Serious Mental Illness-Associated Socio-Medical Needs and Imprisonment Risk in Reentry Clients

David L. Rosen, M.D., Ph.D., Theodore R. Zarzar, M.D., Anna Baker, M.P.H., Evan A. Ashkin, M.D.

Objective: To examine whether the socio-medical needs and imprisonment risk among transitional care clients with serious mental illness (SMI) differ from other transitional care clients.

Methods: A retrospective cohort study was conducted of adults who entered the Formerly Incarcerated Transition (FIT) Program from 2018 to 2023 following a period of incarceration. At program entry, FIT clients were screened for socio-medical needs and diagnoses, including those reflecting SMI. Imprisonment outcomes were assessed using administrative records. Cumulative imprisonment risk and relative risk of imprisonment were estimated comparing clients by SMI status.

Results: Among 759 clients, 78.1% were men, 53.6% were aged 31–50 years, 59.8% reported Black race, and 32.9% had SMI. Clients with SMI were significantly more likely to be female, aged ≤40 years, White race, recently without food, to have healthcare coverage, to be unhoused, and to be in need of housing assistance, disability benefits, or legal assistance. Cumulative imprisonment risk at 360 and 720 days for clients with SMI (0.14 and 0.21) was higher than for those without (0.08 and 0.11), $p < 0.001$. In a multivariable proportional hazards model, SMI was associated with increased risk of imprisonment (1.75, 95% CI: 1.18, 2.60).

Conclusions: Released persons with SMI have a particularly heavy burden of socio-medical needs and high imprisonment rates in North Carolina (NC).

Relevance to Clinical Practice: Similar programs in other states should consider assessing outcomes among their clients with SMI. In NC, efforts are underway to facilitate greater care continuity upon re-entry for people with SMI, including direct linkage to co-located primary and psychiatric care.

Psych Res Clin Pract. 2026; xx:1–10; doi: 10.1176/appi.prcp.20250046

Millions of incarcerated people return to US communities each year (1, 2). The process of returning to the community, known as reentry, presents an array of economic and social challenges. These often include securing food, housing, and employment, and the complexities of navigating new and existing interpersonal relationships (3, 4). Reentry challenges are heightened for the more than 40% with chronic health conditions, including chronic mental health conditions (5, 6).

Jails and prisons disproportionately incarcerate people with psychiatric illness (7). Some of the most severe psychiatric disorders are termed "serious mental illnesses" (SMI), referring to a mental illness that causes "functional impairment which substantially interferes with or limits one or more major life activities" (8). SMI can be operationalized using diagnoses defined in part by psychosis (9). Accordingly, common SMI diagnoses include schizophrenia (SCZ), schizoaffective disorder (SZA), bipolar I disorder, and major depression with psychotic features (9). In a 2011 nationally representative survey, 8% of people incarcerated in state prisons endorsed a history of SCZ or other psychotic disorders (5).

HIGHLIGHTS

- A retrospective cohort study was conducted to examine if socio-medical needs and imprisonment risk among transitional care clients with serious mental illness (SMI) differ from other clients.
- In this retrospective cohort study with 759 re-entry clients, clients with SMI had greater socio-medical needs, particularly in areas related to housing, disability benefits, and family matters, than those without SMI. The imprisonment risk at 360 and 720 days for clients with SMI (0.14, 0.21) was significantly higher than those without SMI (0.08, 0.11).
- Released persons with SMI have a heavy burden of socio-medical needs, high imprisonment risk, and could benefit from direct linkages to primary and psychiatric care.

People with SMI can face particularly difficult reentries. A 2008 survey of people recently released from prison found that those with mental illness were more likely than others to experience housing instability and unemployment, and soon after release, were less likely to receive family support (4). With historically little linkage to reentry services, released people with SMI have often experienced difficulty obtaining consistent mental health care after release (10, 11). Resulting ongoing psychiatric symptoms—and the common co-occurrence and lack of care for active substance use (11, 12)—creates further barriers to needed resources and stability. Although the dynamic factors primarily driving criminogenic risk, as described in the Risk-Need-Responsivity model, have been shown to operate independently of behavioral health conditions, exacerbation of behavioral health symptoms and lack of the basic resources that underpin positive structural determinants of health can increase criminogenic risk (13, 14). In turn, incarceration is itself a social determinant, perpetuating subsequent incarceration (15).

Given the cyclical nature of incarceration, particularly for those with SMI, prevention of recidivism is of interest to a wide array of patient advocates, policy makers, and law enforcement agencies. Recidivism is a blunt indicator of reentry success (13), and its occurrence can either be precipitated by or cause treatment interruptions, including interruption of behavioral health treatments.

In a 2009 review of SMI and recidivism, Baillargeon et al. reported that smaller studies found no or modest associations, but the lead author's own study, which included records for more than 79,000 people, found that those with SMI were twice as likely to have a history of two or more incarcerations compared to those without SMI (16). Despite wide ranging methodological differences, several cohort studies have subsequently reported that following release from incarceration, those with SMI are at increased risk for further justice involvement, including re-arrest, conviction, and imprisonment (17–19). Aligned with these findings, a 2022 systematic review suggested that receipt of community mental health services following incarceration may lead to improvements in criminal legal outcomes for people with mental illness and substance use disorder (SUD) (20).

Increasingly, transitional care programs have been established to support post-release care. Perhaps the most widely disseminated model comes from the Transitions Clinic Network (TCN), a nationwide consortium of primary care clinics serving formerly incarcerated individuals (21). A foundation of the TCN model is to train and employ formerly incarcerated people as community health workers (CHWs). These CHWs serve as health system navigators, advocates, and peer support specialists. They facilitate connection to primary care services and assist with medico-social reentry needs. In this model, specialty care including mental health is typically sought through referrals. Although results vary by site, the TCN model has been associated with reduced ED visits (22), reductions in subsequent incarceration days (23), and reductions in criminal justice-related costs (24).

