New York City Health Justice Network Recidivism Evaluation Study

Final Report
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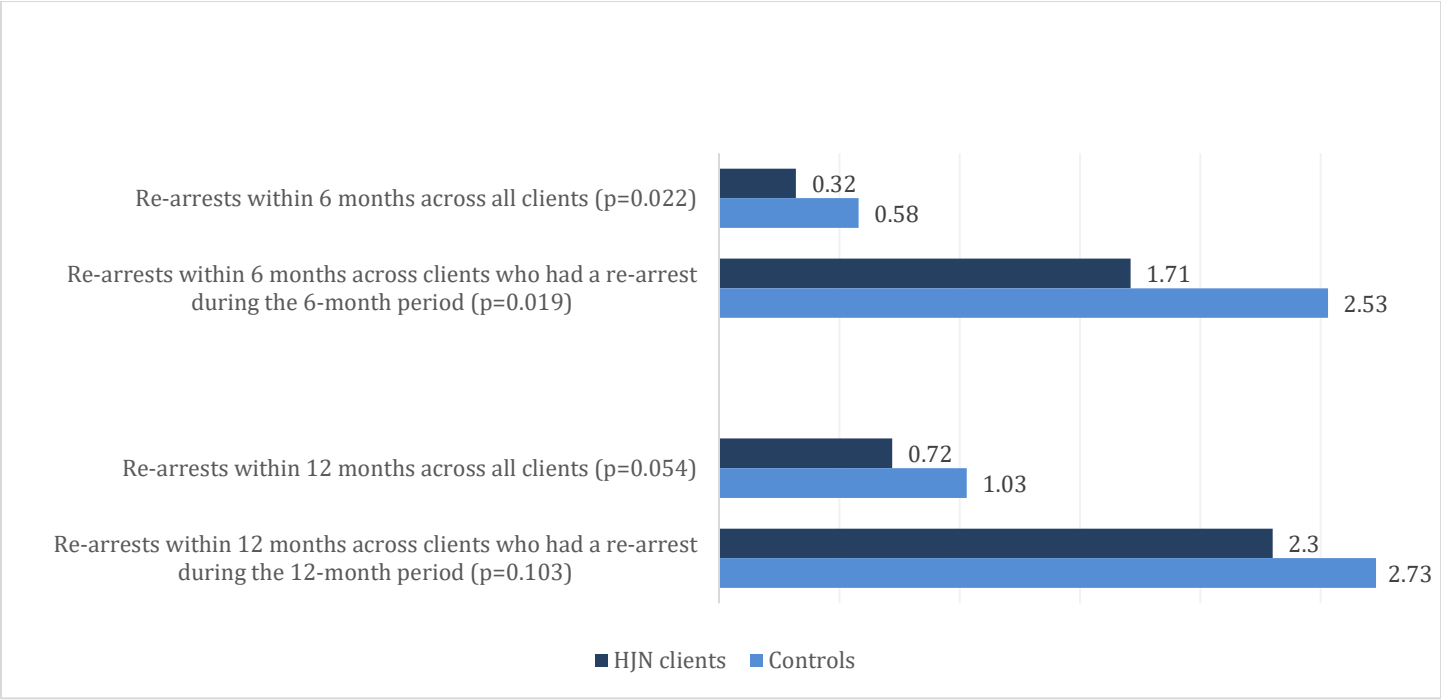**Maria Khan, PhD**

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The US incarcerates more people than any country in the world.[1–3] Driven by racial bias in policing policies, practices and sentencing, as well as biases toward individuals of lower socio-economic background, minority groups are disproportionately exposed to police contact and incarceration.[4–8] People who have a history of incarceration face elevated risk of adverse health outcomes prior to incarceration, and incarceration is likely a determinant of the racial/ethnicity disparity in health.[9] There is strong evidence showing that criminal legal system involvement (CLI) plays a role in cardiovascular disease (CVD)[10–14] and STI/HIV exposure.[15–21] CLI also appears to be associated with other chronic conditions such as diabetes[22,23] and adverse pregnancy outcomes such as miscarriage.[24] In addition, there is evidence CLI increases exposure to violence, including homicide and suicide.[14,25] Given the intersection of incarceration and a myriad of health risks, there is a critical need to develop public health programs for people released from incarceration focused on client-centered goals to best protect health and wellbeing, and promote social integration, upon return to the community.

The New York City Health Justice Network (NYC HJN), an innovative health service delivery program for individuals returning from incarceration, was developed and implemented by the NYC Department of Health and Mental Hygiene (DOHMH), with criminal justice reform funding from the Manhattan District Attorney's Office (DANY) Criminal Justice Investment Initiative (CJII). NYC HJN sought to provide individuals recently released from incarceration with peer support from community health workers (CHW) with lived experience of successful reentry from the criminal legal system and access to integrated primary care and social services. As an inter-sectoral strategy to improve community health and well-being, NYC HJN aimed to reduce the likelihood of further contact with the criminal legal system. NYC HJN addressed a wide range of client health needs, including support with health insurance, primary care, dental care, mental and behavioral health, and social service needs such as assistance with employment, housing, food security, obtaining vital documents (e.g., identification), and legal support. CHWs provided social and emotional support and served as critical advocates to help clients navigate the healthcare system as well as a wide range of social service organizations deemed critical to successful community reentry. The NYC HJN program served people released from both prison and jail. Those served generally represented the incarcerated population in NYC.

This final evaluation report aims to examine the association of NYC HJN program participation with criminal legal system re-involvement outcomes, including re-arrests, conviction/reconviction and reincarceration at 6- and 12-months post program start. For the purpose of this evaluation, a sample of HJN clients who enrolled in the program between 2020-2022 were recruited and consented into the study. Using administrative data from criminal justice agencies in New York, HJN clients were compared to a sample of controls matched on age, sex, time spent incarcerated during the last jail or prison stay, top charge for the last incarceration, and frequency of incarceration in the past 5 years. For the final analysis, 203 HJN clients were matched against 339 individuals serving as controls. Bivariate results showed that HJN clients had a lower average *number* of re-arrests at 6-months compared to controls, as shown in Figure 1 below. This trend was present up to 12 months after program start. Other outcomes such as rates of conviction/reconviction and reincarceration were lower among HJN program participation relative to controls but were not statistically significantly different between the two groups. After adjusting for covariates,

there were no significant differences in any of the outcomes at 6- or 12-months between HJN clients and controls, except for the lower mean number of re-arrests in the HJN group. The lack of statistical significance among other variables should be interpreted with caution, as the results may have been affected by the small sample size and relative short duration of the study.

Figure 1. Average number of re-arrests per person at 6- and 12-months among HJN clients vs. controls.

Re-arrests within 6 months across all clients (p=0.022)
HJN clients 0.32
Controls 0.58

Re-arrests within 6 months across clients who had a re-arrest during the 6-month period (p=0.019)
HJN clients 1.71
Controls 2.53

Re-arrests within 12 months across all clients (p=0.054)
HJN clients 0.72
Controls 1.03

Re-arrests within 12 months across clients who had a re-arrest during the 12-month period (p=0.103)
HJN clients 2.3
Controls 2.73

■ HJN clients ■ Controls

Note. P-values in parentheses indicate statistical comparisons between HJN and controls.

In brief, this final evaluation provides preliminary evidence suggestive of a benefit of NYC HJN for reducing at least some aspects of criminal legal system re-involvement in the first 6-12 months following program enrollment. However, due to the pilot nature of this study, the evidence is not conclusive, and more research is warranted to further investigate the protective effect of such enhanced reentry support programs on future criminal legal system re-involvement. Key recommendations from this report include the need to reinforce the criminal legal system as a critical player in recidivism prevention through, for example, the reduction of biased policing in minoritized communities, improved care of individuals in custody, and more coordinated discharge planning. In addition, we need to also strengthen municipal health departments that link healthcare and social services for individuals released from incarceration, including primary care, housing, employment, vocational training, and other services. To achieve this, more resources are needed to develop a cadre of CHWs with lived experience of the criminal legal system to support such citywide public health interventions. In addition, there is a need to better understand and tailor programs to different individuals based on age, gender, race/ethnicity, material living conditions and healthcare or mental health needs at the point of entry, suggesting that structural competence and the ability to identify and triage diverse health needs are critical features that should be embedded in reentry programs. A concurrent evaluation assesses the effects of HJN on health outcomes. Preliminary findings (as of the

date of this publication) show positive results. Future research is warranted to assess how improvements in health outcomes in relation to programs such as HJN may be linked to an increased investment in material resources that increase likelihood of successful reentry and thereby a reduction in criminal legal justice re-involvement.

By simultaneously addressing health and social needs and relating to persons with CLI using a trauma-informed approach, NYC HJN and public health programs like it have the potential to play a critical role in supporting successful community re-integration of people with prior CLI.

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1. BACKGROUND

In 2019, over 20,000 people were released from state and federal prisons in New York State (NYS), of whom approximately 2,000 were released from federal prisons. In addition, at least 3,500 people were released from New York City (NYC) jails following sentence completion, though this is likely an underestimation due to some individuals not being publicly reported after completing a sentence that was less than one year in duration.[26–29] Incarceration and reentry into the community are stressful life events. Incarcerated individuals experience significant stress during incarceration due to loss of freedom, isolation, and stigma associated with incarceration.[30] During reentry, those who are released from jail or prison often have few material resources or established plans to connect with valuable community-based social services and healthcare, making it difficult to negotiate the administrative burdens of housing and employment, re-establish family ties, and avoid return to high-risk situations.[31,32] These burdens impact people's ability to successfully re-integrate in a seamless fashion. In addition, there are significant health needs during reentry, including gaining access to primary healthcare, obtaining medications, and mental and behavioral healthcare.[9] Individuals released from incarceration experience higher utilization of emergency services and higher rates of preventable hospital admissions.[9]

The stress-buffering effect of social ties on well-being is well established and is thought to play an important role in protecting against adverse outcomes during the reentry process[33–36] and subsequent criminal legal system re-involvement.[37–41] Social support buffers the stress associated with incarceration and reentry by enabling the individual to better cope, thereby working through negative emotional and behavioral responses.[42] In addition, members of an individual's social support network can provide instrumental (e.g., assistance with obtaining a cell phone or insurance) and emotional support (e.g., being available to talk about life challenges),[43] which is critical during reentry, given incarceration disrupts community ties, employment, and housing as a result of isolation, exclusion, and stigmatization. There is evidence that social support has positive effects on the well-being, employment, and health of those released from incarceration.[43–46]

2. PROGRAM DESIGN

With these principles in mind, the NYC HJN was designed through a trauma-informed lens and uses trained, professional community health workers (CHWs) with lived experience of prior incarceration to improve social support during the reentry process and address the needs of individuals (i.e., clients) recently released from incarceration. The use of CHWs with lived experience of successful reentry from the criminal legal system ensures that those supporting NYC HJN clients are knowledgeable about their unique needs and challenges. CHWs provide social support in several ways including: (a) support by discussing with clients their post-release goals and pathways to achieving goals; and (b) instrumental support by providing linkages to health and social services such as primary, dental and mental health care, employment, housing, food assistance and acquiring vital documents (e.g., identification, birth certificate). In essence, CHWs serve as health educators, case workers and navigators for

clients, creating a linkage vehicle for clients to connect with critical services and the community at-large upon reentry.

Individuals 18 years or older, residing in NYC, and released from incarceration within 3 years prior to enrollment were eligible to participate in the NYC HJN. The NYC HJN program began enrolling clients in September 2019 and, as of December 2023, had enrolled a total of 1,339 clients. Outreach to clients was conducted by the NYC HJN program via halfway houses, transitional hotels, shelters, various partner community-based organizations serving this population, as well as other community-based organizations and court partners. Prospective clients were informed of the nature of the NYC HJN program and invited to voluntarily participate in the program. Clients provided informed consent for participation in the program, and those enrolled were additionally invited to participate in this evaluation study. Participation in the program was not contingent upon participation in the evaluation study; hence, NYC HJN clients who agreed to participate in the recidivism study signed a separate informed consent form specific to this evaluation.

Upon consent into program participation, clients were assigned a CHW and contacted for the initial intake assessment. The intake assessment provided much of the baseline data used in this report to describe client characteristics and baseline needs. Following the intake assessment, clients worked with their assigned CHW to address their needs. Key programmatic aims were to assist with the linkage to primary care, behavioral healthcare and key social service needs such as housing and employment. While the original protocol aimed to retain clients for six months, the NYC HJN program was tailored to each client's specific needs, which meant the duration and extent of program engagement could vary among clients, with some clients engaged for a short duration in order to meet a discrete, onetime need (e.g., obtaining a birth certificate). A novel element of the program was this flexibility and client-centered approach.

