outcomes data
9. Future plans

After each program was summarized for inclusion in the report, NRI researchers solicited comments and feedback from the contact person to assure that the details were captured accurately. A few of the innovations described herein were found researching the internet and are summarized and included in this report due to their relevance to the topic covered, and sources are cited.

IV. Exemplary Programs

Health Information Exchange

New Jersey: “Hotspotting”

The [Camden Coalition of Healthcare Providers](#),²¹ founded in 2002, is a citywide coalition of over 25 entities, that includes hospitals, primary care providers and community organizations working together to deliver better healthcare to the citizens of Camden, NJ. Nearly a decade ago, three acute care hospitals within the coalition embarked on an integrated data strategy to identify shortcomings in the healthcare system and to drive change. The result was a unique collaboration among hospitals to link real time clinical data,²² in order to understand population health trends in the Camden area.

Research from the database uncovered distinct patient profiles that were high utilizers of health care services, contributing disproportionately to rising costs. These individuals tended to be older and present with complex health and social service needs. The Coalition worked to develop new models to provide more holistic care for these complex, high-cost patient groups. The vision was to address not only these patients’ healthcare needs, but also the social factors contributing to poor outcomes such as housing instability, criminal justice involvement, and unmet behavioral health issues. The Coalition established a health information exchange (HIE) where each of the city’s three hospitals shared patient-level data to meet three goals: (1) to understand utilization trends across the healthcare system; (2) to project population health in their catchment area, and (3) to identify specific patients that are falling through the cracks, and for whom targeted interventions can be designed. The HIE offers regional health care providers real-time access to important medical information for patients from almost any workstation, laptop, tablet, or computer via a web-based application. It facilitates sharing of detailed clinical data among hospitals, physician practices, laboratory and radiology groups, and other health care organizations.

Integrating patient-level data in an HIE uncovered that 20 percent of patients accounted for 84 percent of all hospital costs in the Camden, NJ

Individuals that are frequent recidivists to the health system are identified through the shared data in the HIE. Specifically, patients with two or more inpatient admissions within six months, unmet behavioral health issues (as identified through diagnosis and procedure coding), complex health issues, and potential housing instability are targeted for intervention. An analysis of the data showed that 20 percent of patients accounted for 84 percent of all charges and that 76 percent of all

patients visited two or more hospitals, reaffirming the need to share data across the

²¹ Follow the Camden Coalition of Healthcare Providers on Twitter: -@CamdenHealth

²² The original HIE was established based on claims data, but has since evolved into real-time patient-level clinical information.

healthcare system.²³ The Coalition deploys comprehensive care teams comprised of social workers, nurses, health coaches, and behavioral health workers to work closely with these individuals in the community to navigate the often complex and fragmented healthcare system.

The HIE has faced challenges related to integrating behavioral health data with general medical information due to the specific privacy laws regarding behavioral health data. If a patient's encounter at a hospital is primarily due to a behavioral health condition, the encounter will be captured in the HIE; however, details about the encounter, including clinical notes, will not be included. If the person presented with primary medical concerns, and behavioral health issues are identified in the clinical notes, then the information *is* included in the HIE and higher-level access restrictions are put in place.

Use of the HIE has expanded. Since the inception of the Coalition, two additional hospitals have joined the HIE, totaling five hospitals contributing patient-level data. In addition, other healthcare and social service providers are able to obtain access to the data by signing a [Data Sharing Contract](#)²⁴ and paying a fee. These service providers are able to gain knowledge of their patient's inpatient stay, procedures, diagnoses, and medications to improve continuity of care.

Staff at Camden County Jail currently have read-only access rights to clinical data in the HIE. The ability to view an inmate's current list of medications has vastly reduced the time required for medication reconciliation at the time of initial jail detention. Staff can now complete a process that used to take 30 to 60 days in real-time, thereby ensuring continuity of the person's medication regimen.

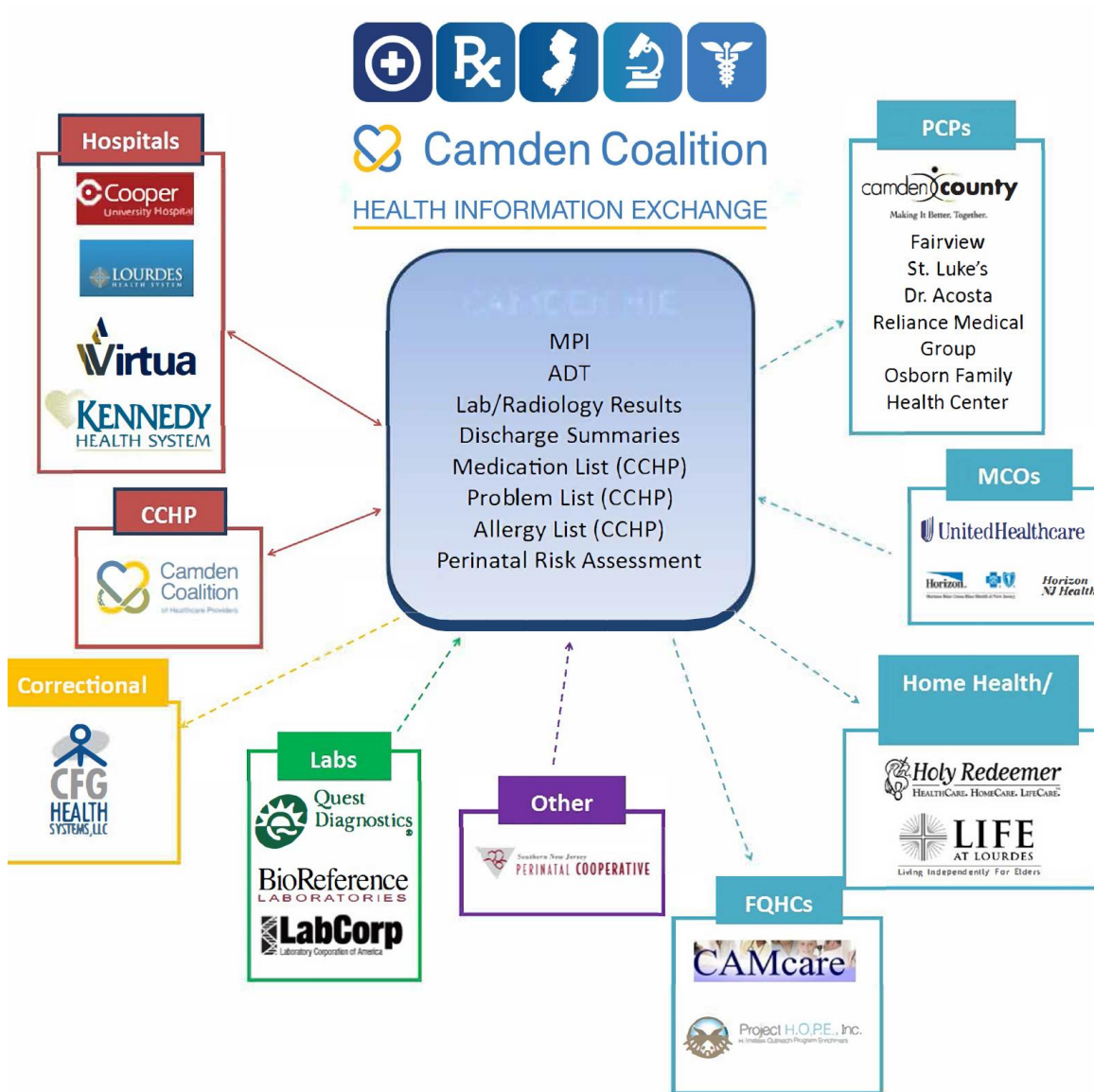
A future goal is to link real-time health information at the inmate level from the jail's electronic health record with the HIE described above to identify frequent utilizers of the healthcare system who also have multiple encounters with the criminal justice system. It is hoped that, once identified, care teams can engage these individuals in jail prior to their release into the community, help create a feasible plan for integrated care, and make a positive impact in their lives.

The HIE is now largely sustained through the use of member fees, and it is expected that in the near future fees will be the sole source of funding. The HIE is governed by an Internal Review Board (IRB) which established that the HIE is solely to be used for the

²³ Gross, K. et al. (2013). Building a citywide, all-payer, hospital claims database to improve health care delivery in a low income, urban community. *Population Health Management*, 16, Supp. 1, S20-24.