In North Carolina (NC), the implementation of the TCN model is known as the Formerly Incarcerated Transition (FIT) Program. The first FIT clinic was established in 2017 within a Federally Qualified Health Center (FQHC). As of 2023, there were 7 FIT clinics within FQHCs located in six counties. During this period, NC had not expanded Medicaid coverage. Medicaid or Affordable Care Act insurance enrollment is a common need for FIT clients. For those without insurance, the FIT program covers copays for medical, behavioral health, and dental visits at partner FQHCs. In addition, FIT provides up to $100 per patient monthly for medications. Mental health services beyond those available at FIT FQHCs required referral to psychiatric providers at outside clinics.

Existing studies evaluating the characteristics and outcomes among TCN clinical populations have not focused specifically on those with SMI. Considering the post-release challenges among those with SMI—particularly in Medicaid non-expansion states—we sought to examine whether the socio-medical needs and imprisonment risk among FIT clients with SMI differed from other clients in the program. These findings could inform implementation of TCN services for clients with SMI in clinics in the state and around the country.

METHODS

FIT Program Enrollment

Through a collaboration with the NC Department of Adult Correction (DAC), the FIT Program receives referrals from correctional facilities, local reentry councils, and community-based organizations. Individuals must meet the following eligibility criteria: adults (aged 18+ years), release from incarceration within the past 2 years, suffering from a chronic medical condition (inclusive of SUD) and/or mental illness, living or returning to one of the six NC counties with a FIT clinical site, and willingness to actively participate in the program. Specially trained CHWs, with a lived experience of incarceration, follow up with eligible individuals for program enrollment. Program enrollment includes the completion of an intake form, completion of new patient paperwork at clients' designated primary care medical home, and scheduling of initial clinic appointment.

Survey Development and Domains

The program intake survey was developed with input from the TCN Technical Assistance team and local FIT program leadership. Domains include demographics; facility most recently incarcerated; most recent release date; food security; current living situation (e.g., "in a shelter"); employment; healthcare coverage; areas of needed assistance including health care coverage, disability benefits,

25755609, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1176/appi.prcp.20250046, Wiley Online Library on [31/03/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

food stamps, family matters, debt, housing, employment, and domestic violence; history of 26 health conditions, assessed with the item "Has a doctor ever told you that you have any of the following … "; and sources of post-release medical care. The full intake survey is available (Supporting Information S1).

Survey Administration and Assessment of SMI

CHWs administered the survey at program intake. The survey required approximately 20 min to administer. We coded people responding "Yes," to having "Bipolar disorder (Manic Depression)" or "SZA/SCZ (hearing voices or seeing things others don't)," as having SMI. For simplicity, we refer to these constituent conditions as "Bipolar" and "SZA/SCZ." Other conditions, such as depression and Post-Traumatic Stress Disorder, can be considered to be SMIs in their most severe presentations. However, without functional assessments, we limited our operationalization of SMI to Bipolar and SZA/SCZ because their psychotic features are more consistently associated with severe dysfunction.

Assessment of Imprisonment

The NC DAC maintains a public database of all convictions leading to imprisonment in the state prison system, including technical violations for people under community supervision following release from prison. The minimum duration for these imprisonments is 3 months, representing a potentially impactful disruption from access to community care. In July 2024, we queried the database to determine whether FIT participants had any imprisonments between the time of FIT entry and December 31, 2023. If so, we recorded the date of the first imprisonment following FIT entry.

Study Population

We included in our analytic population FIT clients who: (1) enrolled in FIT from January 1, 2018 to December 31, 2023; (2) had documentation allowing us to distinguish whether their most recent incarceration was in prison or in jail; and (3) had a DAC database record—with corresponding unique personal identification number—created prior to program entry. Use of this identification number enabled us to avoid the limitations of name-based matching (e.g., the use of aliases) in assessing imprisonments in the DAC database. Of 1020 FIT clients who entered during the study period, 159 were excluded because of lack of incarceration information and 102 were subsequently excluded because they lacked a DAC identification number, resulting in a study population of 759.

Analytic Approach

We primarily used frequencies and percentages in examining the socio-demographics, health conditions, and social service needs of the study population. Additionally, we used medians and interquartile range [IQR], that is, 25th and 75th percentiles, to characterize FIT participants' number of reported health conditions. The median (IQR) estimates for number of health conditions were repeated, excluding the two conditions corresponding to SMI. We estimated descriptive statistics for the entire FIT population and stratified by SMI status. For categorical and continuous variables, we used tests of chi-square and ranked sum tests, respectively. For all tests of statistical significance, we used two-sided tests with alpha of 0.05.

We estimated person-time as time between program entry and the first to occur: new imprisonment or December 31, 2023. We then estimated cumulative imprisonment risk (i.e., incidence) for all FIT participants and for participants stratified by SMI, highlighting estimates at 360 and 720 days.

We used Cox proportional hazard models to examine the relative risk of imprisonment, comparing participants by SMI status. In doing so, we first examined the bivariate association between imprisonment and socio-demographic variables, SMI, SUD (i.e., either alcohol or drug use disorder), and types of needed assistance. We then included variables with statistically significant ($p < 0.05$) bivariate associations into a multivariable Cox proportional hazard model of imprisonment. Using bivariate and multivariable models, we also estimated the risk of imprisonment among those with SUD, stratifying by SMI status. We report bivariate and adjusted multivariable hazard ratios with 95% confidence intervals [95% CIs].

This study was approved by the Institutional Review Board at the University of North Carolina at Chapel Hill.

RESULTS

From 2018 to 2023, 759 people entered the FIT program and met our study inclusion criteria. Among all FIT enrollees, 78.1% were male, 66.1% were aged 41+ years, 59.8% were Black, 74.2% had been released from incarceration for 26 weeks or less at FIT entry, and 81.0% had been released from a prison facility rather than a jail. Nineteen percent had gone without food in the past 4 months, 87.2% had no healthcare coverage, and 19.8% were unhoused. The top three areas of needed assistance were housing (65.3%), employment (64.8%), and food stamps (52.4%) (Table 1).

