Potential Reliability Measures for the Proposed Study of the Justice and Mental Health Collaboration Program

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Introduction

This review is linked to the evaluation of the Resource Reentry Center (RRC) and a separate but connected evaluation of the federally funded Bureau of Justice Assistance Justice and Mental Health Collaboration Program (JMHCP). This relationship between the RRC and JMHCP has been described elsewhere and is not repeated here.

Additionally, the data we are seeking to obtain is part of a federal court order that requires the contractor providing medical and mental health care to inmates at the MDC to share with the ISR the patient records and other Protected Health Information (PHI), as designated at 45 CFR § 160.103 and NMSA 1978 § 43-1-3, which the Institute for Social Research needs to conduct any studies on behalf of the County Defendants. To date the ISR has not received these data.

The overall goal of the JMHCP is to provide case management and services that achieve the following:

1. Reduce the number (and percentage) of people who have mental illnesses who are booked into jail.
2. Reduce their average length of stay in jail.
3. Increase the percentage of people who have mental illnesses who are connected to treatment.
4. Reduce their recidivism rates.
5. Decrease the number of visits to hospital emergency departments.

To study the implementation and effectiveness of the JMHCP and the separate, but connected, evaluation of the Resource Reentry Center (RRC) we have completed a variety of tasks. This includes a review of data needed to conduct a study of the JMHCP such as data maintained that documents the clients served and services provided by JMHCP funded case managers who work at the RRC and data maintained by the County contracted medical provider at the Bernalillo County Metropolitan Detention Center (MDC). This includes a series of validated screens that can be used to measure the risk to recidivate posed by inmates defined as a new booking into the MDC; the needs of inmates as measured by validated screens for mental health, substance use, alcohol use, opioid risk, and suicide risk; and the services received by inmates while confined in the MDC. Subsequent to the reports detailing the data limitations of available medical data from the Metropolitan Detention Center (MDC) and service data from the Resource Reentry Center (RRC), this report describes the projected next steps in the proposed study of the Justice and Mental Health Collaboration Program (JMHCP).

Background

In October 2020, a brief report entitled *Preliminary Review of Administrative Data for the Proposed Study of the Justice and Mental Health Collaboration Program* was completed that detailed the current database utilized at the RRC. A 100 client sample of individuals who were seen by JMHCP-funded staff or case managers was constructed. The sample was linked to the case management data from the RRC and any services by staff members. It was determined this historical data is not sufficient to identify clients who are receiving services and what types of services are received.

In November 2020, the *Review of the Metropolitan Detention Center Data and Sapphire Data for the Proposed Study of the Justice and Mental Health Collaboration Program* was submitted to Bernalillo County Department of Behavioral Health Services. This report detailed the difficulties in extracting client/inmate data that is linked to clinician visits, psychiatrist visits, or historical and oftentimes, current, diagnoses. We reported the only method to export data would be a manual review of individual clients, which would be time consuming and possibly unreliable.

In tandem with this report we have completed a review of receiving screening data from the MDC. Each individual who is booked into the MDC is screened prior to booking and, as mentioned above, this screening includes a battery of validated screening tools. Among other questions and validate screens, the form includes four validated screens used to measure three dimensions of risk: Proxy Risk to Recidivate Screener (Proxy) to measure criminogenic risk; Drug Abuse Screening Test (DAST-10) and Alcohol Use Disorders Identification Test-Consumptions (AUDIT-C) to measure substance use risk; and the Brief Jail Mental Health Screen (BJMHS) to measure mental illness risk. Responses to the screens correspond to a risk level of low, medium, or high on each dimension, and the dimension levels are combined to generate a score on the risk-needs framework ranging from 1 (lowest risk) to 8 (highest risk). The report entitled: *Justice and Mental Health Collaboration Program Risk-Needs Framework Scores and New Bookings Alignment Review* documents this review. In our comparison of the risk framework to the Proxy tool we found that preliminarily the Proxy does a better job of predicting new booking risk.

We are also completing a brief review of receiving screening form data that will not result in a report. This review consists of a within assessment and between form consistency check. This check looks at the reliability of the data collected by analyzing and comparing data within the receiving screen form and between receiving screening forms.

The within check includes analyzing the data for logical and consistency errors. For example, the age category selected in the Proxy should match the actual age of the person being screened. Our within check compares the selected age category to the actual age of the individual to confirm they match in this way. In our review a match did not occur in 2.8% of the analyzed sample of slightly more than 31,000 receiving screen forms. We also checked the AUDIT-C for logical consistency errors. For example, a respondent who indicates the "Never" drank during the last year should also respond "Never" when asked how often they had 6 or more drinks during the past year. In 2.4% of the sample these logical errors existed. A review of the DAST-10 found 1.4% of the sample had a logical error. The within receiving screening form did not find sufficiently large errors to present an issue. The between check has not been completed but will include reviewing the data for logical and consistency errors. For example, this will include reviewing the age of individuals across multiple bookings for which there is a unique receiving screening form for each booking in the 17-month sample time frame (February 2019 – June 2020). In this time frame 32.2% of the individuals were booked into the MDC 2 or more times (mean 1.6 bookings) with one individual having 28 bookings and 28 corresponding receiving screening forms. If this review results in findings that impact the reliability of the receiving screening form those results will be presented with recommendations.

