

Patterns and Predictors of Reincarceration among Prisoners with Serious Mental Illness: A Cohort Study

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Modèles et prédicteurs de réincarcération chez les prisonniers souffrant de maladie mentale grave : Une étude de cohorte

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Abstract

Background: A small proportion of people who have serious mental illness and rapid and frequent incarcerations account for a disproportionate amount of overall service use and cost. It is important to describe such individuals, so that services can respond more effectively.

Methods: We investigated a cohort of 4,704 incarcerated men and women who were discharged from a correctional mental health service and followed for a median of 535 days. We investigated social, clinical, demographic, and offense characteristics as predictors of return to the service using Cox survival analyses. Secondly, we characterized individuals as high-frequency service users as those who had 3 or more incarcerations during a 1-year period and investigated their characteristics.

Results: We found that a higher rate of return to custody was associated with schizophrenia spectrum/bipolar affective disorder (BPAD), personality disorder traits, crack cocaine and methamphetamine use, and unstable housing. Charges of theft/robbery and breach of probation were also positively associated, and sex assault was negatively associated with return to custody. Within a 1-year time period, we found 7.2% of individuals were high-frequency service users, which accounted for 19.5% of all reincarcerations.

Conclusion: Identification of the characteristics of those with mental illness in custody, especially those who have high-frequency returns to custody, may provide opportunity to target resources more effectively. The primary targets of intervention would be to treat those with schizophrenia/BPAD and substance use problems, particularly those using stimulants, and addressing homelessness. This could reduce the problem of repeated criminalization of the mentally ill and reduce the overall incarceration rate.

Abrégé

Contexte : Une petite proportion de personnes qui ont une maladie mentale grave et des incarcérations rapides et fréquentes représente une quantité disproportionnée d'utilisation générale des services et des coûts. Il importe de décrire ces personnes pour faire en sorte que les services répondent plus efficacement.

Méthodes : Nous avons investigué une cohorte de 4 704 hommes et femmes incarcérés qui ont reçu leur congé d'un service de santé mentale correctionnel et les avons suivis pour une moyenne de 535 jours. Nous avons investigué les caractéristiques

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sociales, cliniques, démographiques et des infractions comme prédicteurs du retour au service à l'aide des analyses de survie de Cox. Deuxièmement, les personnes que nous avons caractérisées comme étant des utilisateurs de services de haute fréquence étaient celles qui avaient 3 incarcérations ou plus dans une période d'un an et nous avons investigué leurs caractéristiques.

Résultats : Nous avons constaté que le taux plus élevé du retour en détention était associé au trouble du spectre de la schizophrénie / bipolaire affectif et aux traits de personnalité, au sexe féminin, à l'utilisation du crack cocaïne et des méthamphétamines, et au logement instable. Les accusations de vol/cambriolage et de manquement à une condition de probation étaient aussi associées positivement, et l'agression sexuelle était associée négativement au retour à la détention. À l'intérieur d'une période d'un an, nous avons constaté que 7,2% des personnes étaient des utilisateurs de services de haute fréquence, ce qui représentait 19,5% de toutes les réincarcérations.

Conclusion : L'identification des caractéristiques des détenus souffrant de maladie mentale, surtout de ceux qui ont une haute fréquence de retours en détention, peut offrir la possibilité de cibler les ressources plus efficacement. Les principales cibles d'intervention seraient de traiter les personnes souffrant de schizophrénie / trouble bipolaire affectif et de problèmes d'utilisation de substances, en particulier ceux qui font usage de stimulants, et de s'attaquer à l'itinérance. Cela pourrait réduire le problème de la criminalisation répétée des personnes souffrant de maladie mentale, et réduire le taux global d'incarcération.

Keywords

prison, corrections, mental illness, recidivism, women, homelessness, substance use disorders, revolving door

Background

Healthcare need is unevenly distributed within populations. Approximately 1% of health service users account for 20% to 33% of overall healthcare costs,^{1,2} and in mental health services, a small number of patients account for a disproportionate number of all admissions.³ Psychiatric patients who have frequent admissions to hospital have been termed "high-frequency users,"⁴ "high-intensity users,"⁵ and "revolving door" patients.^{3,4,6-8} Such patients are characterized as having multiple medical and behavioral problems, substance abuse, more psychopathology, and are more likely to have problems managing finances and housing.^{6,9,10} Existing mental health services may be inadequate at meeting these needs, contributing to repeat hospitalizations, homelessness, and other adverse outcomes.^{11,12}

High-frequency mental health users also have high levels of police and criminal justice involvement.¹³⁻¹⁶ Persons with serious mental illness (SMI) are more likely than those without SMI to be charged with a criminal offense after being arrested by the police¹⁷ and are often incarcerated for relatively minor offenses including crimes of poverty, offenses related to substance use, or minor offenses against judicial orders.¹⁸ This may result in repeated brief incarceration, which can cause fracturing of community ties such as housing, income support, or access to psychiatric care.