While clients remained in the program, CHWs connected and referred clients to social and healthcare services, as needed. In some instances, CHWs accompanied clients to these appointments. In addition, CHWs aimed to help clients establish goals and make progress towards these goals. CHWs generally made at least one contact per week with each client. Typically, clients would exit the program once all their needs were met (in most cases within 6 months of program initiation). Exiting the program was established in two ways: 1) clients expressly indicating that they had no further needs, time or interest; 2) clients were unresponsive after 4 outreach attempts over 4 weeks, in which case program staff and CHWs would examine client records to see if previously indicated needs were met and then decide to close the case. On a case-by-case basis, if the CHW and client had had a good rapport, the program team would make a judgment call to leave a case open longer than the 4-week standard for non-engagement, in order to leave open the possibility of re-engagement. Similarly, if they received information from a family member or other contact sooner than 4 weeks that indicated a reason for case closure, the CHW would consult with program leadership about closing the case early.

3. OUTCOMES EVALUATION APPROACH

The primary goals of the recidivism evaluation study were to (1) investigate the association between NYC HJN program participation and risk of criminal legal system re-involvement (i.e., re-arrests, reconviction, reincarceration, etc.) at 6- and 12-months post-enrollment, and (2) examine whether this association varies by socio-demographic factors or factors related to the most recent incarceration (e.g., release from prison vs. jail). Given that evidence suggests CHW models improve linkage to care during reentry after incarceration,[44–46] and social support and healthcare protect against recidivism,[41,47,48] we hypothesized that NYC HJN would better address the social and healthcare needs of clients, which, in turn, will reduce the likelihood of subsequent criminal legal system involvement. Specifically, by addressing healthcare needs and related social service needs (i.e., food security, housing, employment, etc.), the improved stability may translate to reduced mental health needs, substance use, and employment. Each of these structural factors is strongly linked to criminal legal system involvement. See the Appendix 1 for the program logic model.

To conduct this investigation, the NYU-CUNY PRC ("PRC") collaborated with the Manhattan District Attorney's Office (DANY), with guidance from the NYC Department of Health and Mental Hygiene (DOHMH), to compare NYC HJN clients to a matched comparison group of individuals released from incarceration (jail or prison) in NYS who had not participated in the NYC HJN on post-incarceration recidivism. Matching took into account client demographics, time frame of release from incarceration, and similarity of prior history in criminal legal system involvement. In the final evaluation, we linked NYC HJN program data to data from the NYC Department of Corrections (DOC) and the NYS Department of Corrections and Community Supervision (DOCCS) to compare NYC HJN clients with a matched comparison group of individuals released from incarceration who were unexposed to NYC HJN. Using NYS Division of Criminal Justice Services (DCJS) data, we investigated the association of NYC HJN participation (vs. the matched comparison) with criminal legal system re-involvement outcomes, specifically re-arrests, reconviction and reincarceration.

3.1 Analytic sample selection

NYC HJN clients (n=472) were invited to participate in the recidivism evaluation from April 2021 through October 2022. In total, 286 clients consented to the recidivism evaluation. Of the 286 clients, past reincarceration data (from DOC or DOCCS for jail vs. prison stays, respectively) were available for n=203 clients (70.1%). Clients who could not be linked in DOC or DOCCS data (n=83) were likely individuals released from federal prison or otherwise had data problems (e.g., name changes, reporting errors) in the various datasets. Most of the included clients reported being released from jail or prison within the past 6 months (76%). These clients were matched with a comparison group of individuals (n=399) released from incarceration (using data from DOC or DOCCS) in NYS in 2021 or 2022 (i.e., years when HJN program started for intervention clients, Figure 2). In addition, controls were matched on time spent incarcerated during the last stay (+/- 6 months), top charge for the last incarceration (i.e., violent felony, drug offenses, property and other offenses, other coercive offenses), total number of incarcerations

in the past 5 years (1 vs. more than 1), age (+/- 5 years), and sex. The number of controls per each HJN client ranged from 1-5.

Figure 2. Analytic sample selection

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┌─────────────────────────────────────┐
│ 286 HJN clients consented to the     │
│ recidivism evaluation                │
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                │
                │        ┌──────────────────────────────────────────┐
                │───────▶│ Excluded:                                │
                │        │                                          │
                │        │ 83 HJN clients not able to be matched     │
                │        │ to DOC or DOCCS data                      │
                ▼        └──────────────────────────────────────────┘
┌─────────────────────────────┐       ┌──────────────────────────────────────────┐
│ 203 HJN clients             │       │ 339 matched controls released from        │
│                             │       │ incarceration in 2021 or 2022             │
│  • 123 identified in DOC     │◀─────▶│                                          │
│    data                     │       │   • 223 identified in DOC data            │
│  • 80 identified in DOCCS    │       │   • 116 identified in DOCCS data          │
│    data                     │       │                                          │
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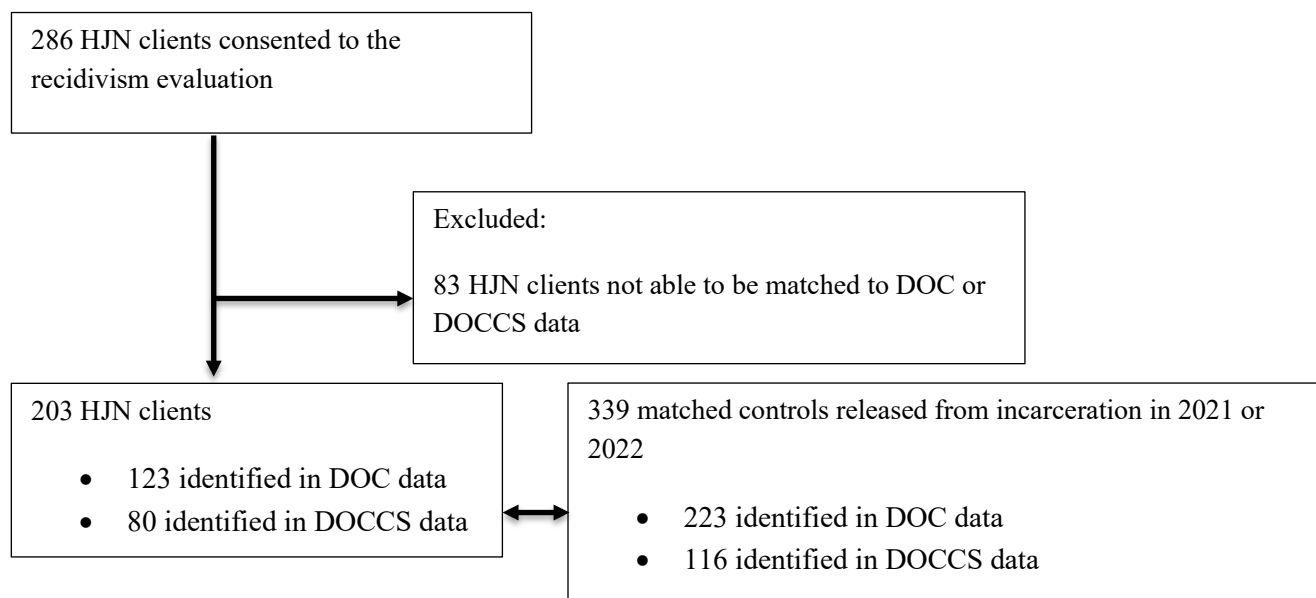
The study observation period was 12 months post the HJN program enrollment date (HJN clients) or latest jail or prison release (controls). HJN enrollment date was defined as the date of first contact with HJN community health workers (CHW). Note that we did not match the two groups on discharge year because there were discrepancies in some cases between the self-reported time frame of release and the dates captured in DOC or DOCCS among HJN clients. Thus, we limited the study baseline to 2021 and 2022.

3.2 Outcome measures

Outcomes for criminal legal system re-involvement included re-arrest and top disposition charge details. Relevant to this evaluation were outcomes that occurred during the study period (i.e. up to 12 months post the HJN program start among intervention clients or latest jail or prison release among controls). Detailed outcome definitions are available in Appendix 2. A summary of outcomes is as follows:

- **Re-arrest** within the 6-month and within the 12-month follow-up (no, yes)
- **Number of re-arrests** within the 6-month and within the 12-month follow-up

- **Type of alleged offense/top charge at disposition** (non-violent, violent)
- **Outcome of case disposition** (not convicted, convicted by verdict or plea)
- **Reincarceration** (no, yes)

In addition, we also examined the following outcomes for the first re-arrest during study follow-up:

- **Time to first re-arrest** (in days)
- **Type of alleged offense/top charge at disposition for the first re-arrest** (non-violent, violent)
- **Outcome of case disposition for the first re-arrest** (not convicted, convicted by verdict or plea)
- **Reincarceration for the first re-arrest** (no, yes)

Time to conviction/reconviction and time to reincarceration were deemed not relevant for this HJN program evaluation since these time periods are largely a function of criminal justice system process and calendar, in addition to factors such as nature and severity of the offense, defendant's criminal history or strength of evidence.

3.3 Data analysis

We compared demographic variables, time frame of release from incarceration and prior history in criminal legal system involvement between NYC HJN clients and matched controls using Chi-Square tests and independent samples t-tests. We also compared the characteristics of HJN clients included in the analytic sample to those excluded using Chi-Square tests.

Next, we examined associations between HJN program participation and the criminal justice re-involvement outcomes at 6- and 12-month follow-up using crude and adjusted log binomial and negative-binomial regressions (risk ratios (RR) and incident rate ratios (IRR) along with 95% confidence intervals (CIs)). Differences in time to first re-arrest by HJN program participation vs. controls were analyzed using Kaplan-Meier survival analysis and Cox regression (hazard ratio and 95% CIs). Multivariable models were adjusted for total number of incarcerations in the past 5 years, which was the only imbalance between the groups.

We also analyzed all outcomes by demographics (i.e., age groups, sex, race/ethnicity) and release from jail vs. prison using bivariate Chi-Square and multivariable log binomial models described above. Furthermore, among HJN clients, we also analyzed outcomes by education level, employment status, having children at home, and time since release at the HJN program enrollment (these variables were not available for controls).

All analyses were performed using SAS v.9.4 (Cary, NC). Statistical significance was set at *p*<0.05.

4. RESULTS

4.1 Sample characteristics among HJN clients vs. controls

In total, 286 clients consented to the current evaluation study. A majority of clients learned about NYC HJN through a correctional institution (41.9%), a community-based organization (30.2%) or a healthcare facility (7.3%), while other sources of referral included friends and other community contacts.

Table 1 shows the sample characteristics in HJN clients (n=203) vs. controls (n=339). Both HJN clients and matched controls were similar in demographics and most prior history of criminal legal system involvement, excluding incarcerations in the past five years. They were of similar age (M=45.03y, SD=12.72y, range 20-78y vs. M=42.89y, SD=12.27y, range 18-73y), mostly men (94.6% vs. 96.5%), Black (64% vs. 61.4%) or Latino/a (28.6% vs. 30.7%). Nearly half of each group were previously incarcerated for a violent crime (48.3% vs. 48.4%) and spent on average just over 50 months incarcerated (M= 54.83, SD=113.49 vs. M=52.74, SD=105.10). All the aforementioned comparisons were statistically non-significant (p>0.05). The only variable that was statistically different between groups was the number of incarcerations in the past 5 years, where 60.6% of HJN clients vs. 71.1% of controls had 2 or more incarcerations (*p*=.006). There were no differences between HJN clients included vs. excluded from this analysis in terms of demographic characteristics (Appendix 3).

Appendix 4 shows some other demographic variables that were available for HJN clients (full HJN sample, n=286) but not the controls. The majority of HJN spoke English (94.2%) while nearly one in five spoke Spanish (16.8%). The majority had a high school education or greater (70.7%). Most clients were unemployed at the time of HJN program intake (80.3%) and 15.3% were employed either full-time (10.9%) or part-time (4.4%). Approximately one-third of the clients had children younger than 18 years old (35.4%). At the time of intake, a small minority lived in their own home (2.8%); otherwise, clients primarily stayed with family (18.5%), at transitional homes (17.1%), halfway houses (15.7%), hotels (11.5%), shelters (10.1%) or they reported having multiple housing arrangements (14.3%).

Table 1. Demographic characteristics (HJN n=203, control n=339).