This brief report emphasizes our preliminary review of individual level data maintained by the program with the goal of assessing the feasibility of conducting a study to evaluate the impact of the program on clients.

This brief report provides a description of potential next steps focused on how the receiving screening form data is being used and the reliability of the information being collected to create the risk framework score and the receiving screening data in general

Testing Reliability

There are a handful of measures we are suggesting that could be used to study the reliability of the data used to create the risk score.

One option, though perhaps not feasible given the COVID-19 pandemic, is observations of the receiving and screening process at the MDC. This would include, though not limited to: observing staff administering the tool to newly booked persons, observing the manner in which data is recorded, referral/handoff procedure for anyone requiring further medical or mental health care, and reviewing forms, data collection procedure, or documentation involving the same. This would be compared to best practices and current policy and procedure regarding screening.

A second option is to more completely understand who administers the screening including their training and how the MDC and Centurion use receiving screening form information in their business practices. This includes the number of staff who administer the form and perform the screening. A preliminary review conducted by ISR staff used data exported from Sapphire found from September to November 2020, there were 29 staff members who administered 4,297 screening tools. Table 1 and 2 below display the number of staff members by number of screening tools that were administered in the three-month period.

In September, there were 1,649 screening tools administered and 1,666 bookings. In October and November, the number of bookings decreased to 1,421 and 1,227, respectively and the number of screenings administered decreased to 1,419 and 1,229, respectively.

Table 1. Receiving Screening Frequencies by Month September to November 2020

Month	Screenings Administered	Monthly Bookings
September	1,649	1,666
October	1,419	1,421
November	1,229	1,227
Total	4,297	4,314

Table 2 displays the number of screenings administered by staff member in the three-month period. Sixteen staff administered the form most frequently - 4,101 forms out of 4,548 (90.2%). The remaining 13 have administered 447 (9.8%) screening form. The title for each staff member is also displayed in Table 2. Staff who have administered the screening in the last three months are either a Registered Nurse (RN) or Licensed Practical Nurse (LPN). Of the 29 staff members, there were 15 LPNs who

administered the form and account for 2,728 forms out of 4,548 (60%). The remaining 14 staff members are RNs who account for 1,820 forms out of 4,548 (40%).

The number of staff assigned to administer the screening form is important as it relates to inter-rater reliability, or how different staff rate the same individual. As the number of the staff increases, so does the room for error.

Table 2. Receiving Screening Frequencies by Staff Member September to November 2020

Staff	Staff Title	Frequency
Staff #1	LPN	15
Staff #2	LPN	502
Staff #3	RN	460
Staff #4	RN	121
Staff #5	LPN	388
Staff #6	LPN	28
Staff #7	RN	10
Staff #8	LPN	271
Staff #9	LPN	98
Staff #10	RN	137
Staff #11	LPN	117
Staff #12	LPN	212
Staff #13	LPN	46
Staff #14	LPN	105
Staff #15	LPN	340
Staff #16	RN	407
Staff #17	LPN	65
Staff #18	RN	54
Staff #19	LPN	1
Staff #20	LPN	266
Staff #21	LPN	274
Staff #22	RN	2
Staff #23	RN	29
Staff #24	RN	140
Staff #25	RN	3
Staff #26	RN	247
Staff #27	RN	1
Staff #28	RN	95
Staff #29	RN	114

A third option and connected to option two is to conduct a survey of staff who administer the screening. This could be used to help us better understand from the perspective of staff their familiarity with the screening process and form, how the form is administered, the utility of the form, and how the information is used.

Fourth, a reliability test could be conducted to study how different staff rate the same individual. The reliability assessment is designed to study the reliability measured as the degree of consistency in the decision-making process, of the revised forms using an inter-reliability assessment. This is a critical

component of a process evaluation. Inter-rater reliability refers to consistency among raters in reaching similar classification decisions when using the same criteria. Having different classification officers classify the same inmate can test inter-rater reliability.

Intra-rater reliability refers to an individual rater's consistency in using classification criteria over time. Having the same classification officer reclassify the same prisoner on several dates can test intra-rater reliability. Both inter-rater and intra-rater reliability are important to ensure that the system is being implemented as designed. If the level of reliability in the classification decision-making process is low (i.e., less than 80 percent), then the classification system will have little or no validity and will be unlikely to have a positive impact on prison operations and safety.