Higher rates of reincarceration among people with SMI have been found in previous studies from the United States.¹⁹⁻²¹ One issue likely driving rapid and frequent reincarceration among those with SMI is concurrent substance use disorder. High rates of substance misuse and SMI have been found among prisoners globally^{22,23} and is one of the strongest predictors of recidivism among those with psychiatric diagnoses^{20,21,24-27} though specific substances of abuse as predictors of rapid or frequent return in this population have rarely been studied.

Given the disproportionately high impact that high-frequency service users have on health and criminal justice services, detection and characterization of individuals with mental health needs who frequently return to custody is important as it may inform the tailoring of services specifically for this group in order to lower the impact on criminal justice and mental health services as a whole.²⁸ In our study, we aim to (1) investigate the proportion and frequency of those who have mental health needs who are reincarcerated; (2) investigate diagnostic, clinical, criminological, and social factors that predict frequency of and time to return to custody; and (3) define high-frequency service users and describe their clinical, sociodemographic, and offense characteristics. We hypothesized that persons with mental illness with higher rates of repeat incarceration would have relatively minor charges, more symptoms, higher rates of homelessness, and higher rates of substance misuse.

Methods

Participants and Setting

This study was carried out at the Toronto South Detention Centre (TSDC), a male facility that holds a maximum of 1,650 inmates, and the Vanier Centre for Women (VCW), a facility that holds a maximum of 333 women, which serve Greater Toronto and parts of Southern Ontario, Canada. Both centers have a high turnover of inmates and detain primarily those on remand.

The Forensic Early Intervention Service (FEIS) is a team of 6 psychiatrists and 12 clinicians (comprising 3 nurses, 6 social workers, and 3 occupational therapists) that provides mental health screening, assessment, and consultation to men and women on remand in these jails.

Study Design

As part of routine care, all inmates are screened at reception by correctional health staff using the Brief Jail Mental Health Screen,²⁹ which is an 8-item mental health screening tool requiring “yes” or “no” responses that has been validated in a number of settings.²⁹⁻³¹ Those who screen positive are referred to FEIS for assessment following which a triage assessment using the Jail Screening Assessment Tool (JSAT)³² is completed. A decision is then made whether secondary mental health services are needed, comprising outpatient equivalent psychiatric consultation. The inmate is either referred for a psychiatrist assessment or discharged. There are no inpatient mental health services within the jails. At the point of discharge, a checklist is completed which includes the clinical diagnosis and services which the patient received or was referred to. Discharge may be due to the client not requiring the service, the client declining the service, or when released from the jail. A research database was established in 2016 to record data from the screening assessments and the discharge checklist for all clients referred to the service for the purpose of research and service evaluation. Participants comprised all clients who were assessed by the FEIS service between January 1, 2016, and December 31, 2018. Reincarceration in this study was defined as those being rereferred to the FEIS service.

Ethical Approval

Research Ethical approval was granted by the Centre for Addiction and Mental Health Research Ethics Board (#018/2018) for this research. Participant consent was not required as it would be impractical to obtain consent from all participants and the risk of any harm is low.

Measures

The JSAT is a structured professional judgment tool based on a clinical interview by a trained mental health clinician, which takes approximately 20 min to complete and has been shown to have good sensitivity and specificity.^{33,34} All clinicians received training in the use of the JSAT, however, interrater reliability was not measured.

Diagnosis was taken from the JSAT as recorded by the clinician which maps onto *Diagnostic and Statistical Manual of Mental Disorders, fourth edition* diagnoses. We categorized diagnosis as either schizophrenia spectrum disorder/bipolar affective disorder (BPAD), substance use disorder mood disorder, stress/anxiety disorder, or personality disorder traits.

Ethnicity was self-identified and categorized as Asian, Black, White, Aboriginal, or Other.