	HJN N=203		Control N=339		
	n	%	n	%	p-value
Age group					.648
18-25	11	5.4	23	6.8	
26-35	49	24.1	97	28.6	
36-50	64	31.5	106	31.3	
51-61	62	30.5	90	26.5	
62-78	17	8.4	23	6.8	
Age (Mean, SD)	45.03	12.72	42.89	12.27	.053
Sex					.294
Male	192	94.6	327	96.5	
Female	11	5.4	12	3.5	
Race/ethnicity*					.895
White	14	6.9	24	7.1	
Black	130	64.0	208	61.4	
Latino/a	58	28.6	104	30.7	
Other	1	0.5	3	0.9	
Top charge for the last incarceration					.982
Violent felony	98	48.3	164	48.4	
Non-violent felony	105	51.7	175	51.6	
Other coercive	18	17.1	26	14.9	
Drug offenses	19	18.1	33	18.9	
Property and other offenses	56	53.3	111	63.4	
Other	12	11.4	5	2.9	
Time spent incarcerated during the last incarceration (months) (Mean, SD)	54.83	113.49	52.74	105.10	.831
Total number of incarcerations in the past 5 years					.006
1	**82**	**40.4**	**98**	**28.9**	
2+	**121**	**60.6**	**241**	**71.1**	
HJN Program start (HJN clients) or Discharge year (control group)**					
2020	10	5.0	0	0.0	
2021	146	72.3	214	63.1	
2022	46	22.8	125	36.9	

Note. Source: DOC/DOCCS, *DCJS. Age variable source: HJN Program for HJN clients, DOC/DOCCS for controls. Column % are reported. Bolded statistics indicate statistically significant differences (p<.05) between HJN clients vs. controls, based on chi-square tests or independent-samples t-tests. **No statistical test performed because there is no common variable in the two samples. This data shows how follow-up was defined for each group when it started in the calendar year.

4.2 Descriptive statistics for criminal legal system re-involvement outcomes among HJN clients vs. controls

Table 2 compares the proportions or means of criminal legal system reinvolvement outcomes, including re-arrests, alleged violent crimes, convictions/reconvictions and reincarcerations, in HJN clients vs. controls at 6- and 12-month follow-ups. Nearly 7 in 10 HJN clients (68.5%) did not experience re-arrest in the 12-month follow-up, as compared 6 in 10 controls (62.2%). The incidence of re-arrests was lower among HJN clients in the first 6 months (18.7% vs. 23.0%) as well as in the 12-month follow-up (31.5%, n=64 vs. 37.8%). Furthermore, HJN clients had fewer multiple re-arrests during both follow-up periods (2+ re-arrests at 6-month follow-up: 6.5% vs. 11.3%; 12-month follow-up: 15.3% vs. 21.5%). However, none of the above comparisons reached statistical significance.

In contrast, in the 6-month follow-up, the mean *number* of re-arrests per client was significantly lower among HJN clients compared to controls overall (M=0.32, SD=0.84 vs. M=0.58, SD=1.76, p=0.022) and among those who were re-arrested (M=1.71, SD=1.21 vs. M=2.53, SD=2.98, p=0.019). In the 12-month follow-up, these numbers showed a similar trend but reached only marginal significance between HJN clients and controls overall (M=0.72, SD=1.44 vs. M=1.03, SD=2.24, p=0.054) and among those who were re-arrested (M=2.30, SD=1.73 vs. M=2.73, SD=2.95, p=0.103).

HJN clients and controls had similar rates of being charged with violent offenses (top charge at the time of case disposition) (6-month follow-up: 3.9% vs. 4.1%; 12-month follow-up 7.6% vs. 9.1%; note that the indication of charge was among all individuals with or without eventual conviction). On the other hand, HJN clients had a marginally significant lower conviction/reconviction rate at the 6-month follow-up, compared to controls (6.4% vs. 11.5%, p=0.051). However, the conviction/reconviction rate was not statistically different at the 12-month follow-up (13.3% vs. 17.4%). Incidence of no reincarceration was also comparable between HJN clients and controls overall (6-month follow-up: 98.0% vs. 97.3%; 12-month follow-up: 96.1% vs. 95.3%). Note, however, that case processing times tend to be long in New York City, reducing the likelihood of observing conviction/reconviction and reincarceration within 12 months in general.

Table 2. Summary statistics for criminal legal system re-involvement outcomes (HJN n=203, control n=339).

	HJN		Control		
	N=203		N=339		
	n	%	n	%	p-value

Re-arrests					
Clients with no re-arrest within 6 months	165	81.3	261	77.0	0.239
Clients with re-arrest within 6 months	38	18.7	78	23.0	
Clients with no re-arrest within 12 months	139	68.5	211	62.2	0.142
Clients with re-arrest within 12 months	64	31.5	128	37.8	
Clients by number of re-arrests within 6 months					0.328
0	165	81.3	261	77.0	
1	25	12.3	40	11.8	
2	6	3.0	17	5.0	
3+	7	3.5	21	6.3	
Clients by number of re-arrests within 12 months					0.102
0	139	68.5	211	62.2	
1	32	15.8	55	16.2	
2	9	4.4	35	10.3	
3+	23	11.3	38	11.2	
Per person average number of re-arrests within 6 months across all clients*	**65**	**M=0.32 (SD=0.84)**	**197**	**M=0.58 (SD=1.76)**	**0.022**
Per person average number of re-arrests within 6 months across clients who had a re-arrest during this period*	**65**	**M=1.71 (SD=1.21)**	**197**	**M=2.53 (SD=2.98)**	**0.019**
Per person average number of re-arrests with 12 months across all clients*	**147**	**M=0.72** **(SD=1.44)**	**349**	**M=1.03** **(SD=2.24)**	**0.054**
Per person average number of re-arrests within 12 months across clients who had a re-arrest during this period*	147	M=2.30 (SD=1.73)	349	M=2.73 (SD=2.95)	0.103
Type of alleged offense at case disposition					
Clients with alleged non-violent and violent type of offense at disposition within 6 months**					0.914
Non-violent	195	96.1	325	95.9	
Violent	8	3.9	14	4.1	
Clients with alleged non-violent and violent type of offense at disposition within 12 months**					0.564
Non-violent	170	92.4	269	90.9	
Violent	14	7.6	27	9.1	
Outcome of case disposition					
Clients with no convictions and convictions within 6 months					**0.051**
No conviction	**190**	**93.6**	**300**	**88.5**	
Conviction by verdict or plea	**13**	**6.4**	**39**	**11.5**	
Clients with no convictions and convictions within 6 months among those who were re-arrested at least once during this period					0.235
No conviction	25	65.8	39	50.0	
Conviction by verdict or plea	13	34.2	39	50.0	

Clients with no convictions and convictions within 12 months					0.206
No conviction	176	86.7	280	82.6	
Conviction by verdict or plea	27	13.3	59	17.4	
Clients with no convictions and convictions within 12 months among those who were re-arrested at least once during this period					0.608
No conviction	37	57.8	69	53.8	
Conviction by verdict or plea	27	42.2	59	46.1	
Reincarceration					
Clients with no reincarceration and reincarceration within 6 months					0.614
No reincarceration	199	98.0	330	97.3	
Reincarceration	4	2.0	9	2.7	
Clients with no reincarceration and reincarceration within 12 months					0.670
No reincarceration	195	96.1	323	95.3	
Reincarceration	8	3.9	16	4.7	

Note. Source: DCJS. Column % are reported. Bolded statistics indicate statistically significant differences (p<.05) or marginally significant differences (p<0.10) between HJN clients vs. controls, based on chi-square tests or independent-samples t-tests. *n for these variables refers to the total number of re-arrests. To obtain the per person average, the n is divided by either the full sample or the sub-sample with re-arrest(s) among HJN clients or controls. **Data available for all arrests other than where prosecution was declined or disposition information was unavailable. Note that the indication of charge was for all individuals regardless of eventual conviction or not.

In brief, while the vast majority of outcomes were favorable for HJN clients, compared to controls, a trend towards statistically significant difference emerged for only two outcomes within the first 6 months of the follow-up. Specifically, as shown in Table 2, HJN clients, compared to controls, experienced a significantly lower average *number* of re-arrests (p=0.022). The trend for lower average number of re-arrests also persisted until the end of the 12-month follow-up (p=0.054).

Tables 3a and 3b compare the relative risk (RR) and incident rate ratio (IRR) of experiencing a criminal legal system re-involvement outcome by HJN clients compared to controls, adjusting for the total number of incarcerations in the past 5 years, given that the intervention and control groups were imbalanced on this variable. While the unadjusted RRs based on regressions in the matched sample reflected proportional differences in the various CLI outcomes observed in summary statistics (Table 2), none of the aRRs, which additionally adjusted for prior incarceration history in the past five years, reached statistical significance (aRR range=0.63-1.07, Table 3a). However, in Table 3b, after controlling for the covariate, HJN clients had a statistically significant lower mean *number* of re-arrests per client in the 6-month follow-up overall (aIRR = 0.61, 95%CI=0.38, 0.99, p=0.044) and among those who were re-arrested in this time period (aIRR = 0.69, 95%CI=0.48, 0.98, p=0.037). Comparisons at 12-month follow-up were not statistically significant. Figure 3 shows the adjusted incidence rates or average number of re-arrests per person by study group and length of follow-up.

Table 3a. Regression models for binary criminal legal system re-involvement outcomes (HJN n=203, control n=339).

Outcome	RR	95%CI		p-value	aRR	95%CI		p-value
Re-arrests								
Re-arrest within 6 months	0.81	0.57	1.15	0.243	0.90	0.64	1.26	0.539
Re-arrest within 12 months	0.84	0.65	1.07	0.148	0.88	0.70	1.12	0.302
Type of alleged offense at case disposition								
Alleged violent offense within 6 months	0.95	0.41	2.24	0.914	1.07	0.46	2.51	0.878
Alleged violent offense within 12 months	0.83	0.45	1.55	0.566	0.91	0.48	1.68	0.752
Outcome of case disposition								
Conviction within 6 months	**0.56**	**0.31**	**1.02**	**0.057**	0.63	0.35	1.14	0.126
Conviction within 12 months	0.76	0.50	1.16	0.210	0.84	0.56	1.28	0.424
Reincarceration								
Reincarceration within 6 months	0.74	0.23	2.38	0.616	0.81	0.25	2.61	0.727
Reincarceration within 12 months	0.84	0.36	1.92	0.670	0.95	0.42	2.17	0.905

Note. Source: DCJS. Comparison HJN clients vs. controls. RR-relative risk, aRR- adjusted relative risk from log binomial regression. Models adjusted for total number of incarcerations in the past 5 years (1, 2+; source: DOC/DOCCS). Bolded statistics indicate marginally significant difference (p<0.10) between HJN clients vs. controls.

Table 3b. Regression models comparing re-arrest incidence rates (HJN n=203, control n=339).

Outcome	IRR	95%CI		p-value	aIRR	95%CI		p-value
Re-arrest incidence rate across all clients								
Re-arrest incidence rate within 6 months	**0.55**	**0.34**	**0.90**	**0.016**	**0.61**	**0.38**	**0.99**	**0.044**
Re-arrest incidence rate within 12 months	0.70	0.49	1.01	0.055	0.78	0.55	1.11	0.169
Re-arrest incidence rates across clients who had re-arrest during the follow-up period								
Re-arrest incidence rate within 6 months	**0.68**	**0.48**	**0.96**	**0.031**	**0.69**	**0.48**	**0.98**	**0.037**
Re-arrest incidence rate within 12 months	0.84	0.65	1.09	0.186	0.89	0.69	1.15	0.359

Note. Source: DCJS. Comparison HJN clients vs. controls. IRR-incidence rate ratio, aIRR- adjusted incidence rate ratio from negative binomial regression. Models adjusted for total number of incarcerations in the past 5 years (1, 2+; source: DOC/DOCCS). Bolded statistics indicate statistically significant differences (p<.05) between HJN clients vs. controls.