²⁴ Two examples of Data Sharing Contracts can be found here: <https://www.camdenhealth.org/arise-camden/>

sharing of patient level information for healthcare operations; using the data for research purposes is prohibited.



Integrated Datasets

Camden ARISE

After the establishment of the HIE, it became apparent that broadening the array of data-sharing partners would be beneficial in fully comprehending the needs of the population. Hospital information provided only a limited snapshot of life circumstances; there are additional factors that play a significant role in poor health outcomes that are not observable through the basic demographic and procedural codes obtained through hospital claims data. In November 2014, funding from the [Laura and John Arnold Foundation](#)²⁵ was secured and, in January 2015, the first data-sharing agreement was signed to build a social determinants database. The first phase of [Camden ARISE](#) linked individual arrest records from the Camden County Police Department with patient-level information from the regional hospitals to shed light on overlapping issues in health care and public safety.²⁶ Partnering with the Police Department facilitated the investigation of the complex factors that drive high utilization in both healthcare and the criminal justice systems.

Data from the last five years showed a small group of people who had repeated hospitalizations and arrests. These “dual system high utilizers” had at least ten emergency department visits and six or more arrests between 2010 and 2014. Unmet behavioral health needs were prevalent in this group: approximately 75 percent had previous substance abuse or mental health-related hospitalization. The data also showed that over 40 percent of those individuals were homeless at the time of their hospitalization or arrest. These findings prompted Camden Arise to ask: are there opportunities to intervene at crucial times to change individual outcomes?²⁷

Analysis of the Camden ARISE cross-system linked data set can help address root causes of recurring public problems and lead to better decision making for public policy.

Health system and police department staff will use these findings for service planning. The Camden ARISE dataset links person-level data from the multiple dataset as shown in the table on the following page. Unlike the HIE which links real-time patient information, the ARISE dataset is comprised of static data compiled from various data sources. Use of the dataset is strictly limited to population-based research.

²⁵ The Laura and John Arnold Foundation: <http://www.arnoldfoundation.org/>

²⁶ Camden ARISE website: <https://www.camdenhealth.org/arise-camden/>

²⁷ <https://www.camdenhealth.org/camden-arise-studies-dual-system-high-utilization/>

Camden ARISE person-level linked datasets	
Data Set:	Type of information:
Camden Coalition	Static hospital claims data from area hospitals
Camden County Policy Department	Arrest, calls for service, overdose, and crime incident data
New Jersey State Prison	Inmate data
Camden County Schools	Student attendance and demographic information
CamConnect	Identifies addresses that are vacant (used as a proxy for homelessness)
South Jersey Perinatal Cooperative	Data on pregnant women

Analysis of the combined data can help address root causes of recurring public problems and lead to better decision making for public policy. The next phase of the project is focused on knowledge dissemination about the types of interventions that would be effective to improve the outcomes for specific patient groups. Solicitations for funding will be targeted toward the specific focus area of each intervention.

Interactive Websites

Virginia Bed Registry

The Virginia Bed Registry²⁸ was developed by [Virginia Health Information \(VHI\)](#), the Virginia state entity which serves as the one-stop source for health data reporting in Virginia, and went live on March 3, 2014. The bed registry website was launched in response to the challenges faced by preadmission screeners and emergency services staff locating potential beds for individuals in need of emergency psychiatric care. With time especially precious in emergency situations, stakeholders felt the need for a bed registry was imperative. The registry can be utilized to give providers a starting point for checking bed availability in a more useful way than initially cold calling facilities at random.

State hospitals, community service boards, and crisis stabilization units and private inpatient providers that are licensed by the Virginia Department of Behavioral Health & Developmental Services are required to participate in the registry. VHI provides logon access to the registry to qualified individuals, facilities, and providers and there is no fee for participating and using the registry. The most important requirements for participating facilities and providers are to ensure the registry is current and updated, make sure that

²⁸ Virginia Bed Registry: www.vhi.org/pbr

the facility's contact information is correct, and update the bed census any time there is a change in bed availability, or at least once daily.

However, the registry is a tool. The data relies on the users, and more is needed than an available bed to facilitate appropriate care. The registry does not replace the need for communicating clinical information between facilities.

Oregon Mental Health Residential Facilities Registry

The Oregon Mental Health Residential Facilities Registry was developed under the Oregon Addictions and Mental Health Initiative²⁹ and launched on-line as a website in early 2015 with the goal of providing assistance to counties while triaging and managing incoming referrals. The residential system in Oregon includes public and private residential placements (private usually takes self-pay and private insurance clients). The public residential facilities are all licensed by the state and each county has an assigned individual to manage referrals to residential placement. While each county has a different process for triaging and managing incoming referrals, the Oregon Mental Health Residential Facilities Registry was created to provide a standardized tool to identify available beds.

Only public, state-licensed facilities that pay for services through Medicaid are listed. Some regions or counties have included their crisis and stabilization facilities, too. Hospitals are not included in the registry as placements change rapidly, and there is a specific referral process for inpatient admissions. There is no fee associated with using the website and no registration is needed. Most users refer to the registry daily to search open beds, especially state hospital social workers engaged in discharge planning. The website came to full realization from the concerted efforts of a clinician in one county who had a programming background, a few staff in other counties, and state-level employees involved during the testing phase. Users do not have to endorse or maintain the page or create an account, which makes the system very simple to use. Users are only responsible for updating their own section.

The main benefit of the registry is that an open placement can be found quickly. It also allows the receiving placement to post status updates, such as when they are experiencing a high volume of requests and can no longer accept referrals. Also, as staff members change positions/agencies, the registry provides a live location for contacts, correct referral paths, and live bed status. As facilities are opened/closed, they can be easily updated on the website, too. Overall, the bed registry has made the referral process smoother and quicker for everyone.

However, a timely bed update relies on each county. Some areas do not update their information as often, so that it is a challenge to have every county prioritize at least daily updates. Since the launch of the Oregon Mental Health Residential Facilities Registry

²⁹ Addictions and Mental Health Initiative website: <http://oregonamhi.wikidot.com/>.

website has had great acceptance, a new website was created for the Oregon Psychiatric Security Review Board³⁰ which supervises those individuals who successfully asserted the insanity defense to a criminal charge.

Comparison between the Virginia Psychiatric Bed Registry and Oregon Mental Health Residential Facilities Registry	
Virginia Psychiatric Bed Registry	Oregon Mental Health Residential Facilities Registry
Live since March 3, 2014	Live since early 2015
Registration needed	No registration needed
No limited time when making the updates	Limited time when making the updates
Only registered/qualified users can make edits	Everyone can access the edit section
More complex process-request registration, user verification, login information assigned	Simple process to be added to the list
User friendly format	HTML format therefore formatting/updating the page is not user friendly
No cost associated for using the registry	No cost associated to the use of the page
There is a “how to update” guide	There are instructions on how to update the Wiki page. No standardization for the written text: Full vs 0 open or no openings
Includes information from all public, private, community service boards, and residential crisis stabilization units	Includes information for all public, state licensed facilities. Some regions include their crisis and stabilization facilities
Private inpatient providers are included	Exclude private providers
Providers licensed by the Virginia Department of Behavioral Health & Developmental Services are required to register in the psychiatric bed registry	Not required by licensing agency to provide bed capacity/availability
Provides capacity data, degree of security, demographics served, address and contact information	Provides the name of the facility, contact information and opening/referral status. Some facilities include more details than others
Since it is required by law to submit information to the psychiatric bed registry, all counties participate on it	70 percent of the counties use the website to update statuses

³⁰ Psychiatric Security Review Board website: <http://psrboregon.wikidot.com/>.