Among all enrollees, 32.9% ($n = 250$) were coded for SMI, which included 28% ($n = 216$) with bipolar disorder and 15% ($n = 111$) with SZA/SCZ. Seventy-seven clients reported both bipolar disorder and SZA/SCZ, accounting for 35.6% (77/216) of all those with bipolar disorder and 69.4% (77/111) of all those with SZA/SCZ.

People with SMI were about twice as likely as other enrollees to be female (30.0% vs. 15.9%), more likely to be aged 40 years or less (44.8% vs. 28.3%), to self-report White race, to have gone without food in past 4 months (28.9% vs. 18.9%), to have healthcare coverage (16.0% vs. 11.2%) and to be unhoused (25.6% vs. 16.9%). Those with SMI were also

25755609, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1176/appi.prcp.20250046, Wiley Online Library on [31/03/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 1. Sociodemographics and needs at transitional care intake, by SMI[a] status, 2018–2023.

		All (n = 759)[b]		SMI[b]				
				Yes (n = 250)		No (n = 509)		
Characteristic	Level	No.	%	No.	%	No.	%	p-value
Sex	Female	156	20.6	75	30.0	81	15.9	<0.0001*
	Male	593	78.1	174	69.6	419	82.3	
Age group	18–30	80	10.5	40	16.0	40	7.9	<0.0001*
	31–40	176	23.2	72	28.8	104	20.4	
	41–50	231	30.4	74	29.6	157	30.8	
	51–60	201	26.5	53	21.2	148	29.1	
	61+	70	9.2	10	4.0	60	11.8	
Race	AA/Black	454	59.8	128	51.2	326	64.0	0.0012*
	White	228	30.0	95	38.0	133	26.1	
	Other/multi racial	67	8.8	26	10.4	41	8.1	
LatinX	Yes	55	7.2	20	8.0	35	6.9	0.7704
Release time	≤26 weeks	563	74.2	188	75.2	375	73.7	0.8958
	>26 weeks	103	13.6	33	13.2	70	13.8	
	Unknown	93	12.3	29	11.6	64	12.6	
Last incarceration type	Jail	144	19.0	54	21.6	90	17.7	0.1957
	Prison	615	81.0	196	78.4	419	82.3	
Food insecurity[c]	Yes	145	22.1	61	28.9	84	18.9	0.0038*
Current healthcare coverage	Yes	97	12.8	40	16.0	57	11.2	0.0626
Unhoused	Yes	150	19.8	64	25.6	86	16.9	0.0047*
Need assistance								
Housing	Yes	496	65.3	187	74.8	309	60.7	0.0001*
Disability benefits	Yes	266	35.0	126	50.4	140	27.5	<0.0001*
Healthcare coverage	Yes	503	66.3	166	66.4	337	66.2	0.9581
Food stamps	Yes	398	52.4	128	51.2	270	53.0	0.6324
Family matters (divorce, custody)	Yes	60	7.9	29	11.6	31	6.1	0.0082*
Debt	Yes	92	12.1	33	13.2	59	11.6	0.5233
Employment	Yes	492	64.8	158	63.2	334	65.6	0.5119
Domestic violence	Yes	7	0.9	3	1.2	4	0.8	0.5748

[a]FIT, Formerly Incarcerated Transition; SMI, serious mental illness.
[b]Unless otherwise indicated, variables may having missing values for 10 or fewer cases; accordingly, variable totals may be less than population totals and variable percentages may add up to <100%.
[c]Denominator is 656 (211 with SMI and 445 without); item not assessed among first 103 FIT clients.
*$p < 0.05$.

significantly more likely than others to need assistance with housing (74.8% vs. 60.7%), disability benefits (50.4% vs. 27.5%), and family matters, for example, custody, (11.6% vs. 6.1%), but there were not statistically significant differences in either direction for needed healthcare coverage, food stamps, employment, or domestic violence issues (Table 1). Nevertheless, more than half of all FIT clients reported needed assistance for attaining healthcare coverage (66.3%), food stamps (52.4%), and employment (64.8%).

People with SMI were more likely than others to have other behavioral health conditions: anxiety (74.8% vs. 41.5%), drug use disorder (54.8% vs. 34.4%), post-traumatic stress disorder (52.8% vs. 24.8%), and alcohol use disorder (28.0% vs. 20.0%) (Table 2). People with SMI were also more likely than others to have chronic pain (36.4% vs. 29.3%), chronic lung disease (10.4% vs. 5.3%) and dementia/Alzheimer's (2.0% vs. 0.4%) but less likely to have hypertension (36.8% vs. 46.2%). The reporting of other conditions did not differ significantly by SMI status.

People with SMI had a median of 5.0 (IQR: 4.0, 8.0) health conditions. When excluding the two conditions used to classify SMI status, those with SMI had a median of 4.0 (IQR: 3.0, 6.0) comorbid health conditions and those without SMI had a median of 3.0 (IQR: 2.0, 5.0) comorbidities, $p < 0.0001$.

The cumulative risk of imprisonment among all FIT participants at 360 and 720 days, respectively, was 0.10 and 0.14 (Figure 1); for people with SMI, the risk at 360 and 720 days was 0.14 and 0.21 and for those without, the risk was 0.08 and 0.11 ($p < 0.001$, Figure 2).

In bivariate models, variables with statistically significant positive associations with imprisonment included SMI (vs. none), White race (vs. Black race), food insecurity (vs. none), having health insurance (vs. none), alcohol/drug use disorder (vs. none) most recently released from prison (vs. jail) and needing assistance to address domestic violence (vs. none). Including these statistically significant variables into a multivariable model, SMI (1.75, 95% CI: 1.18, 2.60), White race (1.51, 95% CI: 1.00, 2.27), and alcohol/drug use (1.58, 95% CI: 1.06, 2.36) and most recently released from prison (2.59, 95% CI: 1.37–4.89) remained statistically significant (Table 3).

