Effects of Access to Mental Health Services Following Release from Custody

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On my honor as a University Student, I have neither given nor received unauthorized aid on this assignment as defined by the Honor Guidelines for Thesis-Related Assignments

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***Abstract*—About a third of current inmates in the United States prisons and jails suffer from severe mental illness (Collier, 2014). For most of these inmates, their untreated mental health needs contribute to their return to custody within the criminal justice system. A 2011 study reported that approximately 68% of inmates with an untreated mental illness and substance abuse diagnoses return to custody at least once within 4 years of the initial release, compared to 60% of those who do not suffer from either mental illness or substance abuse diagnoses (Bronson et al., 2017). This project extends over a decade of prior research examining current mental health services available to those released from the Albemarle-Charlottesville Regional Jail (ACRJ). The primary objective of this project was to identify individuals within the ACRJ, which serves jurisdictions in Charlottesville, Albemarle, and Nelson County who were recommended for services following screening through the Brief Jail Mental Health Screener (BJMHS) to answer questions surrounding the return to custody rate of those linked vs not linked to services.**

To examine the demographics of inmates screened, types of charges, and length of stay in the criminal justice system, data sets were obtained from Region Ten Community Services Board (R10), ACRJ, Offender Aid and Restoration (OAR), and the Thomas Jefferson Area Coalition for the Homeless (TJACH) after each member of the team completed a training on protecting personally identifiable information (PII) and signing a non-disclosure agreement (NDA). The research team analyzed 60 months of data spanning from July 2015 through June 2020. The data include individuals booked into ACRJ and individuals who received mental health, substance abuse, and intake/access/emergency services from R10. The data from ACRJ, the BJMHS, and R10 were merged to form a single data set compiling relevant information for each individual in ACRJ, such as booking details, BJMHS screener scores, and services received from R10.

According to the merged data, of the individuals who took the BJMHS when they were booked into ACRJ, 26% screened in, meaning their BJMHS results indicated they should be referred for further mental health evaluation. The team analyzed the cohort of individuals who screened-in and were available to receive services from R10 following their release from custody. The key findings and outcomes of the study included:

- **From the ACRJ dataset from 2015 to 2019, 913 individuals screened-in for referral to mental health services. This is 26% of the total inmates who were screened at ACRJ.**
- **Individuals who received services from R10 were more likely to return to custody (19%) within 12 months than screened-in individuals who did not receive these services (11%).**

Keywords—Community Health Services, Criminal Justice, Mental Health, Severe Mental Illness

I. Introduction

Despite the rapidly growing U.S. prison and correctional population, there has been little to no empirical data generated on the mental health needs of inmates. The very nature of incarceration, including bookings into the jail, often re-

traumatizes people suffering from mental illness. In the late 1900s, health care in correctional settings underwent unprecedented changes. In 1976 the Supreme Court case Estelle v. Gamble ruled that withholding medical care from prisoners was cruel and unusual punishment and a violation of the Eighth Amendment. The Ruiz v. Estelle (1980) decision instituted six criteria of an appropriate system of mental health care:

- A program for screening and evaluating inmates to identify those with mental health needs
- Treatment and interventions beyond supervision and segregation
- Treatment by trained professionals to identify and provide individualized treatment to treatable inmates suffering from serious mental disorders
- Complete and confidential records of the mental health treatment process
- Appropriate medication practices
- Program for the identification, treatment, and supervision of inmates with suicidal tendencies.

Since then, mental health services and basic screening procedures have been a necessary component of medical care within correctional institutions. Despite this, incarceration of individuals with mental illness in the United States is on the rise. Reports from the Department of Justice in 2006 show that 64% of jail inmates suffer from some kind of mental illness or problem linked to mental health [1]. This indicates an increase from the 1998 national study that found only 16% of local jail inmates reported a mental illness [1]. The same national study reported that only one in six jail inmates suffering from mental illness receive the necessary treatment following intake.