Benefits of Bed Registries		
Benefits for consumer	Benefits for facility	Benefits for community
Timely engagement with the next level of care provider	Timely information on bed availability	Less crowded jails
Assures continuity of psychiatric care	Rapid placement in emergency situation	Increases community safety
Avoids placement in jail	Starting point for checking bed availability in a more useful way	
Secure jail diversion when appropriate	Avoids need to cold-call facilities at random	
	Saves staff time and energy	
	Updates contact information for each facility listed in the registry	

Person-Level Data Linkages

Maryland

In 2006, the Maryland Department of Health and Mental Hygiene, the Maryland Department of Public Safety and Correctional Services, and the state’s Core Service Agencies developed and implemented a data-sharing initiative known as DataLink, to promote the continuity of treatment for individuals with serious mental illness who are detained in the detention centers. As of May 2016, of the 24 counties/jurisdictions in Marylandstate, 54 percent had implemented the DataLink system. Of the 46 percent of counties/jurisdictions that have not yet implemented the DataLink, 18 percent have demonstrated willingness to do so. For 73 percent of the Core Service Agencies ready for implementation, only 18 percent of the the corrections agencies in those same counties/jurisdictions indicated they felt ready to implement. On average, the DataLink system processes 476 records per day and identifies a match of consumers with mental health and/or pharmacy claims 22 percent of the time.³¹

³¹ Ibid.

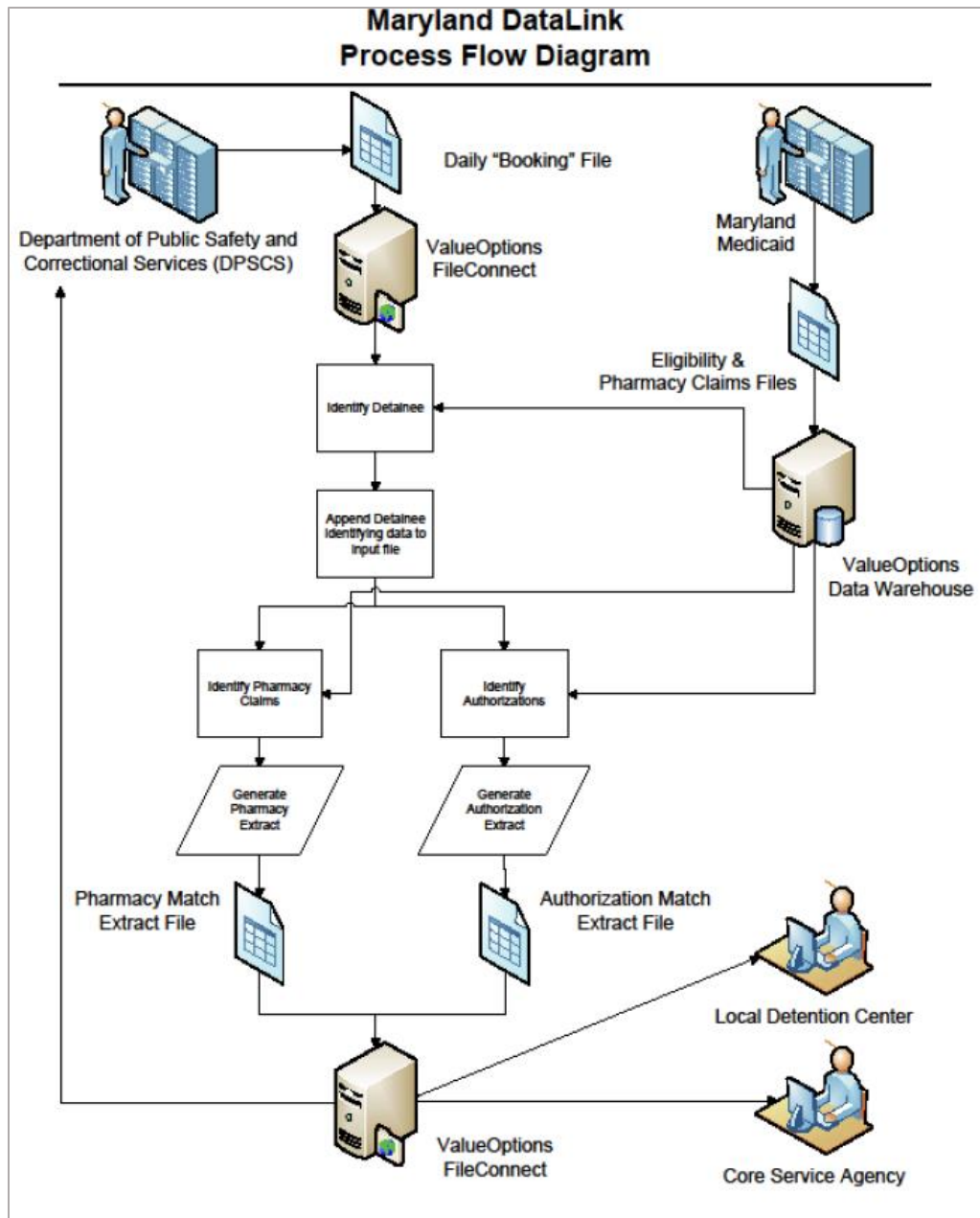
The process for implementing the DataLink system requires several steps. The Administrative Services Organization (ASO) that manages Maryland’s public behavioral health system receives a daily data file from the Department of Public Safety and Correctional Services listing those individuals that, in the last 24 hours, have been detained and processed at a local detention center, incarcerated at a state correctional facility, or remanded to the Department of Parole and Probation. That data is matched to ASO data to identify detainees with previous utilization of public mental health services and pharmacy claims. The information is then electronically returned to the Department of Public Safety and Correctional Services and/or to the participating local detention center so that the staff can quickly address the medical and mental health needs of the detainee. The data is also shared with the local Core Service Agency so that they may assist in providing coordinated care for the individual while detained and upon release.³²

The Maryland Data Link is shared with the local Core Service Agency so that they may assist in providing coordinated care for the individual while detained in jail and upon release.

The DataLink system requires the purchasing of a data scanner, which presents a fiscal challenge to some jurisdictions that have few arrests. Some smaller jails have difficulty justifying the capital investment in the machine based on the small number of individuals with prior mental health service use that would be flagged. With a goal of full statewide implementation, the project is working with these smaller jurisdictions to secure grant funding for the necessary hardware and technology infrastructure to bring the project to scale. However, the data scanner is not only used by the DataLink project; most jurisdictions with larger populations already have the machine and have been using it for other data-sharing purposes.

Besides the live scan machine, there are no other fixed costs for participating in the DataLink project. Some jails have invested in electronic health records (EHRs) which allow recording a detainee’s prior behavioral health service information, from the prior service flag obtained via the DataLink project, and for continuity of care while the individual is incarcerated.

³² <https://mhamd.org/wp-content/uploads/2016/04/MHCJP-10-yr-Progress-Report-Sept-2015.pdf>.



The greatest benefit of the DataLink system has been the opportunity to quickly address the needs of arrested individuals, ensuring continued care. Some of the challenges for implementing the system have included the financial cost and the operational infrastructure of jails and prisons. As jails are operated independently by local governments, the DataLink project has to establish separate relationships with each jail. Prisons, which are state facilities, are all part of the project through one agreement with the state.

The major limitations of the project are the exclusion of substance use disorder treatment information restricted by the 42 CFR Part 2 restrictions on disclosures without the

patient's consent of substance use disorder treatment information. Also, the DataLink system was established to automatically flag individuals that are being detained in county jails who have prior mental health service history through the public system. It's important to keep in mind that these files only contain data on public mental health service utilization paid by the ASO; individuals that are privately insured, and those that received help outside of Maryland's public mental health system would not be flagged. Understanding the limitations as to who is included and excluded from database is important in order to recognize that additional processes must be put in place to reach all individuals with a potential mental health need who are detained in jail.