Figure 3. Adjusted incidence rates for re-arrest at 6- and 12-month among HJN clients vs. controls.
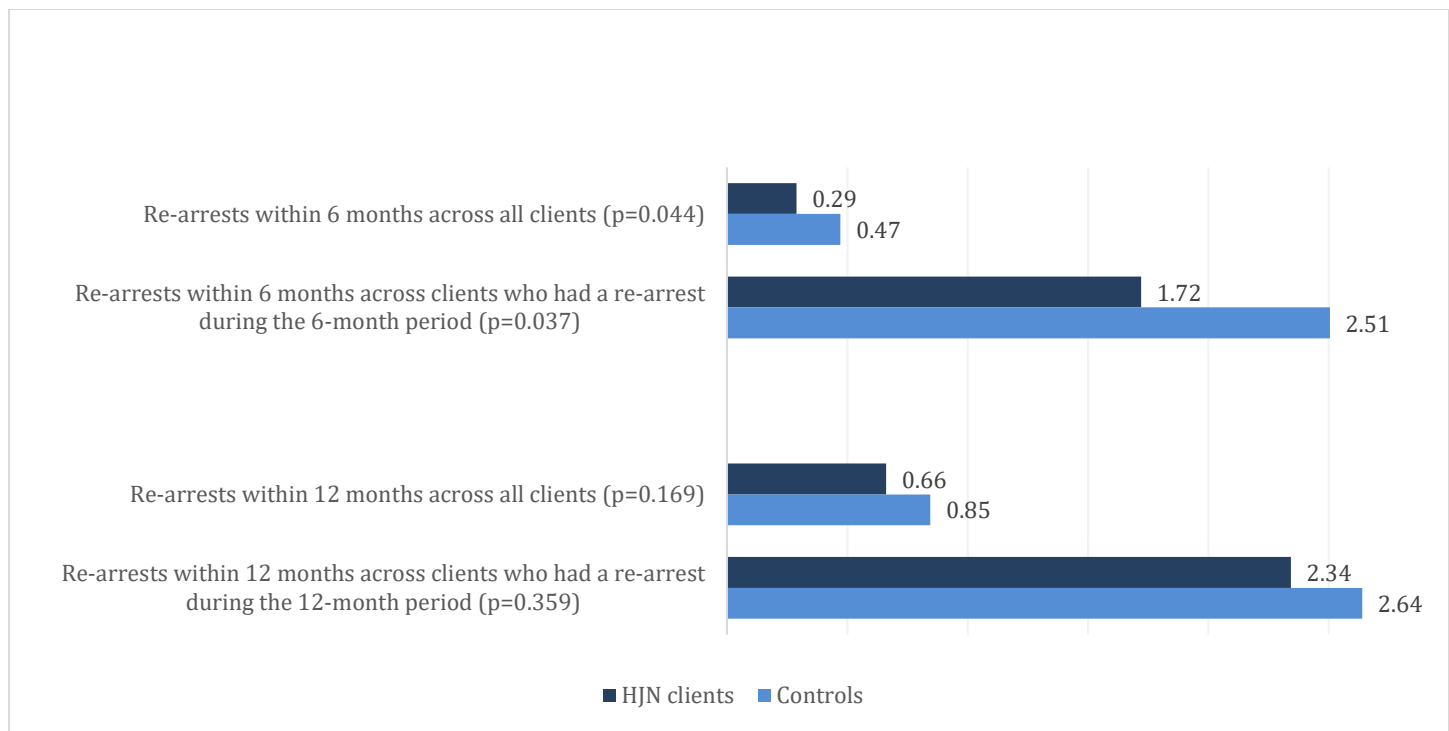
Note. The incidence rates shown represent the average number of re-arrests per person, adjusted for the total number of incarcerations in the past 5 years (1 or 2+). P-values in parentheses indicate statistical comparisons between HJN and controls.

4.3 Outcomes related to the first re-arrest among HJN clients vs. controls

Time (days) to the first re-arrest was comparable between HJN clients and controls (M=152.39, SD=104.80 vs. 155.61, SD=116.45; median=300.48 vs. median=285.34) (Figure 4.). After adjusting for the total number of incarcerations in the past 5 years, the estimated risk of re-arrest among HJN clients was 86% of the risk in the control group, indicating that while re-arrests were occurring more slowly in HJN group, the difference was not statistically significant (aHR=0.86, 95%CI=0.63, 1.16, p=0.322, see Table 4).

Figure 4. The Kaplan-Meier curves showing time to first re-arrest (HJN n=203, control n=339).
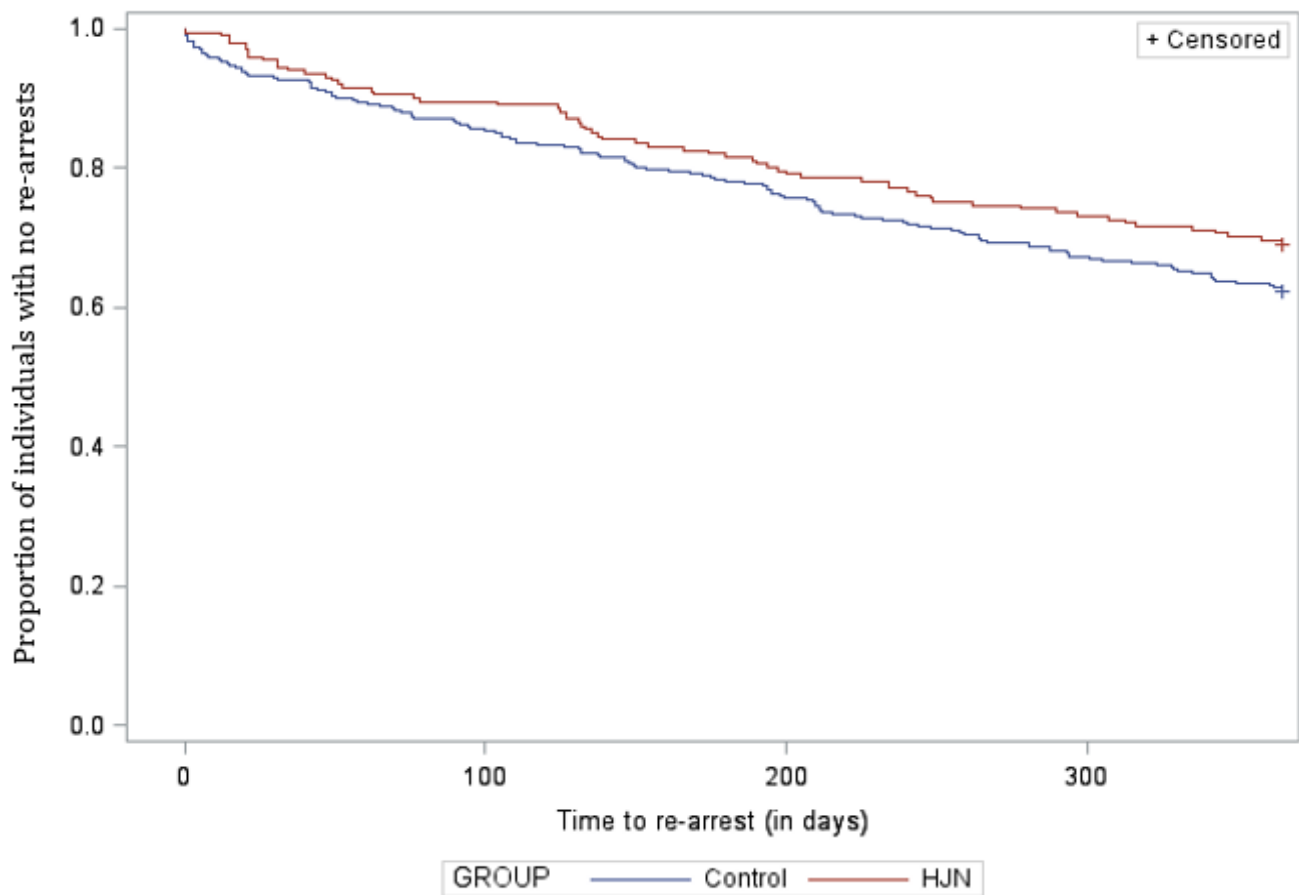
Note. The time to re-arrest was not statistically significant between HJN and controls.

Table 4. Regression models for time to first re-arrest (HJN n=203, control n=339).

Outcome	HR	95%CI	p-value	aHR	95%CI	p-value
First re-arrest	0.78	0.58 -1.05	0.106	0.86	0.63 - 1.16	0.322

Note. Comparison - HJN group vs. control group. HR-hazard ratio, aHR- adjusted hazard ratio from Cox regression. Model adjusted for total number of incarcerations in the past 5 years (1, 2+; source: DOC/DOCCS).

Table 5 shows the descriptive statistics of first re-arrest-related outcomes in HJN clients vs. controls. A lower proportion of HJN clients had alleged non-violent offenses at disposition for the first re-arrest (80.8% vs. 84.9%). In addition, HJN clients had a lower conviction/reconviction rate for the first re-arrest than controls (29.7% vs. 34.4% for no conviction) and a lower reincarceration rate (6.3% vs. 7.8%). These outcomes were again qualitatively more favorable for HJN clients, but none of the differences were statistically significant.

Table 5. Summary statistics for criminal legal system re-involvement outcomes for the first re-arrest (HJN n=64, control n=128).

	HJN N=64		Control N=128		
	n	%	n	%	p-value
Re-arrests					
First re-arrest within 6-months	38	59.4	78	60.9	.835
First re-arrest within 12 months	26	40.6	50	39.1	
Time to first re-arrest since HJN start for HJN Program clients or latest release from incarceration for controls (days) (Mean, SD)	152.39	104.80	155.61	116.45	.849
Type of alleged offense at disposition for the first re-arrest*					
Non-violent	42	80.8	90	84.9	.510
Violent	10	19.2	16	15.1	
Effective Category class for the first re-arrest *					
B Felony	3	5.8	6	5.7	
C Felony	4	7.7	1	0.7	
D Felony	4	7.7	8	7.5	
E Felony	2	3.8	5	4.7	
A Misdemeanor	28	53.8	61	57.5	
Unclassified Misdemeanor	1	1.9	1	0.9	
B Misdemeanor	1	1.9	3	2.8	
Violation	7	13.5	20	18.9	
Infraction	2	3.8	1	0.9	
Effective Category class for the first re-arrest categorized					.664
Felony	13	25	20	18.9	
Misdemeanor	30	57.7	65	61.3	
Violation / Infraction	9	17.3	21	19.8	
Outcome of case disposition for the first re-arrest					
No conviction	45	70.3	84	65.6	.514
Conviction by verdict or plea	19	29.7	44	34.4	
Reincarceration for the first re-arrest					
No reincarceration	60	93.8	118	92.2	.695
Reincarceration	4	6.3	10	7.8	

Note. Source: DCJS. Column % are reported. Bolded statistics indicate statistically significant differences (p<.05) or marginally significant differences (p<0.10) between HJN clients vs. controls, based on chi-square tests or independent-samples t-tests. *Data available for all arrests other than where prosecution was declined or disposition information was unavailable. **Effective Category class section describes the actual classifications of the alleged offence at disposition, which was the basis for categorization, therefore no statistical test was performed.

4.4 Re-arrests by socio-demographic characteristics

When outcome measures were examined by sociodemographic groups within the HJN program only, re-arrests were more prevalent in those 35y and younger compared to those who were older than 35y (p=0.002 at 6 months and p<.001 at 12 months, see Table 6). In addition, compared to HJN clients released from prison, HJN clients released from jail were more likely to experience re-arrests at 6- and 12-months (p<0.001 and p=0.002, respectively). Among controls, a similar pattern of differences in re-arrests between those released from jail vs. prison was also found (all p-values<0.001, see Table 7). Moreover, for controls, but not HJN clients, there was a higher prevalence of re-arrest outcomes among those released from incarceration in 2022 compared to 2021. Descriptive statistics are not shown for reconviction and reincarnation as well as White and Other race/ethnicity and sex in re-arrests due to the small cell sizes and risk for participant identification.

Table 6. Summary statistics for criminal legal system re-arrest outcomes for HJN clients (n=203) only by socio-demographic characteristics.

6-month follow-up	No re-arrest		Re-arrest		
	n	%	n	%	p-value
Age group					
18-35	41	68.3	19	31.7	0.002
36-78	124	86.7	19	13.3	
Race/ethnicity					
White	-	-	-	-	0.592
Black	103	79.2	27	20.8	
Latino/a	48	82.8	10	17.2	
Other	-	-	-	-	
Released from					
Jail (DOC)	91	74	32	26	<.001
Prison (DOCCS)	74	92.5	6	7.5	
Start of the follow-up					
2020	10	100	0	0	0.274
2021	118	80.8	28	19.2	
2022	36	78.3	10	21.7	
Education					
HS or less	111	82.8	23	17.2	0.921
More than HS	51	82.3	11	17.7	

Current employment

	n	%	n	%	p-value
Unemployed/ Unable to work/disabled	136	82.9	28	17.1	0.819
Employed full-time or part-time	26	81.3	6	18.8	

Client has children 18 years old or younger

No	110	84.6	20	15.4	0.309
Yes	52	78.8	14	21.2	

Time since release at the NYC HJN program enrollment

0-3 months	94	80.3	23	19.7	0.274
>3 months	64	86.5	10	13.5	

Self-reported health status

Excellent/Very Good/Good	127	83.6	25	16.4	0.536
Poor/Fair	35	79.5	9	20.5	

Housing status

Other	133	79.6	34	20.4	0.197
Living with a family member or a friend's home or own apartment or home	32	88.9	4	11.1	

12-month follow-up

	No re-arrest		Re-arrest		
	n	%	n	%	p-value
Age group					
18-35	**31**	**51.7**	**29**	**48.3**	**<.001**
36-78	**108**	**75.5**	**35**	**24.5**	
Race/ethnicity*					
White	-	-	-	-	**0.074**
Black	82	63.1	48	36.9	
Latino/a	43	74.1	15	25.9	
Other	-	-	-	-	
Released from					
Jail (DOC)	**74**	**60.2**	**49**	**39.8**	**0.002**
Prison (DOCCS)	**65**	**81.3**	**15**	**18.8**	
Start of the follow-up					
2020	**10**	**100**	**0**	**0**	**0.055**
2021	100	68.5	46	31.5	
2022	28	60.9	18	39.1	
Education					
HS or less	93	69.4	41	30.6	0.995
More than HS	43	69.4	19	30.6	
Current employment					
Unemployed/ Unable to work/disabled	112	68.3	52	31.7	0.451

Employed full-time or part-time	24	75	8	25	
Client has children 18 years old or younger					
No	95	73.1	35	26.9	0.116
Yes	41	62.1	25	37.9	
Time since release at the NYC HJN program enrollment					
0-3 months	80	68.4	37	31.6	0.635
>3 months	53	71.6	21	28.4	
Self-reported health status					
Excellent/Very Good/Good	107	70.4	45	29.6	0.57
Poor/Fair	29	65.9	15	34.1	
Housing status					
Other	113	67.7	54	32.3	0.593
Living with a family member or a friend's home or own appt or home	26	72.2	10	27.8	

Note. Housing status "Other" includes shelter, single room occupancy, transitional housing, residential drug treatment facility, halfway house, hotel, other, multiple housing. Row % are reported. Bolded statistics indicate statistically significant differences (p<.05) or marginally significant differences (p<0.10) between HJN clients vs. controls, based on chi-square tests.