Gender categorized as male or female is defined by the institution. Those incarcerated at VCW and TSDC were categorized as female or male, respectively.

Current charge(s) were recorded as given by the inmate and were categorized as assault, murder/attempted murder, breach of probation, driving under the influence of substances, property damage, sexual offense, theft/robbery, or drug offenses.

Homelessness was defined as living homeless/on the street or living in shelters or hostels.

Age was taken as the age recorded at the index admission.

Total Brief Psychiatric Rating Scale (BPRS-E). A modified version of the BPRS is incorporated in the JSAT and was summed to give a measure of severity of mental illness.

Length of stay was recorded as the number of days from referral to the service to discharge. Those referred and discharged on the same day were given a length of stay of 0.5 days.

Statistical Analysis

First, we carried out survival analyses on all clients assessed by the FEIS service between January 1, 2016, and December 31, 2018, to investigate the characteristics associated with the rate of reincarceration. We carried out univariate analysis on all variables of interest, using the logrank test for categorical variables and Cox proportional hazard models for continuous variables. We analyzed data as multiple failure time in Stata version 14 using a variance-corrected model that adjusts for nonindependence of multiple failures,³⁵ such that clients remained at risk after discharge and were included for all reincarcerations until censored at December 31, 2018. We then selected all variables in which there was a difference in the univariate analyses where logrank $P < 0.2$ for the preliminary multivariate model and included all interaction terms in which there were significant main effects. We tested the proportionality assumption by specifying all time-varying predictors and finally produced a parsimonious model of significant variables.

Second, we defined a cohort of inmates in whom there was a complete 1-year follow-up period (i.e., a cohort in which each client had a period of observation of exactly 1-year postrelease) in order to identify and quantify the number of frequently reincarcerated individuals. We investigated the total number of referrals to FEIS during the 1-year follow-up period and defined a group that had 3 or more referrals during the year as “high-frequency” service users. We then investigated predictors of high-frequency service users creating a model using similar methods.

Results

Complete Cohort

There were 4,704 referrals to the FEIS service from 3,034 unique patients, comprising 2,281 (75.7%) men and 734 (24.3%) women. At time of first entry, the mean age was 35.5 years ($SD = 11.2$). Notwithstanding missing data on this variable, most clients self-identified as White (1,008; 53.7%), the remaining 392 (20.7) as Black, 163 (10.6%) as

Table 1. Descriptive Characteristics of the Participants (Frequencies and Percentages).

| Variable | N | (%) |
|---|-------|-----------------|
| Male | 2,281 | 75.6 |
| Age | 34 | 27 to 43(IQR) |
| Diagnosis | | |
| Schizophrenia spectrum/bipolar affective disorder | 1,057 | 34.8 |
| Mood/anxiety disorders | 1,660 | 54.7 |
| Personality traits | 286 | 9.4 |
| ID/brain injury | 69 | 2.3 |
| Brief Psychiatric Rating Scale total | 4 | 2 to 8(IQR) |
| Ethnicity | | |
| Asian | 116 | 6.2 |
| Black | 392 | 20.0 |
| White | 1,008 | 53.6 |
| Aboriginal | 163 | 8.7 |
| Other | 200 | 10.6 |
| Charges | | |
| Arson | 26 | 0.9 |
| Assault | 675 | 22.2 |
| Breach probation | 891 | 29.4 |
| Driving under influence | 20 | 0.67 |
| Murder | 38 | 1.25 |
| Property damage | 11 | 0.36 |
| Sex assault | 64 | 2.11 |
| Theft/robbery | 626 | 20.6 |
| Drug offense | 233 | 7.7 |
| Other offense | 1,032 | 34.0 |
| Homeless | 1,941 | 52.6 |
| Social support | 1,585 | 40.1 |
| Drugs | | |
| Alcohol | 1,380 | 28.8 |
| Crack | 783 | 16.3 |
| Opioids | 360 | 7.5 |
| Cannabis | 1,335 | 27.8 |
| Methamphetamine | 732 | 15.3 |
| Other drug | 499 | 10.4 |
| Length of stay | 1.5 | 0.5 to 7.5(IQR) |

Abbreviation: IQR = interquartile range; ID = Intellectual Disability.

aboriginal, and 116 (6.2%) as Asian (see Table 1). Just over one half had a diagnosis of schizophrenia, schizoaffective disorder, or BPAD (54.7%), and one-third had a diagnosis of major depression or anxiety (34.8%). The median BPRS-E score on admission was 4 (interquartile range [IQR] 2 to 8). The most common charges were breach of probation (29.4%), assault (22.2%), and theft or robbery (20.6%). Nearly one-third reported the use of alcohol (28.8%) or cannabis (27.8%). Methamphetamine and crack use were reported by 15.3% and 16.3%, respectively.