Illinois

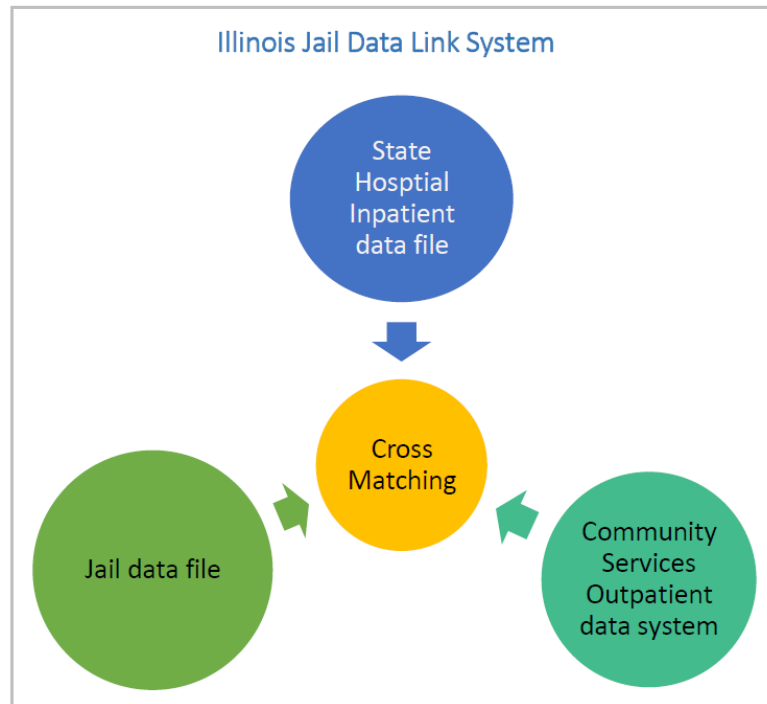
About 30 percent of the Cook County, Illinois, jail's 9,000 inmates have serious mental health issues, with high rates of mood and psychotic disorders.³³ The majority of these inmates are in jail for nonviolent offenses closely associated with their mental health issues, and would be better served by treatment rather than incarceration. In response, the Illinois Division of Mental Health (DMH) launched an initial jail data link pilot project in 1999 with federal funding support through a five-year TOPS (Technology Opportunities Program) grant. The Jail Data Link is a data-matching initiative to identify users of both the Cook County Jail and the Illinois Division of Mental Health (DMH). The Jail Data Link system links records from DMH Reporting Community Services (ROCS) system with the Cook County jail daily census file. The ROCS file is DMH's primary data system containing the identity of individuals who are served by grant-funded community mental health centers. The Jail Data Link identifies detainees on a daily basis who have had an inpatient or outpatient encounter with DMH, in order to aid jail decisions on classification and housing. Further, planning for community re-entry can start almost immediately after jail detainment in an effort to reduce recidivism.

There are three key sources of information in Jail Data Link:

1. DMH Community Services Outpatient system is used to provide recent diagnostic and treatment information.
2. Jail daily census files contain identifiers and basic demographic information.

³³ Novotney, A. (2015). Fixing Chicago's biggest correctional facility. *APA Monitor*, 46(10), P. 44.

3. DMH State Hospital Inpatient Admission data is updated daily.



A data-sharing agreement signed by county jail officials, DMH staff, and DMH grant-funded community mental health representatives allows DMH to disclose the contents of clients' mental health treatment records to county jails for the purpose of providing the mental health services needed while detained in jail³⁴. The data-sharing agreements allow DMH to disclose the contents of clients' mental health treatment records to county jails – without that client's consent – for the purpose of providing mental health services to those individuals while they are detained in the jail. The first phase of the Jail Data Link project was authorized and supported by Illinois Public Act 91-0536 (740 ILCS110/9.1).³⁵ DMH Central office staff are responsible for ongoing database maintenance. Access to the system is managed by DMH and is granted via user identification and password provided by DMH.

A vital feature of the project is that new data is directly entered by jail staff and by community mental health agencies into the Jail Data Link system. New data about a client's treatment and current condition is provided by community mental health

³⁴<http://www.icjia.state.il.us/assets/pdf/ResearchReports/Jail%20Data%20Link%20Final%20Report%20May%202009.pdf>.

³⁵ The Illinois public law that enabled the Data Link project may be viewed at <http://www.ilga.gov/legislation/publicacts/pubact91/acts/91-0536.html>.

providers. Jail staff enters updated data regarding a detainee's pending charges. Combined, these new daily entries facilitate communication between mental health providers and criminal justice about any changes in diagnosis or medication that might have occurred while the client was jailed. The end result is more successful community re-entry, and a reduction in recidivism in the criminal justice system.

Early in the project, DMH staff realized that the crossmatch with mental health community services data was providing a large number of "hits" for individuals who had not received mental health services. This occurred because many community mental health agencies were umbrella agencies providing a number of different types of social services (e.g., substance abuse, domestic violence, court-ordered for a mental health evaluation, etc.) in addition to mental health services. The data cross-matching included these non-mental health encounters. It was clear that a procedure had to be developed to target mental health service cases. As a result, individuals are considered part of the "target" population when they have a serious mental illness and debilitating level of impairment. An evaluation of the project showed that about 10 percent of jail admissions were cross-matched as having been previously served by DMH. Of those, approximately 75 percent were determined to be low priority cases, and case managers focus their efforts on about 25 percent of cases.³⁶

Case Managers use the system daily to check for new clients. When a new client is identified as having a serious mental illness in need of services, the case manager conducts a client interview in the jail setting and is the primary staff person to develop discharge plans and follow-up services in the community. Jail staff retrieve the files on a daily basis so that they can take any needed emergency procedures and begin the process of joint discharge planning in concert with the Case Manager.

Initial results showed that recidivism was reduced using Jail Data Link. Almost twice as many offenders successfully stayed out of jail when they received follow-up care from community mental health providers. Approximately 60 percent of persons not linked to community mental health agencies were re-arrested within 60 days, whereas only about 20 percent of those who were linked were re-arrested.

However, there were two limitations identified by users using the Jail Data Link system; (1) clinical staff at the jail did not have enough time to link the inmate with high quality after care, and (2) the electronic data system did not provide DMH staff an efficient mechanism to monitor discharge and aftercare activities.³⁷

In 2006, DMH expanded the Jail Data Link project from Cook County to Will, Peoria and Jefferson counties through funding from the Illinois Criminal Justice Information

³⁶ Gruenenfelder, D. (2009). Evaluation of the Jail Data Link Program. Springfield, IL: Institute for Legal, Legislative and Policy Studies Center for State Policy and Leadership. Accessed July 26, 2016 from <http://www.icjia.state.il.us/assets/pdf/researchreports/jail%20data%20link%20final%20report%20may%202009.pdf>.

³⁷ Ibid.

Authority and is currently operational in ten counties³⁸ with the idea of overcoming previous limitations. The main objectives of the expanded system were the same as in 1999, to enable jails to quickly and accurately identify detainees with a mental illness, to provide better mental health services to detainees while confined, to initiate and implement joint discharge planning, to follow through with the discharge plan for 30 days after jail exit, and to reduce jail recidivism. The web-based system provides all system users 24/7 access to information indicating that a newly incarcerated individual has a history of prior mental health treatment by DMH.

In 2009, an Evaluation of the Jail Data Link used data from three counties: Peoria, Jefferson and Will and found that of about 28,000 jail admissions from April 2006 thru March 2007, 10 percent were identified as being previously served by DMH. On a monthly basis, about 2,400 persons were admitted to the jails, about 250 were identified as being served by DMH, and about 65 cases were prioritized as needing referral and follow-up services. Of the roughly 800 cases per year that were eligible for linkage, case managers prepared discharge plans for almost 100 percent; however, only about 33 percent were actually connected with services after release. Recidivism rate, using Jail Data Link data, fluctuates between 18 percent and 54 percent.³⁹

Maricopa County, Arizona

Mercy Maricopa serves as the integrated Regional Behavioral Health Authority (RBHA) in Maricopa County, Arizona. It also serves as one of the largest public behavioral health system in the United States, and supports integrated care delivery. Mercy Maricopa uses technology in several ways with the main goal of reducing the number of individuals in jails with mental health issues. In 1997, Mercy Maricopa County participated in a multi-year, multi-site project sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA) targeting jail diversion. The initiative was seeking to establish an evidence base for practice and to develop replicable models that can be adapted for use across the country. The initiative was in response to research on the problem of mental illness among the population of individuals in jails and prisons, the complex and challenging needs of such individuals, and the analysis of case studies.⁴⁰

From the participation in SAMHSA initiative, the jail data link (Data Link) project emerged. Utilizing Data Link mental health information from community providers is shared with correctional health services during booking. Through a Data Link Agreement, the Arizona Department of Health Services, Division of Behavioral Health Services (ADHS/DBHS) and the RBHA receive access to the Correctional Health

³⁸ Illinois Jail Data Link System: <https://sisonline.dhs.state.il.us/jaillink/home.asp>

³⁹ Gruenenfelder, D. (2009). Evaluation of the Jail Data Link Program. Springfield, IL: Institute for Legal, Legislative and Policy Studies Center for State Policy and Leadership. Accessed July 26, 2016 from <http://www.icjia.state.il.us/assets/pdf/researchreports/jail%20data%20link20final%20report%20may%202009.pdf>

⁴⁰ <http://www.namhpac.org/PDFs/01/jaildiversion.pdf>

Services of Maricopa County booking information. The information is used to coordinate behavioral health services to RBHA clients identified as having a serious mental illness who have been incarcerated in the Maricopa County Jail. The Data Link Agreement governs the operation and parties' participation in Data Link. Data Link uses a software that enables the transfer of information between the Correctional Health Services and the ADHS/DBHS or the RBHA data processing systems. This technology provides a platform for multi-discipline collaboration ensuring screening and assessment services, medications and other behavioral health services are provided to individuals. It also ensures a viable discharge plan and continuity of care after discharge.