The Region Ten Community Services Board (R10), Albemarle-Charlottesville Regional Jail (ACRJ), Offender Aid and Restoration (OAR), and the Thomas Jefferson Area Coalition for the Homeless (TJACH), interact through the Albemarle-Charlottesville Evidence-Based Decision Making (EBDM) Policy Team, where regular monthly meetings are held to discuss issues in the criminal justice system. These agencies cooperate to link mental health services with inmates that indicate a need for mental health services. The University of Virginia research team partnered with these local criminal justice agencies and Community Service Providers (CSPs) to share data under an approved Institutional Review Board (IRB) protocol and related non-disclosure agreements. Through analysis of merged data, the research team identified the outcomes of the mental health programs as they relate to inmates released from ACRJ and linked to mental health services at R10. This project provides a detailed look into the demographics of inmates that screened-in versus screened-out, the type of charges linked to inmates returned to custody (RTC), and the length of stay (LOS) of those RTC (screened-in versus screened-out).

The primary objective of this project was to identify the individuals within the Charlottesville criminal justice system who were recommended for services following screening through the Brief Jail Mental Health Screener (BJMHS), to answer question surrounding the RTC rate of those linked versus not linked to services.

II. METHODOLOGY

A. Project Scope and Resources

To examine the demographics of inmates screened, types of charges, and LOS in the criminal justice system, data sets were obtained from each of the four local criminal justice agencies and community organizations in the Charlottesville area. The data provided by the agencies were cleaned, merged, and then analyzed. The data owners included ACRJ, OAR, R10, and the TJACH. The data also contained results from the BJMHS, which is a validated eight-question screening instrument that identifies whether an inmate should be referred for further evaluation for severe mental illness. The BJMHS screening is designed to identify individuals who may be suffering from severe mental illness, including severe chronic depression, bipolar disorder, and schizophrenia.

This research extends work completed in previous years by research teams at the University of Virginia. Previous work focused on similar data from the Charlottesville area that spanned the 48 months from July 2015 to June 2019 [2] and 30 months from July 2015 to December 2017 respectively [3]. Key findings from the past years found that 28% of all inmates screened-in. Of those screened-in, 69% of them were available for linkage; 63% of those who were available were linked to R10 for further mental health services [2]. It also identified demographic differences and treatment linkage, which provided a detailed understanding of metrics for the LOS, booking frequency, and probation success as related to mental health referral and linage to treatment. Previous teams focused on the metrics outlined to track individuals as they moved through the agencies studied.

The study in this paper focuses on the effect of the mental health services provided to the inmates, using RTC as the primary metric for evaluating outcomes. The project also provides a detailed look into the demographics of inmates screened-in versus screened-out by the BJMHS, the type of charges linked to inmates that RTC, and the LOS for screened-in versus screened-out individuals who RTC. In particular, the research team examined the sequence of events to determine the effect of mental health services provided following release on the likelihood of an individual RTC within the next year.

The research team interviewed data owners to discuss their interests and needs and gathered additional data beyond what was used in previous studies. The team focused specifically on understanding the resources provided to inmates, the screening process at BJMHS, and establishing a connection between individuals in the ACRJ data who were linked to services.

B. Data Acquisition and Merging

To ensure confidentiality when working with the data, non-disclosure agreements were established between each of the participating agencies and the research team. Each team member completed training on how to protect personally identifiable information (PII) and to abide by the Health Insurance Portability and Accountability Act (HIPAA) provisions. Data sets containing PII or HIPAA-protected information were

secured on a remote virtual machine following the University of Virginia Institutional Review Board (IRB) approved protocol. Data sets were then accessed by the research team through a Virtual Private Network (VPN) set up specifically for the project. All data moved from the secure server were de-identified on the secure server in accordance with IRB protocols before analysis.

The research team analyzed data that spanned 60 months from July 2015 through June 2020. The data included bookings into the ACRJ, and individuals who received mental health or substance abuse services from R10. The ACRJ data set comprises all unique booking events and corresponding information such as gender, race, age, crime severity, and locus of release. Each booking event is identified by a unique booking number. Throughout the study, the data were grouped to create a set of all unique individuals, so that individuals with multiple booking events and interaction with multiple agencies could be identified. Data from R10 consists of treatment information for all services provided at the community agency.