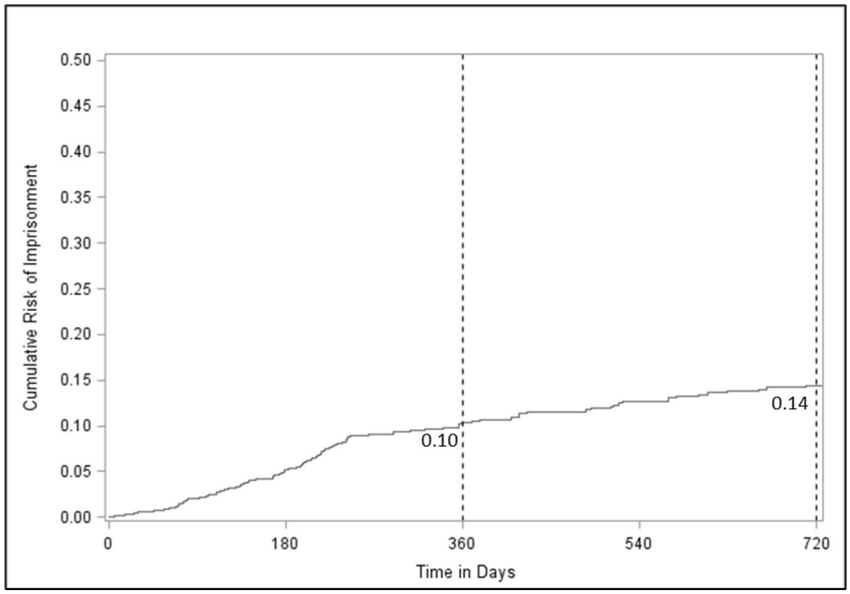
25755609, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1176/appi.prcp.20250046, Wiley Online Library on [31/03/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 2. Health conditions[a,b] at transitional care intake, by SMI status, 2018–2023.

	All (n = 759)		SMI				
			Yes (n = 250)		No (n = 509)		
Health condition	No.	%	No.	%	No.	%	p-value
SMI conditions							
Bipolar	216	28.5	216	86.4	0	0.0	<0.0001*
SZA/SCZ	111	14.6	111	44.4	0	0.0	<0.0001
Other behavioral health conditions							
Anxiety/depression	398	52.4	187	74.8	211	41.5	<0.0001*
Drug use disorder	312	41.1	137	54.8	175	34.4	<0.0001*
Post-traumatic stress disorder	258	34.0	132	52.8	126	24.8	<0.0001*
Alcohol use disorder	172	22.7	70	28.0	102	20.0	0.0084*
Non-behavioral health conditions							
Hypertension	327	43.1	92	36.8	235	46.2	0.0387*
Chronic pain	240	31.6	91	36.4	149	29.3	0.0267*
High cholesterol	179	23.6	52	20.8	127	25.0	0.2807
Diabetes ("high blood sugar")	178	23.5	50	20.0	128	25.1	0.1645
Asthma	131	17.3	51	20.4	80	15.7	0.0804
Circulation in legs or feet	119	15.7	38	15.2	81	15.9	0.9212
Hepatitis C	106	14.0	39	15.6	67	13.2	0.3191
Anemia	69	9.1	24	9.6	45	8.8	0.6579
Chronic lung disease	53	7.0	26	10.4	27	5.3	0.0075*
Stroke/TIA	38	5.0	13	5.2	25	4.9	0.8023
Angina/coronary heart disease	36	4.7	11	4.4	25	4.9	0.8213
Kidney disease	34	4.5	10	4.0	24	4.7	0.711
Congestive heart failure	33	4.3	13	5.2	20	3.9	0.37
Cancer	29	3.8	11	4.4	18	3.5	0.4828
Heart attack	29	3.8	11	4.4	18	3.5	0.5054
Liver disease/cirrhosis	22	2.9	6	2.4	16	3.1	0.598
HIV	21	2.8	9	3.6	12	2.4	0.3015
Pancreatitis	9	1.2	3	1.2	6	1.2	0.9474
Dementia/Alzheimer's	7	0.9	5	2.0	2	0.4	0.0269*
Hepatitis B	4	0.5	2	0.8	2	0.4	0.4532
Other	228	30.0	65	26.0	163	32.0	0.1484

[a]HIV, human immunodeficiency virus; SCZ, schizophrenia; SMI, serious mental illness; SZA, schizoaffective disorder; TIA, transient ischemia attack.
[b]Based on self-report.
*$p < 0.05$.

FIGURE 1. Cumulative incidence of imprisonment among all transitional care patients, 2018–2023. Time at risk begins at program intake. At 360 days, the cumulative probability was 0.10; at 720 days, the cumulative probability was 0.14.



25755609, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1176/appi.prcp.20250046, Wiley Online Library on [31/03/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

FIGURE 2. Cumulative incidence of imprisonment among transitional care patients, by SMI status, 2018–2023. Time at risk begins at program intake. The cumulative probability of imprisonment for those with SMI was 0.14 at 360 days and 0.21 at 720 days. The cumulative probability of imprisonment for those without SMI was 0.08 at 360 days and 0.11 at 720 days. SMI, serious mental illness.