The Maricopa County Data Link technology provides a platform for multi-discipline collaboration ensuring behavioral health screening and assessment services, medications, and discharge planning services to improve the continuity of care.

In 2014, the Superior Court of the State of Arizona passed an administrative order requiring that mental health information be shared with the courts⁴¹. Maricopa County Pre-trial services and several local municipal courts utilize a web portal to identify persons with mental illness at the Initial Appearance, which then informs decisions for shifting cases to the mental health courts. Maricopa County RBHA provides real-time access to its entire client

database including youth enrolled or previously enrolled in children's services to the Maricopa County Superior Court for individuals who have been arrested or detained. Maricopa County Superior Court refers individuals who are identified through validated risk assessments to potentially have mental health and/or substance abuse issues, and do not have healthcare to the Maricopa County RBHA for healthcare enrollment, assessment, and engagement in treatment services to target identified needs. Maricopa County RBHA then determines whether the referred individuals qualify for enrollment and services. Through this technology, not only is an alternative to detention provided to eligible individuals, but adherence to court orders is reinforced.

Maricopa County also utilizes Telemed visits to assess inmates leaving federal prison facilities who are returning to Arizona upon release. These three technologies are currently working well in Maricopa County. The county is also developing an automated feed of behavioral health and medical information from the community when a person is booked into jail or prison and back out to community providers upon release. Maricopa County is currently working with agreements at the county level.

⁴¹ <http://www.azdhs.gov/bhs/documents/other-agreements/superior-court-maricopa-county.pdf>

Benefits of Person-Level Data Linkages

There are considerable benefits to linking person level information from the mental health system with the criminal justice system. One thread throughout the examples was the opportunity to improve coordinated care during the person's detainment and after release. When linked data are near real-time, the jail has better information as to the level of need of the detainee for critical mental health services for stabilization as well as housing considerations. The collaborative effort of the mental health systems and criminal justice systems, in service to the detainee with mental health needs, improves the likelihood of managing the mental illness and acceptable correctional response to the infraction, such as diversion to a mental health court. When the mental health system is notified that a person from their system has entered the criminal justice system, mental health treatment for that person can continue inside the jail. Linked systems that are data rich, including information on offenses, treatments, and other social services, allow each systems to plan appropriate interventions and to gain support from the other systems. Detainees with high levels of previous mental health service utilization can be given case management and treatment supports to improve functional status and successful reintegration into the community. At the time of re-entry, the data link collaboration also supports the coordination of supervision with treatment.

A second major benefit of linking person-level data is the identification of detainees in need of mental health services. The data link approach uses historical and current treatment information to identify persons with serious mental illness and the types of services received. These objective data do not replace the need for screening for mental health issues when detainees enter the jail; however, the data can be used to validate screening efforts of jail staff. It is important to note that shared databases often rely on data entry by one party, and then the other party accessing, reading and possibly acting on the shared information. When time is of the essence in crisis situations, it is better to make a phone call. In these circumstances, connecting person to person assures that the critical information has been conveyed, rather than relying on the other agency to access the information electronically. Entering the information into the database should be a secondary step.

A final major benefit from linked data systems is the opportunity to understand levels of mental health treatment for a subgroup of detainees. In the preceding examples, the identification of a mental health consumer was limited to publicly funded services. Summarizing historical data provides an estimate of the prevalence of mental illness among jail detainees who have used publicly funded mental health services. When combined with the general screening assessments by jails that identify any detainee with a potential mental health issue, the jail and the mental health systems now have a fuller appreciation for the range of mental health needs of detainees and the various funding sources for services after release. Additionally, trend analysis can provide useful information for planning appropriate programs for detainees while in jail and after release.

Video Technology

Videoconferencing at Initial Detention

New York

In 2011, looking for a more effective way for necessary professionals such as mental health staff, attorneys, and probation officers to engage with inmates, the Niagara County Jail in New York started pilot testing an online videoconferencing system. The Web-based videoconferencing system has primarily a two-fold goal of helping to better connect inmates with professional staff and also to cut down the amount of travel to the facility. The focus of the system is mainly to be used for inmate communication, not for official court room appearances.⁴² A recent study found that providers can expect remote interviews to provide clinical information similar to that obtained by in-person interviews.⁴³

The implementation of the technology involved a specialty system built exclusively for jail use. Multiple system units were installed in various housing areas in the jail. The system involved an interactive touchscreen technology. The videoconferencing takes place through a secure server on the Internet that includes the verification of the approved user's credentials (such as user name and password).

The benefits of the technology are the opportunity to streamline inmates' appointments in a more efficient and faster way, and to reduce the visitors to the jail. For inmates in need of mental health services, the opportunity of connecting with the mental health providers more efficiently could improve the inmate's functioning. Mental health providers could take advantage of such opportunity and deliver evidence-based practices more frequently. The technology could also help free-up jail staff to concentrate on other duties rather than escorting visitors to and from various locations in the jail.

The weakness of the videoconferencing is the added costs that professional staff, and eventually family members and loved ones will have as they will need access to a computer, internet connection, web camera, and pay a fee for conferencing with the inmate. The costs are also for the facility as the web conferencing system requires a specialty built-in system. It is expected that the facility will need multiple videoconferencing units; the web conferencing package includes limited number of authorized licenses, and requires a maintenance contract for the technology.

For the technology to be successful, it needs the willingness of the components of the criminal justice system to become more comfortable using and promoting the technology.

⁴² <http://www.govtech.com/public-safety/Web-Chats-Help-Streamline-Operations-at-New-York-Jail.html>

⁴³ Lexcen FJ, Hawk GL, Herrick S, et. Al. (2006). Use of video conferencing for psychiatric and forensic evaluations. *Psychiatric Services*, 57:713-715

The future plans for the videoconferencing include expanding visits between inmates and their family members, along with the use by private attorneys to meet with their incarcerated clients.

Nevada

Like many states, Nevada was experiencing a rising number of individuals in jail that are ordered for competency restoration. Inmates were jailed an average of 57 days in 2004 and 77 days in 2005 while awaiting transfer to Lakes Crossing, in Sparks, NV, the state's only maximum security facility evaluating the competency of offenders referred by the court system. In response, a specialty competency court was established in Clark County District Court in Las Vegas in 2005 since about 60 percent of court-ordered patients are from Clark County. By 2008, the average wait to be transported to the state hospital was seven days.⁴⁴ A challenge is that the Clark County jail is 450 miles from the hospital, which can place a considerable strain on resources when the patient has to travel back and forth for court hearings. Costs to the Police Department to transport defendants are \$5,250 per round-trip flight, which occurs every few weeks, or about \$120,000 a year. Five to six individuals are transported to the hospital at a time, where another six are picked up for transport back to Clark County.⁴⁵ In an effort to curtail costs and streamline communication between the Clark County District Court and Detention Center in the south part of the state with the Lakes Crossing Center in the northern part of the state, a videoconferencing capability was established via a collaborative process between the state and the county.

Clarke County, Nevada's videoconferencing technology has resulted in an estimated travel cost savings of \$120,000 per year

The videoconferencing technology is primarily used for evidentiary medication hearings after the defendant has been admitted to the hospital to avoid the expense of transporting the individual to court. Research shows that transporting an inmate outside of a correctional setting, in terms of actual transportation costs, staff hours, and increased risk to public safety and security have been major barriers to bringing inmates to treatment providers.⁴⁶ Staff time is maximized because staff are able to come into the virtual courtroom when the session starts thereby eliminating time waiting for court to convene.