Data from ACRJ, the BJMHS, and R10 were merged to form a single data set compiling relevant information for each individual in ACRJ, such as booking details, screener scores, and services received from R10. First, a unique identifier was created for each individual in ACRJ using their last name and date of birth, which were the only values that were present across all of the data sets. From there, the team searched for the unique identifier in R10 and BJMHS to merge all of the relevant data. The team then used the unique identifier in each data set to extract any desired corresponding values such as their screener score and the type of service they received.

C. Research Goals and Analysis

The primary objective of this project was to identify the individuals within the three ACRJ jurisdictions Charlottesville, Albemarle, and Nelson who were recommended for mental health or substance abuse services following screening through the BJMHS to answer questions surrounding the RTC rate of those linked vs not linked to services. The primary cohort analyzed were individuals in the ACRJ database who were released from custody within the 48 months from July 2015 through June 2019 with addresses located within the R10 service area, which includes Albemarle, Charlottesville, Fluvanna, Greene, Louisa, and Nelson County areas. The cohort only included those who were released from custody; that is those who were not serving parts of their sentence on the weekends (weekenders) or transferred to another jail or the Department of Corrections. From the individuals released from custody, a sub-cohort was established of those who were screened by BJMHS and identified as either requiring further mental health evaluation or not requiring further mental health evaluation. Fig. 1 shows how the data set was parsed to identify the cohorts who were linked or not linked to services. These cohorts were separated into those with mental health evaluation/treatment needs who were available to be linked vs. not linked to mental health services. These two cohorts were then analyzed to determine any differences in the following:

- Dosage of treatment provided.
- Diagnosis type and services provided.
- Time since release
- The time between release and RTC
- Cause of their RTC (Example: felony, misdemeanor, probation, etc.)

From the data obtained, the questions asked to answer the primary objective were:

- Do individuals who receive Region Ten services RTC at the same rate as those who are not linked to services?
- What is the effective mean linkage required in reducing the RTC?
- What are the causes of RTC, and do they matter?
- Does time since release from custody matter?
- Does dosage or service type matter in reducing the RTC?

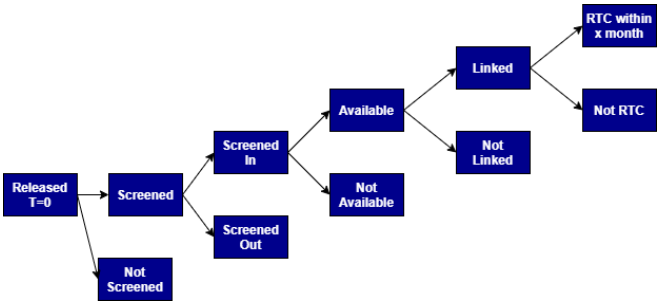

Fig. 1. Flow of how the primary cohort for the data was obtained.

III. RESULTS

In analyzing the factors that affects RTC rates, four distinct types of individuals were identified. Type-A individuals are those that screened-in, were linked to services at R10, and did not RTC within 12 months of receiving services. Type-B, individuals screened-in, were linked to Region 10 services but returned to ACRJ within 12 months of receiving services. Type-C individuals screened-in, were not linked to R10 and did not RTC within 12 months of their release. Finally, type-D individuals are those who screened-in, were not linked to R10, and RTC at ACRJ within 12 months of their release. Fig. 2 below illustrates the percentages of individuals who screened-in within the R10 service area who were linked to R10 and RTC within 12 months of receiving the service (Type-B individuals), and how this proportion changed year over year. As seen in the

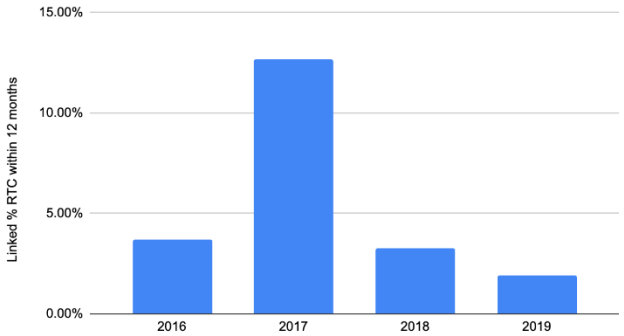

Fig. 2. Shows the percentage of linked individuals who returned to custody within 12 months from 2016-2019

chart, the proportion of the individuals who received services and RTC decreased starting in 2018.