Table 7. Summary statistics for criminal legal system re-involvement outcomes for controls only (n=339) by socio-demographic characteristics.

6-month follow-up

	No re-arrest		Re-arrest		
	n	%	n	%	p-value
Age group					
18-35	89	74.2	31	25.8	0.360
36-78	172	78.5	47	21.5	
Race/ethnicity					
White	-	-	-	-	0.277
Black	154	74	54	26	
Latino/a	87	83.7	17	16.3	
Other	-	-	-	-	
Released from					
Jail (DOC)	**155**	**69.5**	**68**	**30.5**	**<.001**
Prison (DOCCS)	**106**	**91.4**	**10**	**8.6**	
Start of the follow-up					
2020	-	-	-	-	**0.028**
2021	**173**	**80.8**	**41**	**19.2**	
2022	**88**	**70.4**	**37**	**29.6**	

12-month follow-up

	No re-arrest		Re-arrest		
	n	%	n	%	p-value
Age group					
18-35	**67**	**55.8**	53	44.2	0.072
36-78	**144**	**65.8**	75	34.2	
Race/ethnicity*					
White	-	-	-	-	0.494
Black	124	59.6	84	40.4	
Latino/a	71	68.3	33	31.7	
Other	-	-	-	-	
Released from					
Jail (DOC)	**115**	**51.6**	**108**	**48.4**	**<.001**
Prison (DOCCS)	**96**	**82.8**	**20**	**17.2**	
Start of the follow-up					
2020	-	-	-	-	**0.041**

2021	**142**	**66.4**	**72**	**33.6**
2022	**69**	**55.2**	**56**	**44.8**

Note. Row % are reported. Bolded statistics indicate statistically significant differences (p<.05) or marginally significant differences (p<0.10) between HJN clients vs. controls, based on chi-square tests.

4.5 Relative risk of criminal legal system re-involvement outcomes among HJN clients vs. controls by socio-demographic groups

Table 8 shows the differences in criminal legal system re-involvement outcomes between HJN clients and controls by socio-demographic groups. After adjusting for the total number of incarcerations in the past 5 years, there was a marginal difference between HJN clients and controls for re-arrests within 12 months among Whites (aRR=0.17, 95% CI=0.02, 1.18, p=0.073), and re-arrests within 6 months in the 36-50y age group (aRR=0.53, 95% CI=0.26, 1.07, p=0.078).

Table 8. Regression models on the relative risks of outcomes, stratified by client characteristics.

Outcome	RR	95%CI		p-value	aRR	95%CI		p-value
Race/ethnicity: Black (HJN n=130, control n=208)								
Re-arrest within 6 months	0.80	0.53	1.20	0.282	0.90	0.61	1.34	0.611
Re-arrest within 12 months	0.91	0.69	1.21	0.529	0.99	0.76	1.30	0.936
Alleged violent offense within 6 months	1.07	0.39	2.93	0.900	1.24	0.45	3.42	0.675
Alleged violent offense within 12 months	0.95	0.46	1.93	0.877	1.10	0.54	2.25	0.796
Conviction within 6 months	**0.49**	**0.23**	**1.05**	**0.068**	0.56	0.26	1.20	0.138
Conviction within 12 months	0.88	0.54	1.44	0.620	0.99	0.61	1.61	0.976
Reincarceration within 6 months	0.53	0.11	2.60	0.437	0.55	0.11	2.74	0.468
Reincarceration within 12 months	0.89	0.31	2.59	0.829	1.01	0.35	2.96	0.984
Race/ethnicity: Latino/a (HJN n=58, control n=104)								
Re-arrest within 6 months	1.06	0.52	2.15	0.883	1.10	0.55	2.19	0.786
Re-arrest within 12 months	0.82	0.49	1.37	0.440	0.79	0.49	1.30	0.354
Alleged violent offense within 6 months	0.90	0.17	4.75	0.898	0.94	0.18	4.91	0.946
Alleged violent offense within 12 months	0.75	0.20	2.78	0.667	0.71	0.20	2.61	0.610
Conviction within 6 months	0.80	0.26	2.48	0.695	0.84	0.28	2.57	0.759
Conviction within 12 months	0.64	0.24	1.69	0.367	0.68	0.26	1.74	0.418
Reincarceration within 6 months	1.20	0.21	6.95	0.842	1.26	0.22	7.20	0.795

Reincarceration within 12 months	0.90	0.23	3.45	0.874	0.94	0.25	3.56	0.933
Race/ethnicity: White (HJN n=14, control n=18)								
Re-arrest within 6 months	0.29	0.04	2.15	0.222	0.33	0.04	2.49	0.282
Re-arrest within 12 months	**0.17**	**0.02**	**1.20**	**0.076**	**0.17**	**0.02**	**1.18**	**0.073**
Alleged violent offense within 6 months	-	-	-	-	-	-	-	-
Alleged violent offense within 12 months	-	-	-	-	-	-	-	-
Conviction within 6 months	0.57	0.07	4.98	0.612	0.75	0.09	6.15	0.789
Conviction within 12 months	0.29	0.04	2.14	0.222	0.28	0.04	2.14	0.219
Reincarceration within 6 months	-	-	-	-	-	-	-	-
Reincarceration within 12 months	-	-	-	-	-	-	-	-
Age group: 18-25 (HJN n=11, control n=23)								
Re-arrest within 6 months	1.26	0.36	4.33	0.720	0.87	0.26	2.89	0.821
Re-arrest within 12 months	1.05	0.47	2.32	0.913	0.95	0.42	2.19	0.909
Alleged violent offense within 6 months	2.09	0.14	30.41	0.589	2.10	0.14	32.07	0.594
Alleged violent offense within 12 months	0.44	0.06	3.28	0.426	0.45	0.06	3.39	0.439
Conviction within 6 months	-	-	-	-	-	-	-	-
Conviction within 12 months	0.70	0.08	5.96	0.742	0.54	0.06	4.49	0.566
Reincarceration within 6 months	-	-	-	-	-	-	-	-
Reincarceration within 12 months	-	-	-	-	-	-	-	-
Age group: 26-35 (HJN n=49, control n=97)								
Re-arrest within 6 months	1.22	0.73	2.05	0.460	1.33	0.81	2.20	0.262
Re-arrest within 12 months	1.11	0.77	1.59	0.590	1.14	0.81	1.59	0.461
Alleged violent offense within 6 months	1.19	0.30	4.77	0.808	1.28	0.31	5.19	0.733
Alleged violent offense within 12 months	1.03	0.33	3.20	0.966	1.13	0.36	3.48	0.837
Conviction within 6 months	0.83	0.31	2.21	0.702	0.91	0.34	2.44	0.855
Conviction within 12 months	0.94	0.46	1.92	0.860	1.05	0.52	2.10	0.900
Reincarceration within 6 months	0.99	0.09	10.65	0.993	1.00	0.09	10.97	0.997
Reincarceration within 12 months	0.79	0.16	3.94	0.775	0.90	0.18	4.48	0.897
Age group: 36-50 (HJN n=64, control n=102)								
Re-arrest within 6 months	**0.47**	**0.23**	**0.97**	**0.042**	**0.53**	**0.26**	**1.07**	**0.078**
Re-arrest within 12 months	**0.67**	**0.42**	**1.07**	**0.096**	0.70	0.45	1.10	0.125
Alleged violent offense within 6 months	0.55	0.12	2.65	0.458	0.65	0.14	3.07	0.586
Alleged violent offense within 12 months	0.75	0.27	2.08	0.574	0.82	0.30	2.25	0.704
Conviction within 6 months	0.44	0.15	1.27	0.130	0.49	0.17	1.40	0.184

Conviction within 12 months	0.61	0.27	1.37	0.231	0.65	0.29	1.46	0.300
Reincarceration within 6 months	0.66	0.13	3.32	0.616	0.71	0.14	3.57	0.681
Reincarceration within 12 months	1.33	0.37	4.75	0.666	1.46	0.41	5.20	0.560
Age group: 51-61 (HJN n=62, control n=90)								
Re-arrest within 6 months	0.69	0.33	1.42	0.311	0.81	0.40	1.66	0.566
Re-arrest within 12 months	0.77	0.46	1.29	0.328	0.89	0.54	1.47	0.653
Alleged violent offense within 6 months	1.45	0.21	10.03	0.706	1.87	0.27	12.74	0.523
Alleged violent offense within 12 months	1.07	0.25	4.58	0.932	1.25	0.29	5.43	0.770
Conviction within 6 months	0.40	0.12	1.36	0.141	0.48	0.14	1.64	0.241
Conviction within 12 months	0.77	0.37	1.61	0.486	0.90	0.43	1.88	0.784
Reincarceration within 6 months	0.73	0.07	7.83	0.792	0.93	0.09	9.97	0.955
Reincarceration within 12 months	0.58	0.12	2.90	0.507	0.75	0.15	3.67	0.720
Age group: 62-78 (HJN n=17, control n=23)								
Re-arrest within 6 months	-	-	-	-	-	-	-	-
Re-arrest within 12 months	0.90	0.17	4.82	0.904	1.26	0.26	6.22	0.777
Alleged violent offense within 6 months	-	-	-	-	-	-	-	-
Alleged violent offense within 12 months	-	-	-	-	-	-	-	-
Conviction within 6 months	-	-	-	-	-	-	-	-
Conviction within 12 months	1.35	0.09	20.13	0.826	1.89	0.13	26.77	0.638
Reincarceration within 6 months	-	-	-	-	-	-	-	-
Reincarceration within 12 months	-	-	-	-	-	-	-	-
Released from: jail (DOC) (HJN n=123, control n=223)								
Re-arrest within 6 months	0.85	0.60	1.22	0.385	0.95	0.67	1.35	0.768
Re-arrest within 12 months	0.82	0.64	1.06	0.135	0.89	0.69	1.14	0.347
Alleged violent offense within 6 months	1.21	0.44	3.32	0.713	1.46	0.54	3.96	0.462
Alleged violent offense within 12 months	0.95	0.46	1.99	0.900	1.11	0.54	2.30	0.778
Conviction within 6 months	**0.57**	**0.30**	**1.08**	**0.085**	0.68	0.36	1.27	0.224
Conviction within 12 months	0.71	0.45	1.14	0.153	0.83	0.52	1.32	0.426
Reincarceration within 6 months	0.78	0.21	2.95	0.711	0.94	0.25	3.53	0.922
Reincarceration within 12 months	0.91	0.35	2.36	0.840	1.09	0.42	2.81	0.855
Released from: prison (DOCCS) (HJN n=80, control n=116)								
Re-arrest within 6 months	0.87	0.33	2.30	0.779	0.87	0.33	2.30	0.784
Re-arrest within 12 months	1.09	0.59	1.99	0.786	1.08	0.59	1.97	0.807
Alleged violent offense within 6 months	0.58	0.12	2.92	0.509	0.59	0.12	2.97	0.523

	RR				aRR			
Alleged violent offense within 12 months	0.65	0.21	2.04	0.459	0.65	0.21	2.05	0.464
Conviction within 6 months	0.73	0.14	3.86	0.706	0.73	0.14	3.86	0.706
Conviction within 12 months	1.27	0.48	3.36	0.632	1.27	0.48	3.35	0.634
Reincarceration within 6 months	0.73	0.07	7.86	0.791	0.72	0.07	7.83	0.789
Reincarceration within 12 months	0.73	0.14	3.86	0.706	0.73	0.14	3.87	0.712
Follow-up started: 2021 (HJN n=146, control n=214)								
Re-arrest within 6 months	1.00	0.65	1.54	0.996	1.04	0.68	1.59	0.860
Re-arrest within 12 months	0.94	0.69	1.27	0.672	0.95	0.71	1.28	0.746
Alleged violent offense within 6 months	1.26	0.43	3.66	0.676	1.30	0.45	3.79	0.630
Alleged violent offense within 12 months	1.18	0.50	2.77	0.703	1.20	0.51	2.81	0.683
Conviction within 6 months	0.98	0.45	2.12	0.953	1.02	0.48	2.19	0.955
Conviction within 12 months	1.07	0.62	1.86	0.808	1.13	0.65	1.94	0.672
Reincarceration within 6 months	2.93	0.54	15.80	0.211	2.96	0.55	15.96	0.207
Reincarceration within 12 months	2.57	0.77	8.61	0.127	2.66	0.79	8.89	0.113
Follow-up started: 2022 (HJN n=46, control n=125)								
Re-arrest within 6 months	0.73	0.40	1.35	0.322	0.92	0.51	1.66	0.777
Re-arrest within 12 months	0.87	0.58	1.32	0.517	0.98	0.67	1.44	0.929
Alleged violent offense within 6 months	0.78	0.17	3.60	0.747	-	-	-	-
Alleged violent offense within 12 months	0.80	0.31	2.04	0.634	1.20	0.51	2.81	0.683
Conviction within 6 months	**0.34**	**0.11**	**1.08**	**0.066**	0.41	0.13	1.31	0.134
Conviction within 12 months	0.66	0.33	1.32	0.239	0.77	0.39	1.53	0.451
Reincarceration within 6 months	-	-	-	-	-	-	-	-
Reincarceration within 12 months	0.23	0.03	1.69	0.148	-	-	-	-

Note. Comparison - HJN clients vs. controls. RR - relative risk, aRR - adjusted relative risk from log binomial regression. Models adjusted for total number of incarcerations in the past 5 years (1, 2+; source: DOC/DOCCS). Bolded statistics indicate statistically significant differences (p<.05) or marginally significant differences (p<0.10) between HJN clients vs. controls.

