Initial Evaluation of Colorado Jail Based Behavioral Health Services Executive Summary

The Jail Based Behavioral Health Services (JBBS) program is administered by the Colorado Department of Human Services, Office of Behavioral Health and is funded through House Bill 10-1352 and was expanded through Senate Bill 12-163 creating the Correctional Treatment Cash Fund. The Colorado Correctional Treatment Board oversees and allocates the funds pursuant to C.R.S. 18-19-103. The JBBS program provides resources for the county jails to address the needs of individuals with substance use disorders and co-occurring mental health disorders. Initiated in 2011 with twenty- four counties, the program is in its seventh year and has grown to 45 counties across the State.

This initial JBBS program evaluation examined both process elements of how the program is implemented across the counties as well as the outcomes and impact of the services provided.

Research Area	Data Sources
Target Population	Survey and interview data
Expansion Population	Survey, interview, JBBS and claims data
Implementation	Survey, interview, JBBS data
Outcomes	JBBS, claims data, criminal justice data
Resources	Survey and interview data

Five research areas were identified and the evaluation engaged a mixed-methods design incorporating qualitative and quantitative data sources. These sources included two separate surveys designed specifically for correctional staff and behavioral health providers (93% and 100% response rate respectively), interviews with a select set of counties, the JBBS program database, OBH encounter claims data, and criminal justice data.

Despite variation in program implementation, there are program findings that demonstrate stability and consistency in its delivery. Thousands of individuals have received screening for behavioral health conditions and more importantly the JBBS enrollee receives on average 26 hours of services. The average duration of services received has been stable across the life of the program even as the average length of stay and number of services has decreased over time.

The complexity of the JBBS population has also remained consistent with frequent co-occurring mental health and substance use needs. However, the counties are unanimous that individuals with mental health without a substance use condition are a priority population for services within the jail. Other concerns are individuals with trauma and risk for overdose.

The preliminary findings on JBBS program outcomes suggest effectiveness in connecting individuals to community based behavioral health services. The program also appears to be impacting recidivism by reducing crimes related to substance use and or reducing the risk for violent crime. Specific findings and recommendations are outlined by research area.

Research Area 1: Target Population	
Wide variation seen in protocols to screen inmates for behavioral health need and program eligibility.	Across all years, 21,423 inmates were screened, of which 69% were positive for SUD. Of those with a positive SUD screen, 73% were admitted to JBBS. How screening is conducted varies significantly across counties in who conducts the screening, who receives the screening, and whether additional screening is conducted.
Universal screening is rarely conducted.	Only two counties screen every inmate who enters the jail. Barriers to universal screening are consistent across counties.
Average length of stay in jail drives criteria for referral.	Three quarters of providers said the length of stay in jail informs the criteria for program referral. Half said behavioral capacity and staffing also impacts referral numbers.
Most view JBBS screening protocol as accurate in identifying individuals with substance use disorder.	While most providers viewed the JBBS screening as very accurate or somewhat accurate at identifying individuals with SUD, some had concerns about the timing of the screening and inmate rapport with clinicians impacting accuracy.
Recommendations for Target Population: **Conduct Universal Screening Pilot:** One method for checking the JBBS program identification of individuals with need is to pick a few counties (preferably a mix of urban and rural and large and small jails) and conduct universal screening for a period of time (2-3 weeks). The goal would be to screen everyone in the jail in snap shot of time and then compare the positive results in the pilot to the JBBS program routine screening rates. **Referral Source Tracking**: To further understand whether the type of referral impacts outcomes, begin to assign a referral source per JBBS client during the initial JBBS intake or assessment process. A consideration for the tracking of referral source is also to continue to identify whether there is a difference in engagement levels by inmates identified via different referral sources.	
Research Area 2: Expansion of Population	
Mental health issues are significant need for jail population.	82% of jail staff and 49% of behavioral health providers said if the program could be expanded, a priority population would be those with mental health concerns. Sixty-five percent of inmates screened for mental health scored positive for symptoms out of the 99% screened. JBBS program data and community claims data support the prevalence of mental health need in the JBBS population with consistency in the top 10 diagnoses over the course of the program.
Service gaps would need to be addressed to serve those with mental health issues.	For behavioral health providers, key service gaps included psychiatric medication management within the jails and alternative housing options upon release for inmates with serious mental illness. For jail staff, significant gaps were behavioral modification and evaluation.
Targeted services are needed for inmates with short jail stays.	Both behavioral health providers and jail staff identified the need for services at release and post-release to facilitate a successful community transition. Currently most JBBS programs focus on those with longer jail stays to allow for treatment completion.