A. Return to Custody (RTC) for ACRJ

Of the 3,556 individuals who took the mental health screener in ACRJ from 2015 to 2019, 913 people (26%) screened-in for a referral to mental health services, and 2,643 (74%) were screened-out, meaning they did not require further mental health evaluation as shown in Fig. 3.

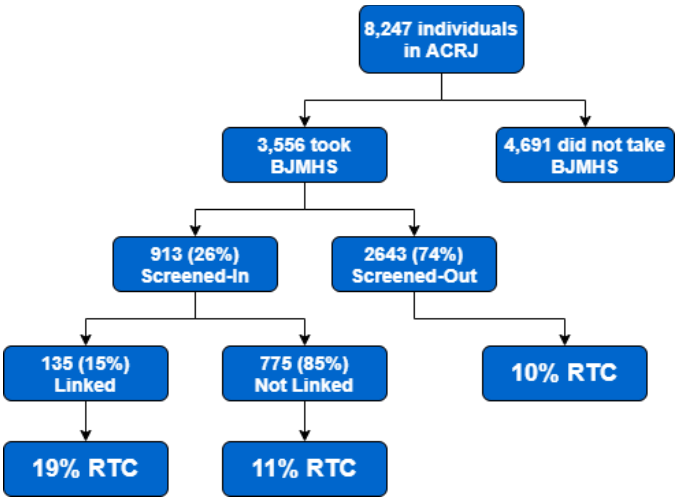

Fig. 2. Shows the breakdown of ACRJ data, from the unique individuals identified to the percentage of individuals RTC within 12 months.

Among the 913 individuals who screened-in on the BJMJHS, 13% RTC within 12 months of their release as shown in Fig. 4. This proportion is not significantly different from that

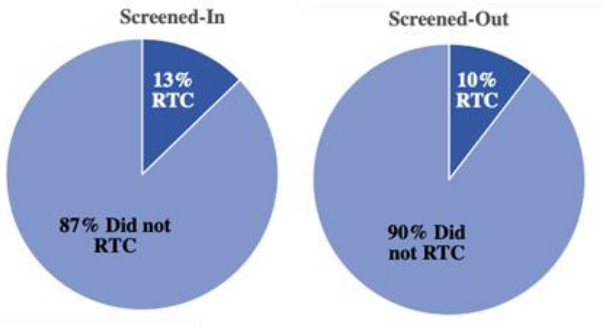

Fig. 4. From the cohort who were screened, 13% of the individuals that screened-in RTC within 12 months while 10% of individuals screened-out RTC.

Fig. 5. Shows 19% of individuals who screened-in and were linked, RTC within 12 months; compared to 11% of individuals who were not linked to services' RTC within 12 months.

of the screened-out population, which had 10% of individuals RTC within 12 months of release as also shown in Fig. 4.

Among this group, as seen in Fig. 5, 19% of the individuals RTC within 12 months of receiving the R10 service (Type B). The subset of individuals who screened-in for further mental health evaluation but were not linked to any services at R10 after release had a lower proportion (11%) RTC within 12 months of their release from ACRJ as in Fig. 5.

Among the screened-in individuals who RTC between 2015-2019, 40% were in the 18–30 year age range, 26% were between 31 and 40 years old, 17% were aged 41-50, and 17% were above 51 years old as shown in Fig. 6.

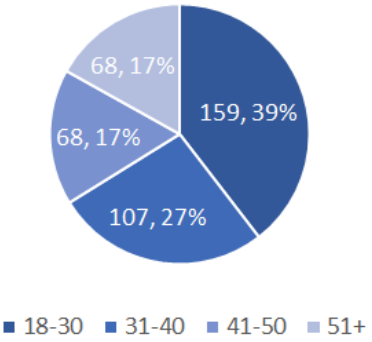

Fig. 6. Shows the breakdown by age of those in the screened-in cohort who returned to custody. Of the cohort, the largest group returning to custody are between the ages 18-30

Within the same group, 36.8% of those who RTC identified as Black/African American, 62.9% identified as White, 0.2% identified as Asian, and 0.2% were identified as Unknown in the data as shown in Fig. 7. By gender, 75% of those who screened-in and RTC were males, and 25% were females as shown in Fig. 8. Similar trends were observed among those who screened-out and RTC.