Following the first incarceration, 28.7% of individuals were reincarcerated at least once during the follow-up period. The median time at risk was 534.5 days (range = 7.5 to 1,109.5 days). We observed that 483 (15.9%) were reincarcerated twice, 191 (6.3%) 3 times, and 83 (2.7%) 4 times. The maximum number of reincarcerations observed was 15 (2 cases).

We investigated variables associated with the rate of reincarceration. We first investigated the univariate association between each exposure and rate of reincarcerations (see Table 2). We found highly significant associations between rate of reincarceration and having a diagnosis of schizophrenia/BPAD or personality traits, ethnicity, homelessness, methamphetamine or crack cocaine use, and offense types of theft/robbery or breach of probation, higher BPRS scores, and shorter length of stay.

We entered those variables from the univariate analyses where there was an association at the 0.2 level of significance into a Cox regression model and tested main effects and all interactions and created a final parsimonious model (see Table 3).

We found strong evidence that schizophrenia spectrum/BPAD and personality traits were associated with higher rates of return to custody, as was crack and methamphetamine use, and homelessness. Higher severity of mental illness measured using the BPRS-E was also associated with higher rate of return to custody, and charges of theft/robbery and breach of probation were positively associated with rate of return to custody. Gender was not directly associated with rate of return to custody; however, females who had schizophrenia/BPAD had a higher rate of return to custody as indicated by the significant interaction effect of these variables.

One-Year Cohort

There were 2,935 individuals in this cohort: 468 (15.6%) had 1 reincarceration, 141 (4.8%) had 2, and 36 (1.3%) had 3 or more (maximum was eight). We defined high-frequency users as having 3 or more incarcerations within a year (2 or more reincarcerations after release from jail within the same year). Two hundred and eleven (7.2%) were defined as high-frequency users, and they accounted for 783 (19.5%) of all reincarcerations.

In the multivariate model, we found that schizophrenia spectrum/BPAD was strongly associated with high-frequency incarceration (odds ratio [OR] = 2.88, 95% confidence interval [CI], 2.07 to 4.00), as was homelessness (OR = 1.81, 95% CI, 1.31 to 2.48). Having an index offense of assault was inversely associated high-frequency incarceration (OR = 0.60, 95% CI, 0.41 to 0.86, respectively, see Table 4).

Discussion

We found that within 1 year of incarceration, 23.1% were reincarcerated at least once and 7.2% had 3 or more incarcerations. A diagnosis of schizophrenia spectrum/BPAD was strongly and consistently associated with reincarceration. Those with schizophrenia/BPAD were around twice as likely to have subsequent reincarcerations as those without in our sample, after adjusting for other variables. These findings are in keeping with a large observational study of inmates released from prisons in Florida, which found that inmates with schizophrenia were twice as likely, and people with

Table 2. Univariate Analyses of Variables Associated with Rate of Reincarceration.