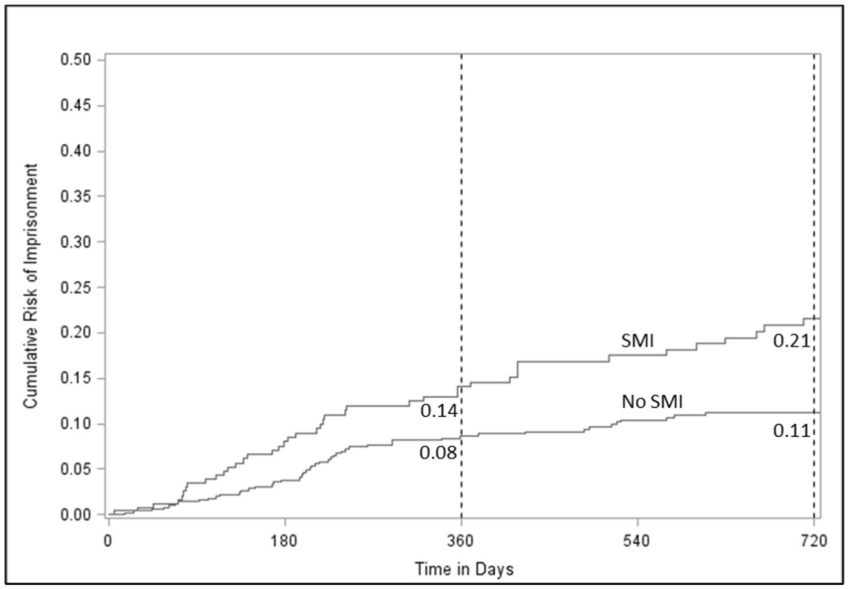


TABLE 3. Association of imprisonment with sociodemographics and needs at intake, among transitional care patients, 2018–2023.[a]

Variable	Level[b]	HR	95% CI	*p*-value	aHR	95% CI	*p*-value
SMI	Yes	1.91	1.34–2.72	0.0003*	1.75	1.18–2.60	0.0058*
Sex	Female	1.06	0.66–1.70	0.8036			
	Male	1.00					
Age (years)	31–40	0.98	0.53–1.83	0.9565			
	41–50	1.09	0.61–1.97	0.7636			
	51–60	0.78	0.42–1.44	0.4256			
	61+	0.52	0.21–1.28	0.1536			
	18–30	1.00					
Race	White	1.90	1.31–2.74	0.0006*	1.51	1.00–2.27	0.0476*
	Other	0.78	0.36–1.70	0.5336	0.73	0.33–1.61	0.429
	Black	1.00					
LatinX	Yes	1.14	0.50–2.59	0.7527			
Food insecurity	Yes	1.57	1.03–2.39	0.0367*	1.36	0.88–2.12	0.1684
Health insurance	Yes	1.54	1.03–2.29	0.0335*	1.57	1.00–2.47	0.0511
Unhoused	Yes	1.03	0.67–1.57	0.9023			
Alcohol/drug use disorder	Yes	1.84	1.29–2.62	0.0007*	1.58	1.06–2.36	0.0249*
Release time	≤26 weeks	1.28	0.74–2.20	0.3775			
	>26 weeks	0.63	0.29–1.37	0.2445			
	Unknown	1.00					
Last incarceration type	Prison	2.04	1.15–3.62	0.0147*	2.59	1.37–4.89	0.0033*
	Jail	1.00					
Needs							
Housing	Yes	1.00	0.69–1.43	0.9834			
Disability benefits	Yes	1.38	0.97–1.97	0.0734			
Health insurance	Yes	0.79	0.43–1.43	0.4315			
Food stamps	Yes	1.09	0.77–1.55	0.6302			
Family matters (e.g., custody)	Yes	0.80	0.41–1.58	0.5267			
Debt	Yes	1.24	0.77–1.98	0.3737			
Employment	Yes	1.13	0.78–1.64	0.5131			
Domestic violence	Yes	3.15	1.00–9.93	0.0495*	2.43	0.75–7.90	0.1409

[a]aHR, adjusted hazard ratio; CI, 95% confidence interval; HR, substance use disorder; SMI, serious mental illness.
[b]For all variables with level "Yes," the referent group is "No"; We explicitly include the reference group for analysis of alcohol/drug use, stratified by SMI status (Yes vs. No).
*$p < 0.05$.

25755609, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1176/appi.prcp.20250046, Wiley Online Library on [31/03/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

DISCUSSION

Programs addressing continuity of care for people reentering the community are becoming increasingly common, yet little is known about their differential impact based on characteristics and needs of program clients. This study sought to determine if transitional care clients with SMI had distinct socio-medical needs and patterns of imprisonment. We found that as a whole, program clients had high levels of socio-medical needs, and compared to other clients, those with SMI had (1) greater social needs; (2) heavier burden of disease; and (3) greater risk of imprisonment.

Consistent with the literature that people with SMI have a multitude of unmet social needs at reentry (3, 4, 10, 25, 26), at program intake there were multiple social needs that were more commonly sought among those with SMI than those without. In particular, nearly twice as many people with SMI compared to others reported needing assistance to obtain disability benefits (social security disability insurance/supplemental security income [SSI]). This finding likely reflects that people with SMI may be eligible for disability benefits because of their SMI, and thus may be more likely than others to need assistance applying. Similar to prior studies, we found that SMI clients were more likely to report being unhoused and had a need for housing (3, 4). Yet, as addressed below, despite qualitative and quantitative studies linking unstable housing to recidivism among SMI populations (10, 27), it was not significant in our analysis of imprisonment.

About two-thirds of all clients reported needing assistance obtaining healthcare coverage with SMI clients slightly more likely (but similar per statistical testing) to have healthcare coverage at program entry than others. In NC, Medicaid enrollment is granted with qualification for SSI. Because NC was a non-expansion state during the study period, those with SMI who qualified for coverage through SSI eligibility (i.e., disability benefits) may have been much more likely to obtain coverage than others.

In NC and across the country, access to Medicaid—providing healthcare coverage and ancillary supports addressing social determinants—for people leaving carceral institutions has been increasing. For example, prerelease Medicaid enrollment programs in Wisconsin and Indiana have led to increased use of outpatient health care visits post-incarceration (28) and increased Medicaid coverage post-release (29).