Conclusion

We have found electronic data from the RRC is incomplete and electronic health record data from the medical contractor (Centurion Health) electronic health record (EHR) has not been made available. Our preliminary manual review of the EHR data indicated there may be quality assurances (how a process is performed) and quality control (related to the quality of information) issues that impact the data EHR data. We hope to further explore this issue in the future. We have noted in previous reports that the lack of complete and reliable data means it is not possible to conduct a historical study of the JMHCP. We have recommended a prospective study for this reason and because of the change in early 2020 in which the case managers funded by the County using JMHCP funds became County employees as well as the services provided by the previous JMHCP funded case managers did not match to what was proposed. A prospective study will focus on the County employed case managers and allow more uniform data collection. Quality assurance, quality control and how the program is implemented will also impact a future prospective study of the RRC and JMHCP if any relevant issues are not resolved

As described in the introduction we have completed a review of receiving screening data from the MDC. Each individual who is booked into the MDC is screened prior to booking and, as mentioned above, this screening includes a battery of validated screening tools. In our comparison of the risk framework to the Proxy tool we found that preliminarily the Proxy does a better job of predicting new booking risk. . Appendix A contains the validated screens that are part of the MDC Receiving Screening form that includes the four validated tools used to construct the risk framework score (Proxy Risk to Recidivate Screener, Drug Abuse Screening Teste [DAST-10], Alcohol Use Disorders Identification Test-Consumptions [AUDIT-C], and Brief Jail Mental Health Screener [BJMHS]). This includes a review of the literature for jail risk scoring, an enhanced review of the scoring related to failure defined as a new booking, the various tools used to construct the score, and a comparison of the Proxy Risk to Recidivate Screener score to the risk score generated using the combination of forms including the Proxy Risk Triage Screener.

At this point we recommend a further limited review of the current receiving screening form and how it is used. This includes how staff are trained to use the form, the policy and procedure for the use of the form, and how the form is used by staff. We do not recommend a full reliability test of the current form because our current review may recommend a change to how risk is evaluated and the use of receiving

screening form. Reviewing how the form is used by staff could include observing the screening and intake process, and surveying staff members involved in administering the form.

Appendix A

The forms below comprise the validated screens that are part of the receiving screening form completed at intake into the MDC.

Proxy Risk to Recidivate Screener	
1. How old are you?	
2. If arrested previously, how old were you at your first arrest?	
3. How many times have you been arrested previously?	

The Alcohol Use Disorders Identification Test-Consumptions (AUDIT-C)					
For each question, circle the best answer					
1. How often did you have a drink containing alcohol in the past year?	Never	Monthly or less	2-4 times a month	2-3 times a week	4 or more times a week
2. How many drinks did you have on a typical day when you were drinking in the past year?	1 or 2	3 or 4	5 or 6	7 to 9	10 or more
3. How often did you have 6 or more drinks on one occasion in the past year?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily

Bush, K, Kivlahan, McDonell, et. al. (1998) The AUDIT Alcohol Consumption Questions (AUDIT-C)

NIDA Modified ASSIST

In the past 6 months:		
Substances Used	**Yes**	**No**
Cannabis (marijuana, pot, grass, hash, etc.)		
Cocaine (coke, crack, etc.)		
Prescription stimulants (Ritalin, Concerta, Dexedrine, Adderall, diet pills, etc.)		
Methamphetamine (speed, crystal, meth, ice, etc.)		
Inhalants (nitrous oxide, glue, gas, paint thinner, etc.)		
Sedatives or sleeping pills (Valium, Serepax, Ativan, Xanax, Librium, Rohypnol, GHB, etc.)		
Hallucinogens (LSD, acid, mushrooms, PCP, Special K, ecstasy, etc.)		
Street Opioids (heroin, opium, etc.)		
Prescription opioids (fentanyl, oxycodone, [OxyContin, Percocet], hydrocodone [Vicodin], methadone, buprenorphine, etc.)		
Other(s) – Specify: 1. 2.		

National Institute on Drug Abuse (NIDA) Modified ASSIST was adapted from the Single-Question screen for drug use, by Saitz et. al, the National Institute on Alcohol Abuse and Alcoholism's screening question on heavy drinking days, and the World Health Organization (WHO) Alcohol, Smoking and Substance Involvement Screening Test (ASSIST), Version 3.0

Drug Abuse Screening Test (DAST-10)

In the past 12 months… Circle			
1	Have you used drugs other than those required for medical reasons?	Yes	No
2	Do you abuse more than one drug at a time?	Yes	No
3	Are you unable to stop abusing drugs when you want to?	Yes	No
4	Have you ever had blackouts or flashbacks as a result of drug use?	Yes	No
5	Do you ever feel bad or guilty about your drug use?	Yes	No
6	Does your spouse (or parents) ever complain about your involvement in drugs?	Yes	No
7	Have you neglected your family because of your use of drugs?	Yes	No
8	Have you engaged in illegal activities in order to obtain drugs?	Yes	No
9	Have you ever experienced withdrawal symptoms (felt sick) when you stopped taking drugs?	Yes	No
10	Have you had medical problems as a result of your drug use (e.g. memory loss, hepatitis, convulsions, bleeding)?	Yes	No
Scoring: Score 1 point for each question answered "Yes," except for question 3 for which a "No" receives 1 point.			