| Variable | N (%) | Missing | Observed | Expected | χ^2 | P |
|---|--------------|--------------|----------|----------|----------|---------|
| Female gender | 1,111 (23.5) | 35 (0.7) | 373 | 330.7 | 6.69 | 0.01 |
| Schizophrenia spectrum/bipolar affective disorder | 1,007 (25.4) | 0 (0) | 498 | 307.75 | 147.89 | <0.0001 |
| Mood/anxiety disorders | 877 (22.1) | 0 (0) | 310 | 340.29 | 3.48 | 0.06 |
| Personality disorder traits | 494 (12.5) | 0 (0) | 255 | 148.6 | 84.6 | <0.001 |
| Ethnicity | | 1,696 (35.6) | | | | |
| Asian | 174 (5.6) | n/a | 52 | 76.6 | 23.8 | <0.001 |
| Black | 677 (21.7) | n/a | 273 | 254.0 | | |
| White | 1,613 (51.7) | n/a | 589 | 630.9 | | |
| Aboriginal | 313 (10.0) | n/a | 143 | 109.6 | | |
| Other | 344 (11.0) | | 152 | 137.9 | | |
| Arson | 35 (0.72) | 1,042 (22.2) | 10 | 11.1 | 0.10 | 0.75 |
| Assault | 1,120 (23.1) | 1,042 (22.2) | 380 | 354.6 | 2.31 | 0.13 |
| Breach probation | 1,653 (34.0) | 1,042 (22.2) | 592 | 478.6 | 37.7 | <0.001 |
| Driving under influence | 23 (0.47) | 1,042 (22.2) | 3 | 10.7 | 5.61 | 0.02 |
| Murder | 43 (0.89) | 1,042 (22.2) | 2 | 16.5 | 12.87 | <0.001 |
| Property damage | 20 (0.41) | 1,042 (22.2) | 8 | 6.1 | 0.62 | 0.43 |
| Sex assault | 95 (1.96) | 1,042 (22.2) | 20 | 39.4 | 9.78 | 0.002 |
| Theft/robbery | 1,164 (24.0) | 1,042 (22.2) | 475 | 335.1 | 73.1 | <0.001 |
| Drug offense | 331 (6.8) | 1,042 (22.2) | 95 | 116.1 | 4.13 | 0.04 |
| Homeless | 1,941 (52.6) | 1,145 (24.0) | 789 | 579 | 142.3 | <0.001 |
| Social support | 1,585 (40.1) | 885 (18.6) | 543 | 568.1 | 1.9 | 0.167 |
| Alcohol | 1,380 (28.8) | 54 (1.1) | 474 | 512 | 4.1 | 0.04 |
| Crack | 783 (16.3) | 54 (1.1) | 303 | 233.9 | 23.8 | <0.001 |
| Heroin | 360 (7.5) | 54 (1.1) | 125 | 126.6 | 0.02 | 0.88 |
| Cannabis | 1,335 (27.8) | 54 (1.1) | 467 | 474.7 | 0.17 | 0.68 |
| Methamphetamine | 732 (15.3) | 54 (1.1) | 299 | 222.0 | 30.9 | <0.001 |
| Other drug | 499 (10.4) | 54 (1.1) | 163 | 192.8 | 5.22 | 0.02 |
| Age | 4,704 | 0 (0) | | | -2.13 | 0.033 |
| Brief Psychiatric Rating Scale total | 4,373 | 331 (7.0) | | | 2.80 | 0.005 |
| Length of stay | 4,704 | 0 (0) | | | -2.3 | 0.021 |

Table 3. Parsimonious Model of Variables Associated with Rate of Reincarceration.

| Variable | Hazard Ratio | Standard Error | z | 95% Confidence Interval | P |
|---|--------------|----------------|-------|-------------------------|--------|
| Female gender | 1.15 | 0.10 | 1.60 | 0.97 to 1.38 | 0.11 |
| Schizophrenia spectrum/bipolar affective disorder | 2.14 | 0.28 | 5.85 | 1.67 to 2.77 | <0.001 |
| Personality disorder traits | 1.62 | 0.14 | 5.62 | 1.37 to 1.93 | <0.001 |
| Breach probation | 1.33 | 0.09 | 4.35 | 1.17 to 1.51 | <0.001 |
| Driving under influence | 0.20 | 0.20 | -1.61 | 0.03 to 1.41 | 0.11 |
| Sex assault | 0.62 | 0.16 | -1.88 | 0.37 to 1.02 | 0.06 |
| Theft/robbery | 1.52 | 0.10 | 6.17 | 1.33 to 1.73 | <0.001 |
| Drug offense | 0.80 | 0.10 | -1.83 | 0.63 to 1.02 | 0.07 |
| Homeless | 1.77 | 0.04 | 7.12 | 1.51 to 2.07 | <0.001 |
| Crack | 1.21 | 0.09 | 2.45 | 1.03 to 1.40 | 0.01 |
| Methamphetamine | 1.24 | 0.10 | 2.61 | 1.06 to 1.46 | 0.01 |
| Other drug | 0.80 | 0.09 | -1.97 | 0.64 to 1.00 | 0.05 |
| Brief Psychiatric Rating Scale total | 1.01 | 0.01 | 2.06 | 1.00 to 1.02 | 0.04 |
| Length of stay | 0.99 | 0.00 | -4.68 | 0.99 to 1.00 | <0.001 |
| Schizophrenia \times female gender | 1.45 | 0.24 | 2.25 | 1.05 to 2.00 | 0.02 |
| Schizophrenia \times homeless | 1.23 | 0.12 | 1.43 | 0.92 to 1.63 | 0.15 |

bipolar disorder were more than 3 times more likely to have 4 or more previous incarcerations.¹⁹ The reasons for the overrepresentation are likely multifactorial. First, there is likely to be a direct association between psychotic symptoms and offending.³⁶ Second, persons with a psychotic illness may

exhibit disorganized behavior, which may lead to breaches of conditions of release. Third, reduced access to services and housing may precipitate offending to secure resources. Fourth, substance abuse can both destabilize mental state and lead to related drug offenses or acquisitive offenses.