⁴⁴ http://elkodaily.com/news/local/competency-court-procedures-get-nevada-supreme-court-review/article_350caae1-bfcc-52cc-8f8d-8a574ecb2529.html

⁴⁵ <http://www.reviewjournal.com/news/crime-courts/competency-evaluations-nevada-detainees-log-jammed>

⁴⁶ Deslich SA, Thistlethwaite T, Coustasse A. (2013). Telepsychiatry in Correctional Facilities: Using Technology to Improve Access and Decrease Costs of Mental Health Care in Underserved Populations. *The Permanente Journal*, 17(10), pp. 80-86. <http://dx.doi.org/10.7812/TPP/12-123>

The Videoconferencing capability occurs through dialing into a secure IP address which directly links the Clark County District Court and the hospital. At the time of admission to the hospital, the patient consent form, as well as the standing court order, permits the sharing of patient information between the hospital and the court. The cost of the videoconferencing equipment and large display screens at the facility are covered by state funds; equipment at the Court is purchased and maintained using county funds, and communication costs are shared expenses between the state and county. The technology has not spread to other court districts due to their sparse populations. In addition, the small number of defendants that are deemed incompetent to stand trial from these rural areas does not justify the expense to the court of establishing firewalls, secure lines, and purchasing and maintaining the necessary equipment.

Videoconferencing for Family Visitation

Montana

In 2013, to provide an alternative option to an in-person visit, the Yellowstone County Detention Facility in Montana implemented a remote visitation system for inmates and their loved ones.⁴⁷ Yellowstone County Detention Facility currently holds a large number of inmates and in-person visits were contributing to crowded lobbies and visitors waiting long hours. In-person meetings are also limited to one per person per week. Therefore, to improve the visitation process the facility developed and implemented the remote visitation program.

The remote visitation program allows for scheduled 30-minute visits via webcam for inmates to communicate with friends and family members. The remote webcam visits are unlimited as long as the user's fee is paid. Basically, the inmate connects with his/her friends and family through a Web browser, can see them through a screen and talk to them using a phone.

The direct benefit of the technology is the opportunity it provides to the inmate to communicate with friends and family members more often and at convenient times, all of which could impact the social connectedness outcomes for inmates. As an indirect benefit, the additional funds generated from the use of the technology will be allocated to programs for inmates. On the other hand, friends and family members need to have access to a computer, Internet connection, Web camera, and pay a fee for conferencing with the inmate. For the detention center, this technology brings new benefits such as decrease risk for recidivism; increased safety for inmates, staff, and visitors; jail staff could use their time more effectively; and the production of additional revenues.

⁴⁷ <http://www.govtech.com/public-safety/Video-Visitation-with-Inmates-in-Montana-Jail.html>

Nevada

The benefits of videoconferencing technology in Nevada have been extended to inmates of the Washoe County Detention Center. Using a state-of-the-art web visitation system known as [iWebVisit](#), visitors are able to conduct two-way remote video visitation using a computer webcam.⁴⁸ Family contact has been shown to be effective for reducing criminal justice recidivism.⁴⁹ A single visit reduced recidivism by 13 percent for new crimes and 25 percent for technical violations.⁵⁰

General population inmates in Washoe County are allowed up to two remote visits per day, seven days per week. Inmates in special mental health sections of the jail are limited to one visit per week on Fridays only. The benefits of video visitation are clear: the use of technology opens up visitation to friends and family members that may reside great distances from the jail. Lawyers are also able to use the system to meet with their clients. However, it also has its limitations. Often, the families of incarcerated people are some of the poorest in the country and the \$9.00 cost per thirty-minute session may pose a hardship. These families may also not have access to a computer with a webcam and the necessary bandwidth to conduct the visit. Some families who have successfully used the system report that it is more difficult for families to ensure or evaluate the wellbeing of their incarcerated loved ones via video than in-person or through-the-glass. They struggle to clearly see the incarcerated person with video visits and instead face a pixelated or sometimes frozen image of the incarcerated person.⁵¹ The literature suggests that making video visitation available as an option, but not a replacement for in-person visitation produces the best outcomes for the incarcerated individual.

Video visitation opens up visitation to friends and family members that may reside great distances from the jail

Video visitation in jails and prisons is currently being tried in more than 500 facilities in 43 states and the District of Columbia, using a variety of vendors.⁵² Information on its availability to inmates with mental illness is not available for each program.

⁴⁸ <http://www.iwebvisit.com/>.

⁴⁹ Petersilia, J. (2006). *When Prisoners Come Home*. New York, NY: Oxford University Press

⁵⁰ Minnesota Department of Corrections. (2011). *The Effects of Prison Visitation on Offender Recidivism*. St. Paul, MN: Minnesota Department of Corrections, p 27. Accessed July 18, 2016 from:

<http://www.doc.state.mn.us/pages/files/large-files/Publications/11-11MNPrisonVisitationStudy.pdf>

⁵¹ Rabuy B. & Wagner P. (2015). *Screening Out Family Time: The for-profit video visitation industry in prisons and jails*. Northampton, MA: Prison Policy Initiative. Access July 18, 2016 from:

<http://www.prisonpolicy.org/visitation/>

⁵² <http://static.prisonpolicy.org/visitation/Exhibit1.pdf>

Videoconferencing for Outpatient Services

Nevada Outpatient Competency Restoration Pilot Program

Following the success of the videoconferencing program between Clark County Jail and Lakes Crossing Hospital, Nevada recently started a pilot project to provide outpatient competency restoration services using similar technology in a rural part of the state. The pilot program was designed to allow individuals to take their legal process training classes via videoconference. The initial and final patient competency assessments are completed at the hospital, but the individual can avoid traveling 90 miles to the nearest facility to receive their training. Candidates for the pilot program are persons with intellectual challenges that do not require medications to restore competency. The program is in its early stages so data to evaluate its effectiveness are not yet available.

A Task Force to reduce jail wait times for detainees with mental illnesses began holding their meetings using video technology. The group includes the judge from the specialty competency court, representatives from the Clark County public defender's office, the Clark County district attorney's office, Lakes Crossing Center, NaphCare (the county detention center's health care provider), and others.

Videoconferencing at Re-Entry

New York

On average, each year in New York State, there are 3,500 releases from state prisons. Of these releases, 800 are classified as having a serious mental illness. Individuals with a serious mental illness in New York are more likely to have trouble transitioning back to the community with 67 percent being re-arrested and up to 50 percent of these inmates being homeless upon discharge⁵³. Responding to this problem, the New York State Office of Mental Health established a system to coordinate the re-entry of persons with serious mental illness from state prisons back into the community using an innovative technology.

The Central New York Psychiatric Center coordinates videoconference interviews between prison inmates with serious mental illness and housing providers prior to discharge

The video-conferencing project was designed to facilitate the discharge plan to the community for individuals with a serious mental illness that apply for mental health housing. It provides an opportunity for a dialogue between the inmate-patient and the community provider to determine if the community setting is a good fit.

⁵³ http://www.cucs.org/index.php?option=com_content&task=view&id=160&Itemid=110

The Central New York Psychiatric Center (CNYPC) of the New York State Office of Mental Health (OMH) is the intermediary between the correctional setting and the community provider and facilitates the interview process. CNYPC coordinates all tasks related to the application for housing and the interviews. These tasks include providing assistance completing housing applications, reviewing applications, sending applications to community mental health housing providers, preparing inmate-patients for housing interviews, and arranging the video-conference interviews between the inmate and the housing providers.

Video teleconferencing (VTC) units have been installed at each correctional facility with a mental health unit. OMH has facilitates provider access to VTC through regional OMH Field Offices or by providing VTC equipment to certain community provider locations. The process is simple:

1. An inmate-patient accepts re-entry planning
2. CNYPC re-entry coordinator applies for mental health housing for which the inmate-patient qualifies.
3. CNYPC coordinates the application for housing process.
4. CNYPC coordinates the interview.
5. CNYPC completes a consent form.
6. CNYPC facilitates the video-conference.