Additionally, since 2023 the Centers for Medicare & Medicaid Services has encouraged states to apply for 1115 waivers that partially void the statutory Medicaid Inmate Exclusion Policy which prohibits Medicaid from service payment during incarceration. As of July 2025, 19 states have been approved, and another nine (including DC), have waivers under review (30, 31). Under these waivers, reentry services may begin up to 90 days before release and include case management, medications for substance use disorders, and a 30-day medication supply upon release. These interventions could be implemented by correctional providers or by community groups, including TCN programs. In NC, the waiver was approved in December 2024, but has not yet been implemented. To complement the services under the waiver, NC recently funded the Reentry 2030 initiative, which seeks to enhance educational achievement, reduce housing instability, and provide greater local support for reentry populations (32). Additionally, the NC state prison system is in the process of expanding the number of prisons providing MOUD initiation along with broader screening to identify people that are eligible (33). This expansion has the potential to significantly reduce post-release recidivism and overdose.

Despite these positive developments across the US and in NC, federal legislation was recently passed that is forecast to reduce Medicaid enrollment by imposing stricter eligibility criteria and limiting sources of state funding (34). In NC, state officials estimate that >250,000 people may lose their Medicaid eligibility (34). The legislation also imposes additional regulations for Medicaid waiver programs, which are predicted to hinder their implementation. The full impact of the legislation remains unknown as states grapple with its implementation, but it is positioned to reverse the positive trends in increasing resources for people returning from incarceration, including those with SMI.

In our study, the overall 1-year risk of imprisonment was 10%, including 14% of those with SMI and 8% without SMI. In prior TCN studies, rates of criminal justice involvement following program enrollment have varied widely by study, which include somewhat different populations and measures. For example, using 12-month follow-up periods, an observational study in Connecticut found that 20% ($n = 19$) of clients were reconvicted (new conviction or parole/probation violation) (23), and in a randomized control trial conducted in San Francisco, 58% ($n = 98$) TCN clients were subsequently incarcerated in jail of (22). Yet neither study produced estimates specific to clients with SMI and we focused strictly on imprisonment, impeding direct comparisons with our results.

The positive association we found between SMI and imprisonment is consistent with much of the broader recidivism literature (17–19). However, while other studies have suggested that most of the effect of reimprisonment for people with SMI is related to co-occurring substance use (35), we found that SMI and substance use were both related to reimprisonment in our multivariable model. If robust, these findings underlie the importance of treating both types of conditions. Despite an association between housing and recidivism in the literature (27), needed housing was not associated with imprisonment in our study population. It is possible that the lack of a housing-imprisonment association is reflective of clients securing housing after program intake, or as one systematic review suggests, housing interventions alone may be insufficient to reduce criminal justice involvement (36).

25755609, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1176/appi.prcp.20250046, Wiley Online Library on [31/03/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Our analysis of imprisonment did not account for criminogenic risk factors, including those articulated by the Risk-Need-Responsivity model. Indeed, others have found that inclusion of criminogenic risk factors have attenuated and modified the effect of SMI in multivariable models of recidivism (17). A growing body of research is examining how SMI symptoms may not only exacerbate these risk factors, but the risk factors themselves may be more prevalent among people with SMI than those without. Greater efforts are needed to further elucidate this relationship.

In sum, people in transitional care programs with SMI have more social and medical needs and higher imprisonment risk than others. These results argue for specialized interventions at release for people with SMI, but currently few exist. Informed by our results, the FIT Program has expanded to further address the needs of people with SMI during reentry. This expanded model, FIT Wellness, builds on the existing TCN framework of employing CHWs for case management and patient navigation. However, unlike the FIT Program, enrollment into FIT Wellness always begins with in-reach during incarceration; linkage occurs to integrated, co-located psychiatric and primary care clinics, rather than relying on referrals to outside psychiatrists (37). Integrated, co-located mental and physical healthcare has been shown to improve care access, reduce psychiatric care stigma, and improve mental and physical outcomes (38, 39). Traditionally, healthcare reentry programs have not focused on addressing criminogenic risk. In the future, FIT Wellness and other TCN programs should explore the impact of integrating healthcare services with criminogenic risk (14) interventions. Otherwise, healthcare treatment efforts may be stymied by continued criminal-legal involvement.

This study has limitations. Our data are based on program intake surveys and do not provide longitudinal information on engagement or evolving needs. As described, information on criminogenic risk factors was not collected. Diagnoses were based on clients' self-report and personality disorders, which are overrepresented in jail and prison populations, were not queried at intake. Further, self-report likely is over-inclusive of SMI diagnoses, thus providing a conservative estimate of the differences between SMI and non-SMI clients. Another limitation is our focus on reimprisonment; our inability to include arrests for offenses beyond those resulting in imprisonment (i.e., misdemeanors) is another factor that likely diminished differences between SMI and non-SMI clients in regard to their criminal-legal involvement (40). Moreover, our lack of misdemeanor data may explain the null finding between housing need and subsequent criminal-legal involvement. We were also unable to determine if SMI may inadvertently result in greater surveillance, and thus increase imprisonment risk (41). Although this study focused on imprisonment, it is important to note that reentry is a complex process with many outcomes (e.g., longitudinal housing, employment) that can be used to define reentry success. Finally, our findings could have been influenced by changes in arrest and sentencing patterns related to the COVID-19 pandemic.

CONCLUSION

People reentering the community from incarceration face many challenges. Individuals with SMI in particular have greater social and medical needs and a higher risk of imprisonment. There are emerging opportunities and challenges in fortifying reentry services for TCN clients with SMI. Additional research is needed from other transitional care clinics regarding outcomes for their SMI populations. Transitional programs should consider implementing models tailored to the needs of people with SMI.

AUTHOR AND ARTICLE INFORMATION

Division of Infectious Diseases, University of North Carolina School of Medicine, Chapel Hill, North Carolina, USA (Rosen); Department of Psychiatry, University of North Carolina School of Medicine, Chapel Hill, North Carolina, USA (Zarzar); Department of Family Medicine, University of North Carolina School of Medicine, Chapel Hill, North Carolina, USA (Baker, Ashkin).