5. Conclusions and Recommendations

Given the disproportionate burden of policing, arrest, and incarceration in the US – especially among minoritized populations that bear the heaviest burden of poverty and health disparities – compared with its counterparts worldwide, understanding how to best reduce involvement in the criminal legal system is a critical public health priority. Reducing the disproportionate level of policing and incarceration in minoritized communities in particular is necessary to addressing social justice as well as wellbeing and health goals. However, even the best programming to reduce CLI among Black and Latino/a groups is challenged by the entrenched differential policing and incarceration in the neighborhoods where these populations reside. In the context of this structural racism and discrimination of people living in poverty, a number of programs are being implemented in the attempt to reduce the impact of CLI in minoritized communities by addressing a range of health and social service needs.

NYC HJN is an innovative multi-partner, municipal health department-led initiative that facilitates community reentry among individuals released from incarceration. The design of the program is uniquely client-centered and trauma-informed and is supported by CHWs with lived experience of the criminal legal system. The program builds on prior research showing the importance of addressing both social needs and health as cornerstones of achieving successful re-integration into society. Recently, NYC HJN was found to have improved health outcomes among individuals served (not yet published, under review with New York State (NYS) and NYC DOHMH). In this evaluation, we sought to examine whether NYC HJN also had a positive short-term effect on outcomes related to criminal legal system re-involvement. We found that among those who participated in NYC HJN, the mean number of re-arrests was significantly lower at 6-month follow-up, compared to matched controls that did not participate in NYC HJN. This trend continued up to 12 months; during this time period HJN clients had on average 0.3 fewer arrests than controls. In addition, in the 6 months after release, while over 10% of controls received a conviction by verdict or plea (note that many cases were likely resolved by plea given the short duration), HJN clients had approximately half the conviction risk. In models additionally adjusting for number of incarcerations in the past five years, the point estimate suggested evidence of an approximate 35% reduction in risk of conviction/reconviction associated with HJN, though the trend was not significant at the 0.05 level. Further, levels of conviction/reconviction at 12-month follow-up were comparable among HJN and control clients. These results are congruent with other prior evaluations, such as an evaluation of the Arches group mentoring program serving young adult probation clients ages 16 to 24y. The evaluation suggested Arches reduced one-year felony conviction/reconviction by over two-thirds and two-year felony conviction/reconviction by over half.[49] Though we were unable to detect statistically significant associations with conviction/reconviction and there was little evidence of an association between HJN and reincarceration, both due to the short-term nature of this study and the modest sample size, the overall descriptive findings across outcome measures were in favor of a protective effect of NYC HJN.

A central feature of NYC HJN was the employment of CHWs to link individuals recently released from incarceration to a broad range of social and healthcare services, tailored to the individual needs of clients. These services included primary care, mental and behavioral healthcare, education and employment services, help with obtaining vital documents, housing, and family reunification, among others. We previously found (see Report) that CHWs

made service referrals for approximately 90% of the clients, a high rate of program fidelity and penetration and a testament to the central role of CHWs in the success of NYC HJN. In addition to assisting with service referrals, CHWs also played a critical role in ensuring service follow-through (e.g., making appointments) and providing social support to clients by staying in regular contact with them. On average, we showed previously that CHWs had more than 20 contacts with clients during program engagement.

As noted, the robust HJN programming appears to translate to important gains in healthcare diagnoses and treatment for a range of leading drivers or morbidity (unpublished, under review by NYS and NYC DOHMH). However, demonstrating effects of HJN on CLI is challenged by the overall high rates of policing in NYC neighborhoods composed primarily of Black and Latino/a residents[50,51] where the majority of HJN clients reside – primarily located in Harlem, NYC. Further, the study was launched in late 2019 to early 2020, when observed increases in policing (e.g., self-initiated patrol) began in the context of the COVID-19 public health emergency.[52] This increased type of police activity was disproportionately common in neighborhoods with higher proportions of residents of racial and ethnic minority status residents.[51] Specifically, a geographic analysis comparing neighborhoods (ZIP code level) defined by the proportion of Black residents during the height of the COVID-19 pandemic (2020) indicated that a one standard deviation increase in the percentage of Black residents was associated with a 56% increase (95% CI: 25%, 95%) in the rate of COVID-19-specific summonses and a 34% increase (95% CI: 17%, 53%) in the public health and nuisance arrest rate. The results highlight the spatial and racialized inequities in pandemic policing of public health that were occurring during the period when HJN implementation was initiated. Further, the number of prosecuted arrests has increased steadily since a sharp decline in 2020, during the period when HJN was operating.[53] Police stops have risen dramatically under the Adams administration (beginning 2022) as an effort to revive "Broken Windows" policing. In the most recent reporting period during Mayor Adams's tenure, there were nearly 17,000 recorded stops by NYPD officers in 2023, the highest number since 2015; of these stops, the American Civil Liberties Union of NYC (NYCLU) indicated 70% of those stopped were innocent. Indeed, rates of re-arrest, conviction/reconviction, and reincarceration increased through the HJN study period (i.e., comparing 2022 versus 2021 in the current analytic sample), reflecting these trends. In brief, even in the context of robust HJN programming that improves social support and linkage to services to address housing, employment, and healthcare, these benefits may not translate to changes in CLI due to the overall high levels of CLI in neighborhoods where HJN clients reside. Such policing practices, largely affecting innocent individuals or persons charged with low-level offenses, may affect HJN clients who are otherwise making gains as far as post-release well-being and health.

In addition to ubiquitous policing in neighborhoods where many HJN clients reside, other structural challenges may hinder HJN programming from having a stronger, immediate impact. Specifically, it is well established that housing and employment are important barriers to reintegration after incarceration.[54] These services have been the most challenging for HJN program staff to address. Hence, even the most skilled and dedicated HJN CHW may not succeed in linking a client with housing and employment in the context of shortages in these domains. Challenges with linkages to housing and employment occurred especially in the context of COVID-19 when the economy was "shut down" and in the "post-COVID-19" era, when governmental assistance with housing and pandemic economic relief ended. In addition, a myriad of additional challenges, including difficulty in navigating

relationships with family and personal networks, health problems, and experiences of ongoing racism and discrimination, affect one's ability to attain economic and social stability that, in turn, may adversely affect CLI. Programs such as HJN, hence, cannot reach the full potential without reinvestments in communities affected by incarceration to improve economic stability and support social integration and equitable access to quality healthcare, including mental healthcare. In future studies, it will be important to evaluate the degree to which health improvements may mediate well-being and ultimately recidivism risk; this could not be accomplished in this study due to administrative barriers in linking the health data with those from the criminal legal system.

A notable finding within the NYC HJC sample is that younger clients (≤35y), compared to older clients, and those released from jail, as opposed to prison, had higher rates of re-arrest. These two findings are likely correlated, as we had found previously that individuals released from jail in NYC tended to be younger than those released from the state prison system. These patterns reflect what is observed across jail and prison populations. Jail stays are shorter (generally less than one year in the NYC jail system); hence, there is less time for linkage to care for mental health conditions and chronic and infectious disease, as well as less time for post-release planning and linkage to social services, to support stable housing and employment opportunities.[55–57] The results highlight the need for programs such as HJN to tailor programming for these populations and potentially provide additional scaffolding for those leaving jail settings and for younger populations.

5.1 Limitations

There are three major limitations of the current study. First, this study uses administrative measures of recidivism, which are imperfect measures of criminal behavior given noted biases in the criminal legal system toward Black and Latino/a individuals. Second, although not uncommon in the field of criminal justice research, this study has a limited sample size, which restricts the study's ability to statistically detect small changes in many of the outcomes. The study is best interpreted as pilot research where the descriptive differences between groups, even if not statistically significant, can inform future directions of programming and policies aimed at supporting the reentry of individuals released from incarceration. Third, the study has a short duration, where many of the criminal legal system re-involvement outcomes may not be reasonably expected to show big changes. This may be a reason why we did not find any significant effects on conviction/reconviction or reincarceration. Nevertheless, despite these limitations, we are able to show a significant positive effect of NYC HJN on reducing the number of arrests in the short term, offering supportive evidence that further research is warranted on how a holistic approach to reentry can benefit individuals and society at-large over the long term.
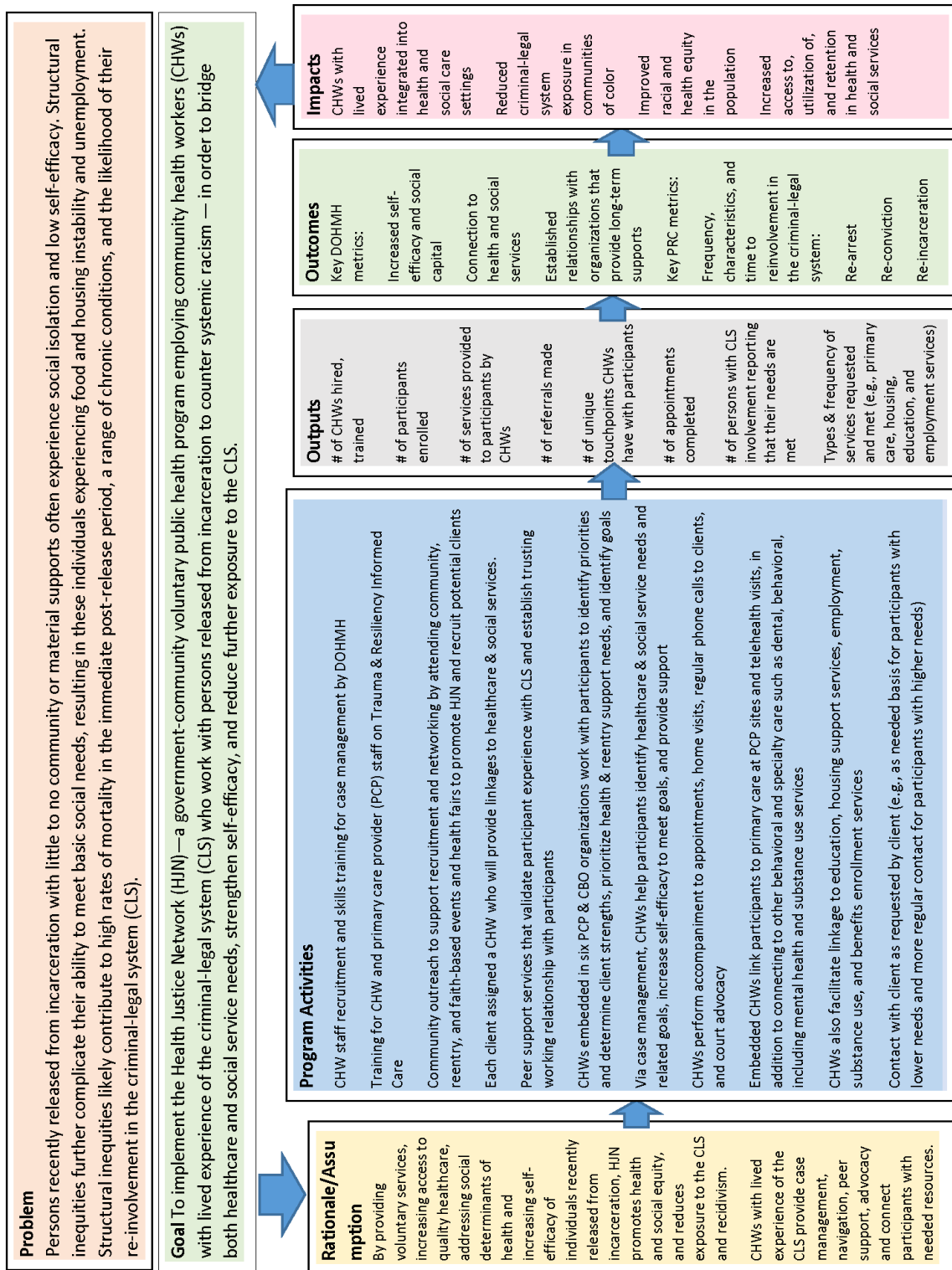
5.2 Recommendations