Table 4. Variables Predicting High-Frequency Reincarceration.

| Variable | Odds Ratio | Standard Error | z | 95% CI | P |
|---|------------|----------------|-------|--------------|--------|
| Female gender | 0.96 | 0.18 | -0.21 | 0.67 to 1.38 | 0.833 |
| Schizophrenia spectrum/bipolar affective disorder | 2.88 | 0.48 | 6.32 | 2.07 to 4.00 | <0.001 |
| Personality disorder traits | 1.12 | 0.27 | 0.49 | 0.70 to 1.80 | 0.63 |
| Depression/anxiety | 0.86 | 0.14 | -0.91 | 0.62 to 1.19 | 0.37 |
| Methamphetamine use | 1.5 | 0.24 | 0.70 | 0.77 to 1.73 | 0.48 |
| Homeless | 1.81 | 0.09 | 3.66 | 1.31 to 2.48 | <0.001 |
| Assault | 0.60 | 0.11 | -2.76 | 0.41 to 0.86 | 0.01 |
| Theft/robbery | 1.26 | 0.22 | 1.32 | 0.89 to 1.76 | 0.19 |

One important factor therefore is likely to be the inadequate treatment of symptoms of mental disorder among these groups. Treatment with antipsychotic medication has been shown to reduce offending³⁷⁻³⁹ and reincarceration and cost,⁴⁰ however, continuity of community care is severely fractured by incarceration often leaving those released from custody without access to treatment or support.^{41,42} We found evidence that severity of symptoms was associated with rate of reincarceration. However, we did not have data on the rate of provision of, or compliance with, treatment after release from custody, and therefore, future studies should measure access to treatment on release and its impact on reincarceration.

Substance misuse was also found to be significantly associated with reincarceration. This is consistent with prior studies that have linked substance use to offending and incarceration,^{13,43} however, not all diagnostic categories of mental disorder are necessarily equally associated with recidivism in combination with substance use.²⁶ It is possible that the type of substances used may also have differential effects on rates of return to custody. Our study indicates that stimulant use—crack cocaine and methamphetamine—was particularly associated with reincarceration, while other drugs, notably cannabis and alcohol, were not. A previous study has shown that stimulant use is associated with a greater risk of violent recidivism as compared with other classes of substances.⁴⁴ This finding needs further exploration and replication. However, it is possible that the effects of crack cocaine and methamphetamine have a particularly destabilizing effect in precipitating symptoms of mental illness leading to offending behavior and reincarceration.

We did not find an association between gender and rate of reincarceration although we found a significant interaction effect of female gender and schizophrenia. It is often observed that even higher rates of SMI exist among female inmate populations than among male populations.²² One study found that SMI status had a stronger impact on time to reoffense for women than for men. They found that in general, women with SMI had longer times to reoffend than men. Future studies should investigate the reasons for a gender difference and the specific needs of women prisoners with SMI.

We found that homelessness was associated with significantly higher rates of reincarceration and was significant in

defining the high-frequency service user group while adjusting for other variables. The 2-way cycle of homelessness and jail has been well-documented.^{45,46} Incarceration has the effect of reducing employability and fragmenting relationships with family and social ties, while homelessness can lead to “crimes of desperation” and exposure to aggressive policing of trespass or vagrancy offenses. High rates of mental illness have also been found among homeless people,^{47,48} and thus, a 3-way “trans-institutionalization” is at play, exacerbated by a lack of affordable housing and drug addiction. Provision of supportive housing has been shown to reduce overall costs to mental health services¹² and could well lead to a reduction in incarceration, particularly among high-frequency offenders who have SMI.