The most important benefit of this project is that it allows for face-to-face interaction to happen between the inmate-patient and the community provider. In this way, the inmate-patient can clearly and personally communicate his/her housing needs, and the community provider has an opportunity to directly meet the person applying for their housing and discuss the services provided. This process improves the chances that an inmate-patient releasing into the community will be accepted into housing prior to release, thereby reducing homelessness and improving linkage to community services.

In 2009, the Center for Urban Community Services began administering a Reentry Coordination System funded by the OMH. The Center reported that in 2009, 420 housing referrals were made and arranged for videoconferencing for 108 inmates; 79 inmates were placed into permanent housing. The Center has brought together 15 state correctional facilities, 69 New York housing programs, and more than a dozen forensic case management programs to help ensure that inmates with serious mental illness who are at risk of homelessness can successfully transition back to the community.

Benefits of Video Technology

Many benefits can be derived from the implementation of video-conferencing, telepsychiatry, or tele-health and can be categorized as benefits for inmates with a serious mental illness, benefits for the correctional system, and benefits for the community^{54,55}.

Benefits of Video Technology		
For inmates	For corrections	For the community
Maintain connection with loved ones	Increased commitment in programmatic activities	Facilitates re-entry planning
Re-build relationships	Reduction in negative behavior	Improve outcomes such as housing, community safety and recidivism rates
Build social support systems	Reduce costs	Facilitates cross-systems collaborations
Actively begin to form links with the community providers	Improve safety and security	Reduce safety concerns
Promote empowerment	Flexibility in scheduling visiting hours and expanding visiting opportunities	Reduce homelessness and in street living rates
Improve access to mental health care and lower the cost of providing such care	Supports the mental health of inmates	Reduce unemployment rates
Improve medical care	Reduced recidivism	Better management of inmates
Increase the number of visits	Reduced transportation costs and time in traffic	
Improve access to ancillary services	Reduce number of visitors	
Improve likelihood of engaging hard to reach individuals such as those living in rural areas	Reduce contraband	
	Jail staff can use their time more effectively	
	Generates additional funds	

⁵⁴ Deslich SA., Thistlethwaite T, Coustasse A. (2013). Telepsychiatry in Correctional Facilities: Using Technology to Improve Access and Decrease Costs of Mental Health Care in Underserved Populations. *The Permanente Journal*, 17(10), pp. 80-86. <http://dx.doi.org/10.7812/TPP/12-123>

⁵⁵U.S. Dept of Justice National Institute of Corrections (2014). Video Visiting in Corrections: Benefits, Limitations, and Implementation Considerations. Washington, DC. Access from: <http://dept.camden.rutgers.edu/nrcfci/files/NIC-Video-Visiting-Guide.pdf>

Limitations of Video Technology

As many benefits can be appreciated from the use of video technology, some limitations merit attention. Limited written documentation and outcome data was encountered while researching the exemplary cases featured here. While most of the programs provided some type of supporting information, the majority did not have accurate baseline or outcome data for comparison between before and after technology implementation. However, the focus of our research was not to examine the effectiveness of these technologies although these data could have shined some light on the costs versus benefits of using technology.

Implementation of new technology could involve specialized equipment not currently available in the facility, therefore becoming an added cost to facilities. To this one-time implementation fee it is necessary to add a maintenance fee, and staff time to support the use of the new modality and to preserve the longevity of the technology. None of the technology presented here has performed a cost-benefit or cost-effectiveness analysis of the implemented technology. In addition, the new technology could require new staff training protocols, which will add to the costs.

Utility of Video Technology

Videoconferencing technology is not just for rural areas looking for ways to overcome transportation challenges and staff shortages. Urban sites use videoconferencing for consultations and patient encounters to engage with a variety of professional staff, including attorneys, judges, health and mental health professionals. Furthermore, videoconferencing is an effective means to facilitate staff communications across providers and among multiple administrative agencies.

Tele-behavioral health programs report widespread client acceptance of using technologies like videoconferencing. In some cases, technology provides added comfort to clients who otherwise might be fearful and resistant to meet face-to-face.⁵⁶ There is some evidence that inmates seem to prefer using video technology because of increased access to mental health professionals.⁵⁷ As inmates have little privacy, it has been found that inmates' acceptance of and satisfaction with tele psychiatry remains high in comparison with face-to-face treatment.⁵⁸

A 2009 study with inmates in correctional institutions found that there is no significant difference in inmate's perceptions of the therapeutic relationship with mental health professionals, post-session mood, or overall satisfaction with services when using video

⁵⁶ HRSA Meeting Summary: Increasing Access to Behavioral Health Care through Technology. March 30, 2012. <http://www.hrsa.gov/publichealth/guidelines/BehavioralHealth/behavioralhealthcareaccess.pdf>

⁵⁷ Deslich SA, Thistlethwaite T, Coustasse A. (2013). Telepsychiatry in Correctional Facilities: Using Technology to Improve Access and Decrease Costs of Mental Health Care in Underserved Populations. *The Permanente Journal*, 17(10), pp. 80-86. <http://dx.doi.org/10.7812/TPP/12-123>

⁵⁸ Ibid.

technology versus traditional face-to-face engagements.⁵⁹ These findings held true when the treatment was related to general mental health and coping skills, or medication management. The findings validate the use of videoconferencing as an effective means to decrease the cost of transporting inmates to a court or other service setting, reducing mental health professionals' travel costs to the jail, all within a safe and secure environment while maintaining continuity of care.

V. Legal, Fiscal and Organizational Culture Issues to Consider

Throughout the research process to complete this report, some common themes emerged regarding the obstacles that programs faced which hindered implementation or progress. Privacy laws for behavioral health data, particularly the restrictions on disclosing substance use treatment information under 42 C.F.R. Part 2—are more complex than those applicable to general patient information and are often seen as obstacles to sharing data.⁶⁰ The ability to secure sustainable financial resources to invest in and maintain technological infrastructure takes a significant amount of motivation and persistence, and buy in from key decision makers will be an essential part of successfully implementing any new technology or process. In some case, programs were completely abandoned due to insurmountable hurdles. While these failed programs were not featured in this report, they can provide valuable insights into the common concerns that programs involving technology are facing.

Legal Considerations

The use of technology either through direct engagement with a client, or through information sharing about a client, warrants a discussion of information security and privacy. Clients have the right to demand that information about their mental illness, substance use, and health conditions remain private. At the same time, successful treatment is often dependent upon information sharing among service providers to maximize continuity of care. Similarly, cross agency data linkages can be critical to understanding population trends and designing effective programs and interventions to achieve positive public health and safety outcomes.

In 2010, the Council of State Governments' Justice Center prepared the report "Information Sharing in Criminal Justice-Mental Health Collaborations: Working with

⁵⁹ Morgan R, Patrick A, & Magaletta P. (2008). Does the use of telehealth alter the treatment experiences? Inmates' perceptions of telemental health versus face-to-face treatment modalities. *Journal of Consulting and Clinical Psychology*, 76(1). 158-162.

⁶⁰ Miller J, Glover R, & Gordon S. (2014). *Crossing the Behavioral Health Digital Divide: The Role of Health Information Technology in Improving Care for People with Behavioral Health Conditions in State Behavioral Health Systems*. Alexandria, VA; NASMHPD.

HIPAA and Other Privacy Laws,⁶¹ which was funded by Bureau of Justice Assistance. The report provides an understanding of the legal framework for criminal justice-mental health information sharing. The report contains a detailed legal analysis of when behavioral health care providers, law enforcement officers, courts, and jail staff are covered by Health Insurance Portability and Accountability Act (HIPAA), and when they can disclose and receive protected health information.

HIPAA's restrictions on sharing health information are often misunderstood, which has resulted in some entities misapplying the law in a far more restrictive manner than the actual regulatory language requires. The report makes the point that the legal framework governing information-sharing should not be seen as an impossible obstacle to criminal justice-mental health collaborations. Several programs have designed mechanisms to build successful relationships to exchange information. These approaches include, but are not limited to, developing procedures to obtain permission forms or court orders, contracting with business associates, and establishing data sharing agreements.⁶² To address apprehension surrounding participating in a shared dataset, a successful strategy used by the Camden ARISE project has been to simply share the power of data collaboration and the results that are possible. Camden ARISE staff strive to determine some topics that are important to the agency from which they are seeking collaboration, and then demonstrate insights that the data can bring.