Recommendations for Expansion Population: **Cross-Training**—Behavioral health providers and correctional staff have different kinds of expertise and a core strength of the JBBS program is the potential to expand knowledge, understanding, and expertise in treating a population with both behavioral health conditions and criminal attitudes and behavior. Recommend JBBS create a formal, more standardized element of training.	
Criminogenic Risk Training—Another need identified is improved understanding of criminogenic risk among community based behavioral health providers. Recommend funding existing trainings. **Defining Trauma Treatment**—The JBBS population appears to be increasingly identified with need for treatment of trauma with a growing trend of positive trauma screening. Providers interviewed for this evaluation had mixed views on the appropriate forms of treatment for trauma in jail settings. Recommend JBBS spearhead a workgroup to consider a treatment protocol for treating trauma. **Drug Testing Pilot**—It is difficult to firmly determine (even with screening) whether the JBBS program is identifying and accurately targeting services to inmates with SUD. One method for more firmly determining the degree of SUD in a county jail is to consider a period of time where drug testing is incorporated into the booking process. **Traumatic Brain Injury**—Although many counties did not have high population prevalence of traumatic brain injury there was some reported connection between veteran status in jails and traumatic brain injury. Recommend that JBBS program data be analyzed at an individual level to determine if JBBS clients with veteran status screen positively for traumatic brain injury.	
Research Area 3: Implementation	
Wait time between inmate referral and screening is increasing.	Across all counties, a trend analysis reveals a significant increase in the wait time between referral and screening, with an average wait of 4.8 days.
Counties differ substantially in contact with clients, types of services and duration of services.	Most contacts are in person, but some send clients more often to other service providers or have phone sessions. Not any one site offers the same set of services and/or all 37 types of services. Service duration ranges from less than one hour to 810 hours per JBBS enrollee with the state average being 26 hours of services per JBBS enrollee.
Average length of stay and number of services are down, but average duration of service has remained consistent over time.	The statewide average length of stay for JBBS has been decreasing, with a median of 62 days. Individual number of services per client has also dropped 42% from 2012-2017. However, inmates have consistently received around 26 hours of service in JBBS, including through group therapy.
All programs use evidence-based practices for treating SUD.	Across the programs, Cognitive Behavioral Therapies are implemented most often (88%), followed by models based in Mindfulness (68%), and Psychoeducation (60%). Variation between counties in specific therapies used was often more about who delivered the therapy.
The type of JBBS contract impacts program variation.	Contracts that include one jail and one behavioral health provider offers higher rates of case management whereas contracts with one jail and multiple providers delivers more treatment and has the shortest average length of stay.

Recommendations for Implementation:

JBBS Dose—A key variable for determining variation in programs and how those variations inform outcomes is the "dose" of services provided by the program. Programs vary in many factors informing dose such as service type (treatment, assessment, case management), duration of services, provider delivering services, etc. These are the core elements of what is provided to the JBBS clients. As a result, recommend tracking of these elements to ensure that the dose provided can inform future efforts to evaluate program outcomes (informing standardization of program elements).

Service Type—The findings indicate that the type of service and duration of services varies considerably across counties and program types. The analysis could be improved by understanding in greater detail what the JBBS programs are delivering in each category (e.g. treatment, assessment, case management) and how services may be tailored to specific sub-populations within JBBS.

Program Capacity—Recommend that for the future, a metric for program capacity be created that includes core elements such as: number of providers and provider type by month or quarter; number of new JBBS clients; number of ongoing JBBS clients (e.g., enrolled for more than 1 month); number of referrals to the JBBS program.

Family Involvement—The data suggest that families are rarely engaged in JBBS programming. As the JBBS program evolves, experimentation and emphasis on how to engage family members more when possible could be beneficial and could enhance program implementation.

Evidence Based Practice—An essential element of the implementation is the actual therapy delivered and this variable was not included in this evaluation. Future efforts could examine if therapy approaches are being implemented to fidelity; and examine the effectiveness of adaptations of the programs in a criminal justice setting; and determine if there are county variations that should be standardized to improve the overall success of the JBBS program.

Research Area 4: Outcomes	
Most clients are discharged successfully.	Statewide, approximately 83% of clients are discharged successfully, meaning they achieved goals or completed treatment up until release.
JBBS enrollees have low inappropriate service utilization in the community.	The rate of inappropriate utilization of community services upon discharge (e.g. ER utilization) has decreased from 4% in 2012 to 2% in 2017.
Recidivism resulting in jail or prison that involves alcohol and other drugs has decreased among JBBS enrollees.	The contribution of crimes involving alcohol and other drugs to recidivism has decreased since 2012. Recidivism has dropped 24%, from 83% of drug and alcohol related crimes resulting in jail or prison to 63% of these crimes resulting in jail or prison. This analysis was performed on a relative small sample size so has limitations.