We found that offenses of breach of probation, theft, and robbery were associated with a higher rate of reincarceration. It appears that a pattern of relatively low-severity offenses characterizes those who frequently or rapidly return to custody. Although the individual circumstances and details of the behaviors that have led to the charges are not known, it is possible that theft may be at least in part be motivated by poverty, substance use, and marginalization among those with SMI. Breach of the terms of probation, such as failing to appear in court or to adhere to the terms of supervision, is also more likely among those who have unstable housing and who have symptoms of major mental disorder and who have inadequate community support, leading to reincarceration and a perpetuation of the revolving door phenomenon.

Limitations

There are a number of limitations to our study. First, we were only able to measure reincarceration among those who returned to either of two jails in which the FEIS service operates. Although all individuals who are reincarcerated go to a provincial jail in the first instance, it is possible that individuals may recidivate and be reincarcerated in other provincial jails of which we would have no knowledge. VCW is by far the largest provincial jail in Ontario for women, accounting for approximately 43% female inmates in Ontario, and is the only jail that covers the Greater Toronto Area and Southern Ontario. Thus, there is a very high likelihood that females released from VCW would be

reincarcerated at this institution rather than a different one unless they moved to and reoffended at a geographically distant location. TSDC is also the largest provincial jail for men and accounts for approximately 75% of the remand space available in the Greater Toronto Area, making it highly likely that males released from TSDC would be reincarcerated there as well.

In addition, it is possible that inmates who are reincarcerated at either VCW or TSDC are not referred to the FEIS service, and therefore, their reincarceration would not be recorded in our data. All individuals are screened for mental health needs on reception into custody, and those previously under the caseload of FEIS are highly likely to be identified and rereferred. It is possible however that some individuals are not identified on a subsequent reincarceration, and their reincarceration would not be recorded in our data. Furthermore, it is possible that some inmates after being identified on screening and referred to FEIS for assessment would be released from jail prior to being assessed. Currently, FEIS receives an average of 348 referrals per month, and although the standard is to assess those referred on the same or next business day, 43% are released prior to assessment; thus, there would be an underdetection of brief returns to custody. Thus, we are only likely to have included those with incarceration of longer than 2 to 3 days. Although we were able to test a fairly comprehensive set of variables and interactions in our models, there are variables that are relevant that have not been measured, such as access to and utilization of community health services, quality of relationships and personal support, and caregiver responsibilities in the community, which may have greater relevance for women. In addition, many of the variables were taken from self-report and we were not able to confirm those details using collateral sources. Also, we have used the BPRS-E Scale which may not have been able to be completed among those who are most severely ill and less cooperative with intake assessment. Future studies should therefore investigate symptom severity more proximal to release and consider using alternative measures of illness severity such as Clinical Global Impression (CGI-C).^{49,50} Finally, the diagnostic categories we used in our study were taken from the Mental Health Issues section of the JSAT, and thus, we were unable to use *DSM-5* diagnostic categories in our analyses. It is also likely that personality disorder traits were underdiagnosed in our sample due to diagnostic overshadowing of the other categories, and since a structured diagnostic tool was not used. Future studies should investigate more specific diagnostic groupings and symptoms in relation to reincarceration.

Summary and Future Direction

In summary, we have identified a group of high-frequency service users who account for a disproportionately high number of incarcerations and found that the most important predictors of return to custody among those with mental illness are a diagnosis of schizophrenia/BPAD disorder,

homelessness, and crack cocaine or methamphetamine use, with offenses of theft or robbery. Identification of these frequent users could allow targeting resources which could reduce the frequency and rate of incarcerations in this group. Services designed to target resources at high-intensity users have been successful elsewhere,^{5,28,51} and there is promise for interventions that provide services to help bridge the transition from jail to the community.^{41,42,52} The primary targets of intervention appear to be effectively treating those with SMI, provision of stable housing, and treating those who have substance use problems, particularly those using stimulants.

Investment in specific transition and community services and careful evaluation of their efficacy is required to address the problems faced by people with SMI released from jail to reduce reoffending. Focusing on the high-frequency service users may have the biggest impact in reducing the total number of incarcerations. Studies should be designed to investigate the efficacy and economic impact of such an approach. In addition, persons with SMI are often incarcerated for relatively minor offenses including crimes of poverty, offenses related to use of illegal substances, or minor offenses against judicial orders, and therefore, alternatives to incarceration should be considered for these individuals where possible.

Authors' Note

The data that support the findings of this study are available from the corresponding author upon reasonable request.


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