Send correspondence to Dr. Rosen (drosen@med.unc.edu).

Previous Presentation: This data has not been shared or presented at a meeting prior to this submission.

This project was supported through a grant from The Duke Endowment (no number).

The authors thank the NC FIT staff and clients, without whom this study would not have been possible.

The authors declare no conflicts of interest.

Data for this project are subject to third party restrictions.

This is an open access article under the terms of the Creative Commons Attribution-NonCommercial-NoDerivs License, which permits use and distribution in any medium, provided the original work is properly cited, the use is non-commercial and no modifications or adaptations are made.

© 2026 The Author(s). Psychiatric Research and Clinical Practice published by Wiley Periodicals LLC on behalf of American Psychiatric Association.

Received April 1, 2025; revised November 3, 2025; accepted December 1, 2025.

REFERENCES

1. Carson EA, Kluckow R. Prisoners in 2022 – statistical tables. 2023. NCJ 307149. November [cited 2025 Mar 2]. Available from: https://bjs.ojp.gov/document/p22st.pdf
2. Zeng Z. Jail inmates in 2022 – statistical tables. 2023. NCJ 307086. December [cited 2024 Jul 22]. Available from: https://bjs.ojp.gov/library/publications/jail-inmates-2022-statistical-tables
3. Western B, Braga AA, Davis J, Sirois C. Stress and hardship after prison. Am J Sociol. 2015;120(5):1512–47. https://doi.org/10.1086/681301
4. Mallik-Kane K, Visher CA. Health and prisoner reentry: how physical, mental, and substance abuse conditions shape the process of reintegration. Washington, DC, The Urban Institute, 2008. p. 1–68.
5. Bronson J, Berzofsky M. Indicators of mental health problems reported by prisoners and jail inmates, 2011–2012. 2017. NCJ

25755609, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1176/appi.prcp.20250046, Wiley Online Library on [31/03/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