Recommendations for Outcomes: **Track Critical Incidents**—Adding critical incident data to the JBBS program data or to jail based tracking information could provide important information on population need over time, JBBS program additions to target behaviors, and could potentially demonstrate that the JBBS program participants have reduced critical incidents when compared to the general jail population. **Treatment Success**—As the model evolves, recommend developing a robust measure of treatment success that can be used as an outcome measure. **Changes in Criminal Behavior and Recidivism**—A future evaluation should consider analyzing criminal justice data at least five years prior to JBBS enrollment and at least three years post JBBS discharge date. This will permit an analysis of the criminal pattern and the extent to which JBBS influence a change in criminal behavior. **Changes in Health Care Utilization**—The estimates on "inappropriate utilization" may be artificially low as a result of data limitations for this evaluation. By including physical health and Medicaid encounters in the analysis, a more realistic picture of utilization is possible.	
Research Area 5: Additional Resources	
Funding and training are needed to improve program effectiveness.	Correctional staff identified the need for additional funding for transition services, more staff, and more services/programs. Both jail staff and behavioral health providers cited the need for additional training and training resources for staff.
40% of organizations have a wait list for JBBS services	Waitlist size ranges from 2 – 60 individuals and time on a waitlist ranges from 1.5 – 8 weeks. Respondents cited the need for more staff, more space and more training/education resources to better serve the population.
Recommendations for Resources Needed: **Community Resources**—Consider innovative or creative methods for improving coordination of services for criminal justice population upon release. Needs identified included housing, residential treatment, and referrals for addressing social determinants of health. Consideration of JBBS interaction with Medicaid Regional Accountable Entities is a next step. Additional support could come from Colorado Senate Bill 17-09, Medication Mental Illness in Justice Systems which could provide support to pilots on health information exchange with criminal justice populations.	

Overarching Evaluation Recommendations

Program Components

Training for Behavioral Health Providers—In continuation of OBH efforts to enhance behavioral health training on working with criminal justice populations, ongoing training may be a central consideration for the future of the JBBS program. Specific training areas to consider include: Criminogenic risk factors and Evidence based practice for criminal justice populations.

Measurement Based Care—Nationally, there is a movement within behavioral health care to engage in measurement based care.[1,2] Measurement based care engages the use of validated screening tools as a form of measurement of treatment progress. The JBBS program is already engaging in validated

[1] Fortney, J.C., Unützer, J., Wrenn, G., Pyne, J.M., et al. (2017). A tipping point for measurement-based care. *Psychiatric Services, 68*(2), 179-188.
[2] Fortney, J., Sladek, R., & Unützer, J. (2015). Fixing Behavioral Health Care in America: A national call for measurement based care in the delivery of behavioral health services. *The Kennedy Forum.*

screening and tracking patient progress through the JBBS program data. Adding measurement of symptom improvement would quickly enhance this data as well as the quality of care delivered.

Psychiatric Medication—A consistent need identified by programs is access to psychiatric medication for treatment of mental health symptoms (particularly psychosis and mania). JBBS could be an avenue for exploring the importance of this component of care. Specific recommendations include consider adding psychiatric medications as a standardized program element and consider conducting a more formal pilot on the impact of psychiatric medications on outcomes.

Short-Term Stays and Pre-Sentence Populations—Throughout the evaluation, distinctions were made about population needs for those with a short term stay or presentence status and those who have been sentenced and are in jails for more considerable time periods. Based on the importance placed on this population throughout the qualitative data, a recommendation is to consider developing an alternative JBBS approach for pre-sentence populations.

JBBS Staff Turnover—From an observational perspective throughout the evaluation, it was apparent that the JBBS program as considerable turnover in behavioral health providers. The turnover may be impacting the program in small or significant ways. As a result, recommend developing a workgroup to reduce JBBS turnover and consider a method for tracking turnover and caseload size in the future.

Data and Evaluation

Logic Model and Theory of Change—The JBBS program is at a point of stability with multiple years and counties deeply invested in the program and its impact. It is a good time and opportunity to develop a theory of change and a logic model.

Motivation and Engagement Measure—Many of the programs described the individual's readiness for change or engagement as central to effectiveness of the program. Recommend adding a readiness measure to the screening process to help identify a baseline score of engagement.

Qualitative Analysis of Program Components—This evaluation highlights the variability of JBBS program implementation. Recommend as a next step conducting a qualitative assessment of program differences at a more granular level. For example, conduct extensive interviews and site visits to see core elements of the JBBS program in action and the variation across counties. The assessment would further refine a list of elements for standardization and begin to demonstrate what elements drive outcomes.

Client Factors—At the center of the JBBS program is the incarcerated individual receiving services. This evaluation was unable to account for individual differences beyond basic demographics and their level of risk score. As a result, recommend that future evaluations incorporate client factors and that additional client factors be considered in the JBBS database.

JBBS Electronic Medical Record—The JBBS database is an incredible foundation for the program and has captured JBBS data since the program began. However, long-term it may be more useful and effective for the program to shift from a database to an electronic medical record to capture more information about client factors, treatment specific components of care, and to support other functions such as reporting and shared treatment planning.

Limitations of the Evaluation

Many data points suggest that the JBBS program is a strong program having an impact on inmates with behavioral health conditions. However, there are limitations in the degree to which this initial evaluation

could clearly demonstrate the effectiveness of the services. As an initial program evaluation there are numerous limitations to the findings and conclusions which is consistent with early evaluation efforts which are often best suited to provide descriptive data about the program as well as identify potential metrics that could improve more quantitative and robust results.