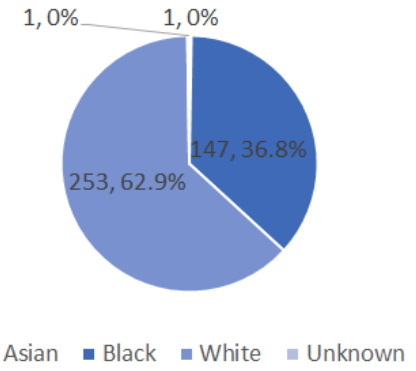

Fig. 7. Shows the breakdown by race of those in the screened-in cohort returning to custody.

Furthermore, we investigated the LOS for the RTC screened-in cohort versus screened-out. 30.6% of those administered the screener RTC at some point between 2015 and 2019. As seen in Fig. 9 below, inmates who were administered the screener and did not RTC had a shorter LOS (Average: 40.23 days, Median: 3.83 days) than inmates who were administered

the screener and did RTC (Average: 50.59 days, Median: 22.81 days).

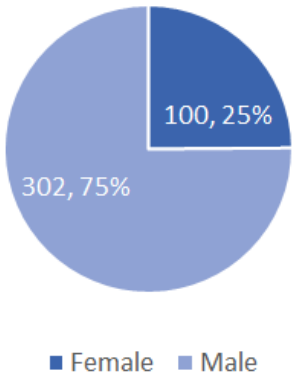

Fig. 8. Shows the breakdown of those RTC by gender with males accounting for the majority of those RTC.

The median LOS for inmates that RTC and screened-in (Average: 52.92 days, Median: 28.45 days) was significantly greater than those that RTC and screened-out (Average: 49.72 days, Median: 21.40 days), as seen in Fig. 10.

Inmates Administered the Screener		
	Average LOS (in days)	**Median LOS (in days)**
Screener, RTC	50.59	22.81
Screener, Not RTC	40.23	3.83

Fig. 9. Shows the average and median length of stay for both the individuals that received a screener and RTC and those that did not RTC.

Inmates Who Screened In and Out		
	Average LOS (in days)	**Median LOS (in days)**
Screened-In	52.92	28.45
Screened-Out	49.72	21.40

Fig. 10. Shows the average and median length of stay for both the individuals that screened in and screened out.

IV. IMPLICATIONS AND CONCLUSION

In summary, out of the individuals screened by the BJMHS, 26% (913 individuals) screened-in for a referral to further mental health evaluation, and 74% (2643 individuals) screened-out. Among this cohort of individuals who took the BJMHS, the proportion of the individuals who screened-in and RTC within 12 months (13%) were not statistically different from the people who screened-out and RTC (11%). The screened-in rate for inmates RTC is similar to that of the overall ACRJ screened-in cohort. Of the individuals in ACRJ that took the screener, 26% screened in (Fig. 3). Of the cohort that RTC and took the screener, 27.23% screened in. This suggests that there is no additional likelihood of screening-in as a result of an RTC and provides support for the observation that serious mental illness does not place a former ACRJ inmate at increased risk of RTC.

Those who RTC after a previous ACRJ stay in which they received a BJMHS tend to have longer lengths of stay on their prior incarceration event than those who do not RTC and that difference is statistically significant. This suggests an association between longer lengths of stay and the likelihood of RTC at a later date. The data also showed that a higher percentage of people who were linked to R10 services RTC than individuals who were not linked to services.

Over the past six years, this research effort has analyzed the screened-in cohort at ACRJ to help inform decision-makers on the best ways to serve individuals in need of mental health services. With the evidence-based analysis, the EBDM team can make informed decisions regarding this population. The research findings reported show the relationship between screened-in versus screened-out to RTC. The future work includes compiling a larger database that includes more comprehensive information regarding the mental health services provided. The more comprehensive data will be a basis for future research investigating questions such as what percentage of those who screened in had mental health services outside of R10, what are the differences between R10 services and other services in the area that could lead to a higher RTC rate for those receiving R10 services, and look into the reason for the higher percentage of people who were linked to R10 services RTC than individuals who were not linked to services.

ACKNOWLEDGMENT

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