Based on this evaluation study, we offer some recommendations for municipal public health and community-based partnership reentry programs at large in the future:

- Healthcare, living wage employment and affordable quality housing, as well as social support, must be integrated in municipal public health and community-based partnership reentry programs, as these different dimensions of need are interconnected.
- Given the substantial burden and lack of robust social safety net focused on the social and healthcare needs among people released from incarceration, municipal public health departments should organize, convene, and link reentry programs to social and healthcare services with the employment and training of CHWs with reentry expertise being a top priority.
- Given that CHWs are an important source of instrumental and social support for individuals released from incarceration, material resources should be devoted to developing a workforce of CHWs with lived expertise of reentry from the criminal legal system to support reentry.
- There is a critical need for more collaboration across sectors, including public health and the criminal justice system, to facilitate the design and implementation of holistic and integrated approaches to reentry programs.
- Many individuals released from incarceration have children. Therefore, it may be important to consider family-based strategies of health and wellbeing in future municipal public health and community-based partnership reentry programs.
- More investment is needed in structural dimensions such as housing, education, and employment in order to optimize the potential impact of reentry programs such as NYC HJN.
- More investment in research is needed on effective anti-racist and trauma-informed health department-led reentry programs. In particular, stronger data linkages are needed across sectors, even across agencies within the criminal justice system, to facilitate new research on the effects of reentry programs across a wide range of social and health outcomes. Such research will greatly inform the design and implementation of future programs and policies.

Overall, NYC HJN, as an innovative municipal public health and community-based partnership program, has succeeded in engaging individuals recently released from incarceration in New York, and has demonstrated some early evidence of a protective effect against re-arrests in the short term. As a municipal public health and community-based partnership program that seeks to address social and health inequity, the innovative approach to holistic, trauma-informed reentry programs has demonstrated its ability to connect with and serve a predominantly minoritized population that is over-represented in the criminal legal system. Alongside continued policy discussions in New York and elsewhere in the U.S. regarding criminal justice reform, it is critical to keep in mind the importance of developing, testing, and implementing, holistic reentry programs that can optimize the societal reintegration of individuals released from incarceration, as a key strategy to break the cycle of criminal legal system re-involvement.

Appendices

Program Logic Model for the Health Justice Network and Its Impact on Recidivism

Problem

Persons recently released from incarceration with little to no community or material supports often experience social isolation and low self-efficacy. Structural inequities further complicate their ability to meet basic social needs, resulting in these individuals experiencing food and housing instability and unemployment. Structural inequities likely contribute to high rates of mortality in the immediate post-release period, a range of chronic conditions, and the likelihood of their re-involvement in the criminal-legal system (CLS).

Goal To implement the Health Justice Network (HJN) — a government-community voluntary public health program employing community health workers (CHWs) with lived experience of the criminal-legal system (CLS) who work with persons released from incarceration to counter systemic racism — in order to bridge both healthcare and social service needs, strengthen self-efficacy, and reduce further exposure to the CLS.

Rationale/Assumption

By providing voluntary services, increasing access to quality healthcare, addressing social determinants of health and increasing self-efficacy of individuals recently released from incarceration, HJN promotes health and social equity, and reduces exposure to the CLS and recidivism.

CHWs with lived experience of the CLS provide case management, navigation, peer support, advocacy and connect participants with needed resources.

Program Activities

CHW staff recruitment and skills training for case management by DOHMH

Training for CHW and primary care provider (PCP) staff on Trauma & Resiliency Informed Care

Community outreach to support recruitment and networking by attending community, reentry, and faith-based events and health fairs to promote HJN and recruit potential clients

Each client assigned a CHW who will provide linkages to healthcare & social services.

Peer support services that validate participant experience with CLS and establish trusting working relationship with participants

CHWs embedded in six PCP & CBO organizations work with participants to identify priorities and determine client strengths, prioritize health & reentry support needs, and identify goals

Via case management, CHWs help participants identify healthcare & social service needs and related goals, increase self-efficacy to meet goals, and provide support

CHWs perform accompaniment to appointments, home visits, regular phone calls to clients, and court advocacy

Embedded CHWs link participants to primary care at PCP sites and telehealth visits, in addition to connecting to other behavioral and specialty care such as dental, behavioral, including mental health and substance use services

CHWs also facilitate linkage to education, housing support services, employment, substance use, and benefits enrollment services

Contact with client as requested by client (e.g., as needed basis for participants with lower needs and more regular contact for participants with higher needs)

Outputs

# of CHWs hired, trained

# of participants enrolled

# of services provided to participants by CHWs

# of referrals made

# of unique touchpoints CHWs have with participants

# of appointments completed

# of persons with CLS involvement reporting that their needs are met

Types & frequency of services requested and met (e.g., primary care, housing, education, and employment services)

Outcomes

Key DOHMH metrics:

Increased self-efficacy and social capital

Connection to health and social services

Established relationships with organizations that provide long-term supports

Key PRC metrics:

Frequency, characteristics, and time to reinvolvement in the criminal-legal system:

Re-arrest

Re-conviction

Re-incarceration

Impacts

CHWs with lived experience integrated into health and social care settings

Reduced criminal-legal system exposure in communities of color

Improved racial and health equity in the population

Increased access to, utilization of, and retention in health and social services

Appendix 2. Outcome definitions.

OUCTOME	Description
Re-arrest (yes, no)	For HJN clients: • Any re-arrest within 6 months after the first HJN contact, defined as the first documented contact between CHW and a client • Any re-arrest within 12 months after the first HJN contact, defined as the first documented contact between CHW and a client For controls: • Any re-arrest within 6 months post latest release from DOC/DOCCS • Any re-arrest within 6 months post latest release from DOC/DOCCS
Re-arrest (frequency) (0, 1, 2, 3+)	For HJN clients: • Number of re-arrests within 6 months after the first HJN contact • Number of re-arrests within 12 months after the first HJN contact For controls: • Number of re-arrests within 6 months post latest release from DOC/DOCCS • Number of re-arrests within 12 months post latest release from DOC/DOCCS
Type of alleged offense at disposition (Violent, non-violent)	Top Disposition Effective Category Class (available for all arrests other where prosecution was declined or disposition information was unavailable or interim disposition): A-E felony, local law felony, misdemeanor, violation, infraction, unspecified; also available is UCR code e.g. burglary, larceny, etc. Categorized into violent (Felony D and E Simple assault; Felony C and D dangerous weapons; Felony B and C burglary; Felony B, C and D aggregated assault, Felony B, C, D and E robbery, Felony B murder) and non-violent crimes (all other, including felonies related controlled substance possession or sale). For HJN clients and controls: • Alleged non-violent crime, alleged violent crime for the first arrest • Alleged non-violent crime, alleged violent crime for any arrest

Outcome of case disposition (No conviction/reconviction, Conviction/reconviction by verdict or plea)	Overall Top Collapsed Disposition Code (available for all arrests other where No disposition information is available): Conviction by verdict, Conviction by plea, acquitted, dismissed, no True Bill, prosecution declined, unknown favorable disposition, covered by/consolidated, other, diverted and dismissed, interim disposition). Categorized into conviction/reconviction by verdict or plea (Conviction by verdict, Conviction by plea), no conviction/reconviction (acquitted, dismissed, no True Bill, prosecution declined, unknown favorable disposition, covered by/consolidated, other, diverted and dismissed, interim disposition, no disposition information yet). Note. Interim dispositions refer to any non-final case outcome where some court action has taken place on the arrest. Cases with an outcome of "Interim disposition" are generally processing and at stages such as arraignment, transferring from one court to another, out on warrants, and other such statuses. Within the large group of interim dispositions are a small subset where there is a conviction disposition (usually a plea) but no sentence has been decided yet. These are treated as interim on our analytic files until sentencing in part because initial pleas of guilty are later withdrawn or vacated before sentencing frequently enough that treating them as final leads to unstable numbers. For HJN and controls: • No conviction/reconviction, conviction/reconviction by verdict or plea for the first arrest • No conviction/reconviction, conviction/reconviction by verdict or plea for any arrest
Reincarceration (yes, no)	Overall Top Dispo Collapsed Sentence Type (available for all arrests): Determinate Prison, Prison, Jail, Time Served, No Cond. Discharge, Jail + Probation, Probation Fine + Conditional Discharge, Conditional Discharge, Fine, Fine or Imprisonment, Misc., Convicted-No sentence, Not Convicted, Not Disposed). Categorized into re-incarcerated (Determinate Prison, Prison, Jail,) and not re-incarcerated (all other). For HJN clients and controls: • Reincarceration, no reincarceration for the first arrest

	• Reincarceration, no reincarceration for any arrest
Time to re-arrest (days)	For HJN clients: • Time to first arrest since HJN start For controls: • Time to first arrest since latest release from DOC/DOCCS

Note. Source: DCJS.

	Included HJN clients		Excluded HJN clients		p-value
	n=203		n=83		
	n	%	n	%	
Age group					
18-25	10	5.2	4	5.2	.381
26-35	44	22.9	18	23.4	
36-50	62	32.3	31	40.3	
51-61	59	30.7	14	18.2	
62-72	13	6.8	7	9.1	
73+	4	2.1	3	3.9	
Age at start of the program (Mean, SD)	45.36	12.69	44.56	12.89	.642
Sex					
Male	176	90.5	67	93.6	.326
Female	10	9.5	7	5.3	
Other	0	0	2	1.1	
Race/ethnicity					.106
White	12	5.9	10	12	
Black	114	56.2	35	42.2	
Hispanic or Latino/a	53	26.1	25	30.1	
Other	24	11.8	13	15.7	
Education					.786
HS or less	134	68.4	52	66.7	
More than HS	62	31.6	26	33.3	
Current employment					
Unemployed	156	79.6	64	82.1	.789

Unable to work/disabled	8	4.1	4	5.1	
Employed part-time	10	5.1	2	2.6	
Employed full-time	22	11.2	8	10.3	
Client has children 18 years old or younger					
No	130	66.3	47	60.3	.343
Yes	66	33.7	31	39.7	

Note. Source: HJN Program. Column % are reported. P-value is from chi-square tests and independent samples t-test. Missing data rates (excluded from table): age n=17, 5.9%, gender n=24, 8.4%, education n=12, 4.2%, current employment n=12, 4.2%, client has children 18 years old or younger n=12, 4.2%.

Appendix 4. Client characteristics of the full consented HJN sample (n=286).

	n	%
Age group		
18-25	14	5.2
26-35	62	23.0
36-50	93	34.8
51-61	73	27.0
62-72	20	7.4
73+	7	2.6
Age (Mean, SD)	45.13	12.73
Gender		
Female	17	6.5
Male	243	92.7
Other	2	0.8
Race/ethnicity		
Black	149	52.1
Hispanic or Latino/a	78	27.3
White	22	7.7
Other	37	12.9
Language spoken (multiple languages possible)		
English	258	94.2
Spanish	46	16.8
Education		
Less than high school	4	1.5
Some high school	74	27.0
High school (HS) diploma, GED, or HS equivalency	108	39.4
Some college or vocational school	42	15.3
Vocational degree or certification	11	4.0

Associate degree	13	4.7
College degree	16	5.8
Post-graduate degree	4	1.5
Other	2	0.7
Current employment		
Employed full-time	30	10.9
Employed part-time	12	4.4
Unable to work/disabled	12	4.4
Unemployed	220	80.3
Client has children 18 years old or younger		
No	177	64.6
Yes	97	35.4
Housing status		
Shelter	29	10.1
Single Room Occupancy	4	1.4
NYCHA	1	0.3
Living in own home or apartment	8	2.8
Living with a family member or a friend's home	53	18.5
Transitional housing	49	17.1
Residential drug treatment facility	5	1.7
Halfway house	45	15.7
Hotel	33	11.5
Other	18	6.3
Multiple housing	41	14.3

Note. Source: HJN Program. Missing data rates (excluded from table): age n=17, 5.9%, gender n=24, 8.4%, education n=12, 4.2%, current employment n=12, 4.2%, client has children 18 years old or younger n=12, 4.2%, language spoken n=12, 4.2%.