Fiscal Considerations

Securing financial resources for new technology – both for initial investment and for ongoing maintenance - can be the largest hurdle for a new project. For many projects, the financial savings that will result from the adoption of the new technology will far surpass the cost. An example is the tremendous transportation cost savings realized by Nevada after the implementation of video conferencing technology (see page 29 for program description). But not all programs have financial savings that are easy to quantify. Additional strategies may be necessary to make the financial case for the program. The Federal Health Resources and Services Administration (HRSA) provides excellent guidance on how to secure funding for technology for behavioral health programs.⁶³ The HRSA recommendations are summarized below.

Consider starting with a pilot project. Full-scale start-up of a new technology may not be feasible when funds are limited. Begin with a smaller-scale project and use results to demonstrate efficacy in order to secure additional funding. By creating a manageable and smaller scale program, start-up costs can be reduced and the endeavor can be more

⁶¹ Petrila J. & Fader-Towe H. (2010). Information Sharing in Criminal Justice-Mental Collaborations: Working with HIPAA and Other Privacy Laws. Washington, D.C.: Council of State Governments. Accessed July 19, 2016 from: https://www.bja.gov/Publications/CSG_CJMH_Info_Sharing.pdf.

⁶² States and/or counties interested in developing similar processes or documents for their own jurisdictions should consult with counsel familiar with the relevant state and federal laws.

⁶³ HRSA Meeting Summary: Increasing Access to Behavioral Health Care Through Technology. March 30, 2012. <http://www.hrsa.gov/publichealth/guidelines/BehavioralHealth/behavioralhealthcareaccess.pdf>

affordable. Another approach is a step-wise startup to focus on funding requests for specific activities (e.g., equipment including videoconference equipment, IT support).

Explore grant Funding Options. At the Federal level, HRSA awards limited funds for demonstration projects.⁶⁴ The U.S. Department of Agriculture funds grants for telehealth equipment (for rural areas only).⁶⁵ SAMHSA's efforts in behavioral health information technology are aimed at advancing systems integration, strengthening the workforce, and developing best practices. SAMHSA provides guidance on incentives for technology infrastructure in behavioral healthcare, including identifying systems that are eligible for financial incentives.⁶⁶ The SAMHA Mental Health Transformation Grants and resources from the GAINS Center were cited by a few of the programs featured in these report.⁶⁷ At the state level, telecommunications contracts may exist via the state's Chief Information Officer or Telecommunications Director. The National Institute of Justice maintains a list of justice-related grant resources which are potential sources of funding for technology-related equipment.⁶⁸

Suggest cost sharing. The most successful partnerships are those where both agencies share the responsibility, along with the rewards. A common thread among the programs featured in this report is that costs are shared between the criminal justice and behavioral health agencies or between the state and the county. Each agency maintains the ability to tap into funding sources that are known to them, while suggesting creative strategies to fill a need. While the blending and braiding of funds prove to be a successful strategy to secure the fiscal resources necessary, one entity should assume primary responsibility for the maintenance of the technology to ensure that diffusion of responsibility doesn't occur and lead to the program's demise.

Embracing a Culture of Innovation

New technologies offers a wide range of benefits, from saving time to envisioning information in new ways. But even with careful planning, resistance to change may become a barrier to implementation. The best of intentions for a new or improved process can quickly be stifled unless the system is receptive to new ways of thinking, seeing, and doing.

Staff acceptance can be nurtured through the use of some proactive strategies. When the benefits of the new technology are clearly communicated, embracing the vision can help

⁶⁴ Federal Office of Rural Health Policy, Office for the Advancement of Telehealth :

<http://www.hrsa.gov/ruralhealth/telehealth/>

⁶⁵ US Dept. of Agriculture Rural Development, Distance Learning and Telemedicine Grants:

<http://www.rd.usda.gov/programs-services/distance-learning-telemedicine-grants>

⁶⁶ <http://www.samhsa.gov/health-information-technology/samhsas-efforts>

⁶⁷ SAMHSA GAINS Center for Behavioral Health and Justice Transformation:

<http://www.samhsa.gov/gains-center>

⁶⁸ National Institute of Justice Funding for Equipment: <http://www.nij.gov/funding/pages/equipment-funding.aspx>

an organization navigate the interim hurdles that must be overcome. Similarly, clear messaging about the reason for the change; for example regarding new equipment or job roles, can trigger positive reactions. People like to be informed early in the process, especially if their jobs may be affected. Rogers' classic Diffusion of Innovation Theory explains that about 15 percent of individuals are willing to embrace a new idea without much convincing. Find and engage these project champions early in the planning process to help spread the message regarding the benefits of the innovation.

When end-users are expressing resistance, it may be due to a real or perceived modification to established work processes or patterns of working relationships between people. There may even be an anticipated threat to job security or shift in power within or among organizations. In these cases, it may be helpful to communicate the potential of the new technology to reduce or eliminate redundant or excessive tasks by automating or streamlining workflow. More importantly, the envisioned benefit to the consumers of public services is a message that resonates. The potential of the new innovation to positively impact long-standing public issues through new collaborations among behavioral health and criminal justice partners can lead to a re-invigorated workforce.

New technologies require both time and money to implement, which means that buy-in from key decision makers will be an essential part of successful implementation. Decision makers may be more responsive to the investment if they perceive that the benefits of the technology will outweigh the financial and staff-time costs. Making a clear business case for the need for a new technology is key; when the need coincides with service system mission and values, administrators are more likely to be on board. The new technological innovation must be seen as producing a significant improvement over current procedures. The benefits must be perceived as so great as to be well worth the inevitable problems and costs associated with any change.

Remember that new ideas, procedures and technology involve risk and it is not possible to always succeed. Good decisions sometimes don't produce successful programs. A failed attempt to implement a new innovation can offer useful insights about where to improve next time.

VI. Summary

Throughout this paper, we have described innovative uses of technology to aid the collaboration of mental health systems and criminal justice systems in service to persons with mental health needs engaged with criminal justice systems. While the examples may have had a specific place within the Sequential Intercept Model, the technology is relevant and adaptable to other intercept points.

Health Information Exchange provides a technology platform to store and then utilize information on the health services of an enrolled population. A health information exchange combined with other data resources, such as arrest record and educational records, provides even more robust information on the population at risk and the current

and historical use of services. For a system primarily focused on custodial care and safety, the criminal justice system gains access to identifying at-risk populations and receiving targeted mental health services from the mental health system that will continue to serve the detainee after release. A health information exchange or an enhanced integrated data resource can help divert persons out of the criminal justice system prior to booking, access known service providers while detained, and link to community services upon release. Real-time or near real-time linkage of person-level records across these data resources provides greater information on the service patterns of the individual and assists with immediate treatment needs when detained, and continuing treatment throughout the detainment, and direct connection to aftercare upon release.

Identifying the complex needs of persons coming into the custody of the state (or county) is the foundation for acquiring needed mental health services. Collaboration with the local mental health service agency provides access to specific services, notably for treating mental illness. However, additional services are often required, particularly housing supports. Bed registries can provide real-time status of supports, which are further evaluated for appropriateness and level of supervision through a call to the provider. Formerly incarcerated individuals with or without mental illnesses will face exacerbated challenges if the social determinants that contributed to their criminal behavioral are not addressed. The most effective interventions for breaking the cycle of recidivism in the criminal justice system for persons with behavioral health disorders are those that target the broad set of individual and environmental risk factors, such as employment, education, housing, exposure to trauma, and poor health, that contribute greater risk of justice system involvement, while also attending to their mental health needs. Treatment for mental illness has entered the age of tele-conferencing. In addition to tele-psychiatry, general interviewing for assessments as well as targeted treatment dialogues enable the detainee to receive services without long wait times, and eliminates transportation time for both the detainee and the mental health professional. Once the technology has been established, it has additional uses such as mentoring and training staff at the jail, professional conferencing, family visitation, and on-line education of the detainee.

Many of the programs highlighted in this paper do not yet have formalized evaluation studies. A key consideration for an evaluation is the outcome that the program was designed to influence. In most cases, these program aim to reduce recidivism to the criminal justice system and increase continuity of care in the mental health system, which are not trivial matters. Numerous social determinants play a role in both of these outcomes along with policy changes that impact entry and exit from these systems. Evaluating the impact of a technology on these systems would also need to consider the social and political environments in which these systems operate.

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