Skinner HA (1982). The Drug Abuse Screening Test-10

Brief Jail Mental Health Screen (BJMHS)				
Questions		**No**	**Yes**	**General Comments**
1	Do you currently believe that someone can control your mind by putting thoughts into your head or taking thoughts out of your head?			
2	Do you currently feel that other people know your thoughts and can read your mind?			
3	Have you currently lost or gained as much as two pounds a week for several weeks without even trying?			
4	Have you or your family or friends noticed that you are currently much more active than you usually are?			
5	Do you currently feel like you have to talk or move more slowly than you usually do?			
6	Have there currently been a few weeks when you felt like you were useless or sinful?			
7	Are you currently taking any medication prescribed for you by a physician for any emotional or mental health problems?			
8	Have you ever been in a hospital for emotional or mental health problems?			
(Optional): Officer's Comments/Impressions (check all that apply):				
___Language barrier ___Under the influence of drugs/alcohol ___Non-cooperative ___Difficulty understanding questions ___Other, specify:_____				

Policy Research Associates, Inc. (2005)

Columbia-Suicide Severity Rating Scale (C-SSRS) **Corrections** *Screen with Triage Points*		
SUICIDE IDEATION DEFINITIONS AND PROMPTS:	**Past Month**	
Ask questions that are in bold and underlined.	**Yes**	**No**
Ask questions 1 and 2		
1. Wish to be Dead: Person endorses thoughts about a wish to be dead or not alive anymore, or wish to fall asleep and not wake up? **Have you wished you were dead or wished you could go to sleep and not wake up?**		
2. Suicidal Thoughts: General non-specific thoughts of wanting to end one's life/die by suicide, *"I've thought about killing myself"* without general thoughts of ways to kill oneself /associated methods, intent or plan **Have you had any actual thoughts of killing yourself?**		
If YES to 1or 2, ask questions 3, 4, 5, and 6. If NO to 1 and 2, no further assessment is required.		
3. Suicidal Thoughts with Method (without Specific Plan or Intent to Act): Person endorses thoughts of suicide and has thought of at least one method during the assessment period. This is different than a specific plan with time, place, or method details worked out. *"I thought about taking an overdose but I never made a specific plan as to when, where, or how I would actually do it…and I would never go through with it."* **Have you been thinking about how you might do this?**		
4. Suicidal Intent (without Specific Plan): Active suicidal thoughts of killing oneself and patient reports having some intent to act on such thoughts, as opposed to *"I have thoughts but I definitely will not do anything about them."* **Have you had these thoughts and had some intention of acting on them?**		
5. Suicide Intent with Specific Plan: Thoughts of killing oneself with details of plan fully or partially worked out and person has some intent to carry it out. **Have you started to work out or worked out the details of how to kill yourself? Do you intend to carry out this plan?**		
6. Suicide Behavior Question **Have you ever done anything, started to do anything, or prepared to do anything to end your life?** Examples: Collected pills, obtained a gun, gave away valuables, wrote a will or suicide note, took out pills but didn't swallow any, held a gun but changed your mind or it was grabbed from your hand, went to the roof but didn't jump; or actually took pills, tried to shoot yourself, cut yourself, tried to hang yourself, etc. **If YES, ask: Was this within the past 3 months?**	**Lifetime** **Past 3 Months**	
Columbia University. Posner, K. et al. (2008) Columbia-Suicide Severity Rating Scale (C-SSRS)		
1. Arresting or transporting officer believes subject may be a suicide risk		

PREA Questions		
1. Has the patient ever been a victim of sexual abuse?	Y	N
2. Does the patient feel vulnerable?	Y	N
3. Has the patient ever been arrested for a sex offense against an adult or a child?	Y	N
4. Does the patient identify as or can be perceived as gay, lesbian, bisexual, transgender, intersex, or gender non-conforming?	Y	N
5. Does the patient have a physical disability or developmental delay / disability?	Y	N
6. Is the patient's first time being arrested?	Y	N
7. Is the patient of small stature or small physical build?	Y	N
If any "yes" answers notify classification and refer to MH to be seen within 14 days		
Referred for Evaluation?	Y	N