References

1. Walmsley R. *World Prison Population List, 11th Edition*. Institute for Criminal Policy Research; 2016. https://www.prisonstudies.org/sites/default/files/resources/downloads/world_prison_population_list_11th_edition_0.pdf

2. Kaeble D, Cowhig M. *Correctional Populations in the United States, 2016*. U.S. Department of Justice; 2018.

3. DeFina RH, Hannon L. *The Sentencing Project: Americans with Criminal Records*.; 2017.

4. Sewell AA, Jefferson KA, Lee H. Living under surveillance: gender, psychological distress, and stop-question-and-frisk policing in New York City. *Soc Sci Med*. 2016;159:1-13. doi:10.1016/j.socscimed.2016.04.024

5. Hartney C, Vuong L. *Created Equal: Racial and Ethnic Disparities in the US Criminal Justice System*.; 2009. Accessed December 17, 2024. https://search.issuelab.org/resource/created-equal-racial-and-ethnic-disparities-in-the-us-criminal-justice-system.html

6. Milner AN, George BJ, Allison DB. Black and Hispanic men perceived to be large are at increased risk for police frisk, search, and force. *PLOS ONE*. 2016;11(1):e0147158. doi:10.1371/journal.pone.0147158

7. Sakala L. *Breaking Down Mass Incarceration in the 2010 Census: State-by-State Incarcernation Rates by Race/Ethnicity*. Prison Policy Initiative; 2014. Accessed December 17, 2024. https://www.prisonpolicy.org/reports/rates.html

8. *U.S. Census Bureau QuickFacts: United States*.; 2017. Accessed December 17, 2024. https://www.census.gov/quickfacts/

9. Wildeman C, Wang EA. Mass incarceration, public health, and widening inequality in the USA. *Lancet*. 2017;389(10077):1464-1474. doi:10.1016/S0140-6736(17)30259-3

10. Wang EA, Redmond N, Dennison Himmelfarb CR, et al. Cardiovascular disease in incarcerated populations. *J Am Coll Cardiol*. 2017;69(24):2967-2976. doi:10.1016/j.jacc.2017.04.040

11. Howell BA, Long JB, Edelman EJ, et al. Incarceration history and uncontrolled blood pressure in a multi-site cohort. *J Gen Intern Med*. 2016;31(12):1496-1502. doi:10.1007/s11606-016-3857-1

12. Wang EA, Pletcher M, Lin F, et al. Incarceration, incident hypertension, and access to health care: findings from the coronary artery risk development in young adults (CARDIA) study. *Arch Intern Med*. 2009;169(7):687-693. doi:10.1001/archinternmed.2009.26

13. Wang EA, Wang Y, Krumholz HM. A High Risk of hospitalization following release from correctional facilities in Medicare beneficiaries. *JAMA Intern Med*. 2013;173(17):1621-1628. doi:10.1001/jamainternmed.2013.9008

14. Binswanger IA, Stern MF, Deyo RA, et al. Release from prison--a high risk of death for former inmates. *N Engl J Med*. 2007;356(2):157-165. doi:10.1056/NEJMsa064115

15. Milloy MJ, Kerr T, Buxton J, et al. Dose-response effect of incarceration events on nonadherence to HIV antiretroviral therapy among injection drug users. *J Infect Dis*. 2011;203(9):1215-1221. doi:10.1093/infdis/jir032

16. Milloy MJ, Kerr T, Buxton J, et al. Social and environmental predictors of plasma HIV RNA rebound among injection drug users treated with antiretroviral therapy. *J Acquir Immune Defic Syndr*. 2012;59(4):393-399. doi:10.1097/QAI.0b013e3182433288

17. Khan MR, Epperson MW, Mateu-Gelabert P, Bolyard M, Sandoval M, Friedman SR. Incarceration, Sex with an STI- or HIV-infected partner, and infection with an STI or HIV in Bushwick, Brooklyn, NY: a social network perspective. *Am J Public Health*. 2011;101(6):1110-1117. doi:10.2105/AJPH.2009.184721

18. Khan MR, Miller WC, Schoenbach VJ, et al. Timing and duration of incarceration and high-risk sexual partnerships among African Americans in North Carolina. *Ann Epidemiol*. 2008;18(5):403-410. doi:10.1016/j.annepidem.2007.12.003

19. Khan MR, Wohl DA, Weir SS, et al. Incarceration and risky sexual partnerships in a southern US city. *J Urban Health*. 2008;85(1):100-113. doi:10.1007/s11524-007-9237-8

20. Rogers SM, Khan MR, Tan S, Turner CF, Miller WC, Erbelding E. Incarceration, high-risk sexual partnerships, and sexually transmitted infections in an urban population. *Sex Transm Infect*. 2012;88(1):63-68. doi:10.1136/sextrans-2011-050280

21. Khan MR, McGinnis KA, Grov C, et al. Past Year and Prior incarceration and HIV transmission risk among HIV-positive men who have Sex with men in the US. *AIDS Care*. 2019;31(3):349-356. doi:10.1080/09540121.2018.1499861

22. López A, Seligman HK. Clinical Management of food-insecure individuals with diabetes. *Diabetes Spectrum*. 2012;25(1):14-18. doi:10.2337/diaspect.25.1.14

23. Engelberg RS, Scheidell JD, Islam N, Thorpe L, Khan MR. Associations between incarceration history and risk of hypertension and hyperglycemia: consideration of differences among Black, Hispanic, Asian and White subgroups. *J Gen Intern Med*. 2024;39(1):5-12. doi:10.1007/s11606-023-08327-9

24. Scheidell JD, Dyer TV, Knittel AK, et al. Incarceration and subsequent pregnancy loss: exploration of sexually transmitted infections as mediating pathways. *J Womens Health (Larchmt)*. 2022;31(2):242-251. doi:10.1089/jwh.2020.8980

25. Dyer TV, Feelemyer J, Scheidell JD, et al. Estimating the influence of incarceration on subsequent experience with violence among Black men who have sex with men in the HPTN061 Study. *J Interpers Violence*. 2022;37(17-18):NP16327-NP16350. doi:10.1177/08862605211021970

26. Carson EA. *Prisoners in 2019 | Bureau of Justice Statistics*. Bureau of Justice; 2020. Accessed December 17, 2024. https://bjs.ojp.gov/library/publications/prisoners-2019

27. *Inmate Release Numbers*. Federal Bureau of Prisons; 2023. Accessed December 17, 2024. https://www.bop.gov/about/statistics/statistics_inmate_releases.jsp

28. *Inmate Discharges*. NYC Open Data; 2023. Accessed December 17, 2024. https://data.cityofnewyork.us/Public-Safety/Inmate-Discharges/94ri-3ium/about_data

29. Sawyer W. *Since You Asked: How Many People Are Released from Each State's Prisons and Jails Every Year?* Prison Policy Initiative Accessed December 17, 2024. https://www.prisonpolicy.org/blog/2022/08/25/releasesbystate/

30. Browning SL, Miller RR, Spruance LM. Criminal incarceration dividing the ties that bind: Black men and their families. *Journal of African American Men*. 2001;6(1):87-102. doi:10.1007/s12111-001-1016-0

31. Haley DF, Golin CE, Farel CE, et al. Multilevel challenges to engagement in HIV care after prison release: a theory-informed qualitative study comparing prisoners' perspectives before and after community reentry. *BMC Public Health*. 2014;14(1):1253. doi:10.1186/1471-2458-14-1253

32. Travis J. *Families Left Behind: The Hidden Costs of Incarceration and Reentry | Office of Justice Programs*. U.S. Department of Justice; 2005. Accessed December 17, 2024. https://www.ojp.gov/ncjrs/virtual-library/abstracts/families-left-behind-hidden-costs-incarceration-and-reentry-0

33. Wolff N, Draine J. Dynamics of social capital of prisoners and community reentry: ties that bind? *Journal of correctional health care*. 2004;10(3):457-490. doi:10.1177/107834580301000310

34. Sampson RJ, Laub JH. *Crime and Deviance Over the Life Course: The Salience of Adult Social Bonds*. National Institute of Justice; 1990. Accessed December 17, 2024. https://nij.ojp.gov/library/publications/crime-and-deviance-over-life-course-salience-adult-social-bonds

35. Kawachi I, Berkman LF. Social ties and mental health. *J Urban Health*. 2001;78(3):458-467. doi:10.1093/jurban/78.3.458

36. Cohen E by S, Underwood LG, Gottlieb and BH, eds. *Social Support Measurement and Intervention: A Guide for Health and Social Scientists*. Oxford University Press; 2000.

37. Solomon AL, Visher C, Vigne NGL, Osborne J. *Understanding the Challenges of Prisoner Reentry. Maryland Pilot Study: Findings from Baltimore.*; 2004.

38. Vigne NGL, Visher C, Castro J. *Chicago Prisoners' Experiences Returning Home*. Urban Institute; 2004.

39. Western B. The impact of incarceration on wage mobility and inequality. *Am Sociol Rev*. 2002;67(4):526-546. doi:10.1177/000312240206700403

40. Jeremy Travis. But They All Come Back: Facing the challenges of prisoner reentry. *J Urban Health*. 2006;83(3):370-371. doi:10.1007/s11524-006-9046-5

41. *Medicaid and Financing Health Care for Individuals Involved with the Criminal Justice System*. The Council of State Governments Justice Center; 2013. Accessed December 17, 2024. https://csgjusticecenter.org/publications/medicaid-and-financing-health-care-for-individuals-involved-with-the-criminal-justice-system/

42. Khan MR, Scheidell JD, Golin CE, et al. Dissolution of committed partnerships during incarceration and STI/HIV-related sexual risk behavior after prison release among African American men. *J Urban Health*. 2018;95(4):479-487. doi:10.1007/s11524-018-0274-2

43. Khan MR, El-Bassel N, Golin CE, et al. The committed intimate partnerships of incarcerated African American men: implications for sexual HIV transmission risk and prevention opportunities. *Arch Sex Behav*. 2017;46(7):2173-2185. doi:10.1007/s10508-016-0916-y

44. Wang EA, Hong CS, Shavit S, Sanders R, Kessell E, Kushel MB. Engaging individuals recently released from prison into primary care: a randomized trial. *Am J Public Health*. 2012;102(9):e22-e29. doi:10.2105/AJPH.2012.300894

45. Fox AD, Anderson MR, Bartlett G, Valverde J, Starrels JL, Cunningham CO. Health outcomes and retention in care following release from prison for patients of an urban post-incarceration transitions clinic. *J Health Care Poor Underserved*. 2014;25(3):1139-1152. doi:10.1353/hpu.2014.0139

46. Morse DS, Wilson JL, McMahon JM, Dozier AM, Quiroz A, Cerulli C. Does a primary health clinic for formerly incarcerated women increase linkage to care? *Womens Health Issues*. 2017;27(4):499-508. doi:10.1016/j.whi.2017.02.003

47. Morrissey JP, Domino ME, Cuddeback GS. Expedited Medicaid enrollment, mental health service use, and criminal recidivism among released prisoners with severe mental illness. *Psychiatr Serv*. 2016;67(8):842-849. doi:10.1176/appi.ps.201500305

48. *For People with Serious Mental Illnesses: Finding the Key to Successful Transition from Jail or Prison to the Community. An Explanation of Federal Medicaid and Disability Program Rules.* Bazelon Center for Mental Health Law; 2009.

49. Lynch M, Astone NM, Collazos J, Lipman M, Esthappan S. *Arches Transformative Mentoring Program*. Urban Institute; 2018.

50. Khan MR, Kapadia F, Geller A, et al. Racial and ethnic disparities in "stop-and-frisk" experience among young sexual minority men in New York City. *PLoS One*. 2021;16(8):e0256201. doi:10.1371/journal.pone.0256201

51. Kajeepeta S, Bruzelius E, Ho JZ, Prins SJ. Policing the pandemic: estimating spatial and racialized inequities in New York City police enforcement of COVID-19 mandates. *Crit Public Health*. 2022;32(1):56-67. doi:10.1080/09581596.2021.1987387

52. Nielson KR, Zhang Y, Ingram JR. The impact of COVID-19 on police officer activities. *J Crim Justice*. 2022;82:101943. doi:10.1016/j.jcrimjus.2022.101943

53. *How Many People Are Arrested And Prosecuted In NYC Each Year?* New York City Criminal Justice Agency Accessed December 17, 2024. https://www.nycja.org/people-prosecuted

54. Rosenfeld R, Grigg A, eds. *The Limits of Recidivism: Measuring Success After Prison*. National Academies Press; 2022. doi:10.17226/26459

55. Berk J, Brinkley-Rubinstein L. Know the difference between jail and prison? Both are associated with risk of death. *Am J Public Health*. 2024;114(9):852-855. doi:10.2105/AJPH.2024.307777

56. *The Difference between Jail and Prison.* Vera Insitute of Justice; 2018. Accessed December 17, 2024.
https://www.vera.org/news/u-s-jails-and-prisons-explained

57. McCann S. *Health Care Behind Bars: Missed Appointments, No Standards, and High….* Vera Institute of Justice; 2022.
Accessed December 17, 2024. https://www.vera.org/news/health-care-behind-bars-missed-appointments-no-
standards-and-high-costs