250612. June [cited 2018 Jul 9]. Available from: https://www.bjs.gov/content/pub/pdf/imhprpji1112.pdf
6. Maruschak LM, Berzofsky M, Unangst J. Medical problems of state and federal prisoners and jail inmates, 2011–12. 2015. NCJ 248491. February [cited 2015 Feb 6]. https://bjs.ojp.gov/content/pub/pdf/mpsfpji1112.pdf
7. Emilian C, Al-Juffali N, Fazel S. Prevalence of severe mental illness among people in prison across 43 countries: a systematic review and meta-analysis. Lancet Public Health. 2025;10(2):e97–110. https://doi.org/10.1016/S2468-2667(24)00280-9
8. National Institute of Mental Health. Mental Illness. Mental Health Information. [cited 2024 Sep 23]. Available from: https://www.nimh.nih.gov/health/statistics/mental-illness#:~:text=Serious%20mental%20illness%20(SMI)%20is,or%20more%20major%20life%20activities
9. Gonzales L, Kois LE, Chen C, Lopez-Aybar L, McCullough B, McLaughlin KJ. Reliability of the term "serious mental illness": a systematic review. Psychiatr Serv. 2022;73(11):1255–62. https://doi.org/10.1176/appi.ps.202100661
10. Pope LG, Smith TE, Wisdom JP, Easter A, Pollock M. Transitioning between systems of care: missed opportunities for engaging adults with serious mental illness and criminal justice involvement. Behav Sci Law. 2013;31(4):444–56. https://doi.org/10.1002/bsl.2074
11. Lovell D, Gagliardi GJ, Peterson PD. Recidivism and use of services among persons with mental illness after release from prison. Psychiatr Serv. 2002;53(10):1290–6. https://doi.org/10.1176/appi.ps.53.10.1290
12. Baranyi G, Fazel S, Langerfeldt SD, Mundt AP. The prevalence of comorbid serious mental illnesses and substance use disorders in prison populations: a systematic review and meta-analysis. Lancet Public Health. 2022;7(6):e557–68. https://doi.org/10.1016/S2468-2667(22)00093-7
13. Bonfine N, Wilson AB, Munetz MR. Meeting the needs of justice-involved people with serious mental illness within community behavioral health systems. Psychiatr Serv. 2020;71(4):355–63. https://doi.org/10.1176/appi.ps.201900453
14. Morgan RD, Scanlon F, Van Horn SA. Criminogenic risk and mental health: a complicated relationship. CNS Spectr. 2020;25(2):237–44. https://doi.org/10.1017/S109285291900141X
15. Rotter M, Compton M. Criminal legal involvement: a cause and consequence of social determinants of health. Psychiatr Serv. 2022;73(1):108–11. https://doi.org/10.1176/appi.ps.202000741
16. Baillargeon J, Binswanger IA, Penn JV, Williams BA, Murray OJ. Psychiatric disorders and repeat incarcerations: the revolving prison door. Am J Psychiatr. 2009;166(1):103–9. https://doi.org/10.1176/appi.ajp.2008.08030416
17. Applegarth DM. Examining the connection between mental illness and recidivism for persons on parole. J Crim Justice. 2024;95(November–December):102315. https://doi.org/10.1016/j.jcrimjus.2024.102315
18. Cloyes KG, Wong B, Latimer S, Abarca J. Time to prison return for offenders with serious mental illness released from prison: a survival analysis. Crim Justice Behav. 2010;37(2):175–87. https://doi.org/10.1177/0093854809354370
19. Bales WD, Nadel M, Reed C, Blomberg TG. Recidivism and inmate mental illness. Int J Criminol Sociol. 2017;6:40–51. https://doi.org/10.6000/1929-4409.2017.06.05
20. Stewart AC, Cossar RD, Quinn B, Dietze P, Romero L, Wilkinson AL, et al. Criminal justice involvement after release from prison following exposure to community mental health services among people who use illicit drugs and have mental illness: a systematic review. J Urban Health. 2022;99(4):635–54. https://doi.org/10.1007/s11524-022-00635-5
21. Network TC. Transitions clinic network sites. 2021 [cited 2021 Jan 23]. Available from: https://transitionsclinic.org/locations/
22. Wang EA, Hong CS, Shavit S, Sanders R, Kessell E, Kushel MB. Engaging individuals recently released from prison into primary care: a randomized trial. Randomized controlled trial research support, N.I.H., extramural research support, non-U.S. gov't. Am J Public Health. 2012;102(9):e22–9. https://doi.org/10.2105/AJPH.2012.300894
23. Wang EA, Lin HJ, Aminawung JA, Busch SH, Gallagher C, Maurer K, et al. Propensity-matched study of enhanced primary care on contact with the criminal justice system among individuals recently released from prison to New Haven. BMJ Open. 2019;9(5):e028097. https://doi.org/10.1136/bmjopen-2018-028097
24. Harvey TD, Busch SH, Lin HJ, Aminawung JA, Puglisi L, Shavit S, et al. Cost savings of a primary care program for individuals recently released from prison: a propensity-matched study. BMC Health Serv Res. 2022;22(1):585. https://doi.org/10.1186/s12913-022-07985-5
25. Baillargeon J, Hoge SK, Penn JV. Addressing the challenge of community reentry among released inmates with serious mental illness. Am J Community Psychol. 2010;46(3-4):361–75. https://doi.org/10.1007/s10464-010-9345-6
26. Applegarth DM, Abrams LS, Farabee DJ. Exploring reentry concerns of incarcerated individuals with severe mental illness. Community Ment Health J. 2025;61(4):704–15. https://doi.org/10.1007/s10597-024-01389-x
27. Nilsson SF, Nordentoft M, Fazel S, Laursen TM. Risk of homelessness after prison release and recidivism in Denmark: a nationwide, register-based cohort study. Lancet Public Health. 2023;8(10):e756–65. https://doi.org/10.1016/S2468-2667(23)00152-4
28. Burns ME, Cook S, Brown LM, Dague L, Tyska S, Hernandez Romero K, et al. Association between assistance with Medicaid enrollment and use of health care after incarceration among adults with a history of substance use. JAMA Netw Open. 2022;5(1):e2142688. https://doi.org/10.1001/jamanetworkopen.2021.42688
29. Blackburn J, Norwood C, Rusyniak D, Gilbert AL, Sullivan J, Menachemi N. Indiana's section 1115 Medicaid waiver and interagency coordination improve enrollment for justice-involved adults. Health Aff. 2020;39(11):1891–9. https://doi.org/10.1377/hlthaff.2019.01823
30. KFF. Medicaid waiver tracker: approved and pending section 1115 waivers by state. KFF; 2025 [cited 2025 Jul 21]. Available from: https://www.kff.org/report-section/section-1115-waiver-tracker-key-themes-maps/
31. Hinton E, Pillai A, Diana A. Section 1115 waiver watch: Medicaid pre-release services for people who are incarcerated August 19, 2024. [cited 2024 Sep 10]. Available from: https://www.kff.org/medicaid/issue-brief/section-1115-waiver-watch-medicaid-pre-release-services-for-people-who-are-incarcerated/
32. Lyons K. Prison reentry council sets ambitious goal for helping people released from prison. NC Newsline [cited 2024 Oct 18]. Available from: https://ncnewsline.com/2024/02/15/prison-reentry-council-sets-ambitious-goal-for-helping-people-released-from-prison/
33. Kraemer B. NC prison population exceeds forecasts as state works to comply with new DOJ ruling. 2024. [cited 2024 Sep 3]. Available from: https://www.carolinajournal.com/nc-prison-population-exceeds-forecasts-as-state-works-to-comply-with-new-doj-ruling/
34. Baxley J, Blythe A. The 'Big Beautiful Bill' has passed. Here's how it could affect health care in NC. NC Health News [cited 2025 Jul 11]. Available from: https://www.northcarolinahealthnews.org/2025/07/10/big-beautiful-bill-impacts/
35. Wilson JA, Wood PB. Dissecting the relationship between mental illness and return to incarceration. J Crim Justice. 2014;42(6):527–37. https://doi.org/10.1016/j.jcrimjus.2014.09.005

25755609, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1176/appi.prcp.20250046, Wiley Online Library on [31/03/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

36. Leclair MC, Deveaux F, Roy L, Goulet MH, Latimer EA, Crocker AG. The impact of housing first on criminal justice outcomes among homeless people with mental illness: a systematic review. Can J Psychiatr. 2019;64(8):525–30. https://doi.org/10.1177/0706743718815902
37. Zarzar TR, Rosen DL, Ashkin EA. Supporting people with serious mental illness after prison release: the FIT wellness model. Psychiatr Serv. 2024;75(4):395. https://doi.org/10.1176/appi.ps.20230513
38. Ramanuj P, Ferenchik E, Docherty M, Spaeth-Rublee B, Pincus HA. Evolving models of integrated behavioral health and primary care. Curr Psychiatry Rep. 2019;21(1):4. https://doi.org/10.1007/s11920-019-0985-4
39. Duncan MH, Erickson JM, Chang D, Toor R, Ratzliff ADH. Psychiatry's expanded integration into primary care. Psychiatr Clin North Am. 2022;45(1):71–80. https://doi.org/10.1016/j.psc.2021.11.004
40. Pope LG, Watson AC, Wood J, Compton MT, American Psychiatric Association Publishing. Entangled: how people with serious mental illness get caught in misdemeanor systems. 1st ed. Washington, DC, American Psychiatric Association Publishing, 2025. p. xxii, 307.
41. Domino ME, Gertner A, Grabert B, Cuddeback GS, Childers T, Morrissey JP. Do timely mental health services reduce re-incarceration among prison releasees with severe mental illness? Health Serv Res. 2019;54(3):592–602. https://doi.org/10.1111/1475-6773.13128

25755609, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1176/appi.prcp.20250046, Wiley Online Library on [31/03/2026]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License