

National Trajectory Project

The National Trajectory Project of Individuals Found Not Criminally Responsible on Account of Mental Disorder in Canada. Part 4: Criminal Recidivism

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Celebrating 60 years
Nous célébrons 60 ans



Objective: To examine criminal recidivism rates of a large sample of people found not criminally responsible on account of mental disorder (NCRMD) in Canada's 3 most populous provinces, British Columbia, Ontario, and Quebec. Public concern about the dangerousness of people found NCRMD has been fed by media attention on high-profile cases. However, little research is available on the rate of reoffending among people found NCRMD across Canadian provinces.

Method: Using data from the National Trajectory Project, this study examined 1800 men and women in British Columbia ($n = 222$), Ontario ($n = 484$), and Quebec ($n = 1094$) who were found NCRMD between May 2000 and April 2005 and followed until December 2008.

Results: Recidivism was relatively low after 3 years (17%). There were interprovincial differences after controlling for number of prior criminal offences, diagnosis, seriousness of the index offence, and supervision by the review boards. British Columbia (10%) and Ontario (9%) were similar, whereas Quebec had almost twice the recidivism (22%). People who had committed severe violent index offences were less likely to reoffend than those who had committed less severe offences. People from the sample were less likely to reoffend when under the purview of review boards, across all 3 provinces.

Conclusion: The results of this study, along with other research on processing differences, suggest systemic differences in the trajectories and outcomes of persons found NCRMD need to be better understood to guide national policies and practices.



Projet national des trajectoires des personnes déclarées non criminellement responsables pour cause de troubles mentaux au Canada. Partie 4 : La récidive criminelle

Objectif : Examiner les taux de récidive criminelle dans un large échantillon de personnes déclarées non criminellement responsables pour cause de troubles mentaux (NCRTM) dans les 3 provinces les plus peuplées du Canada, la Colombie-Britannique, l'Ontario, et le Québec. Les craintes du public à l'égard de la dangerosité des personnes déclarées NCRTM ont été nourries par l'attention portée par les médias à des affaires spectaculaires. Toutefois, il y a peu de recherche sur le taux de récidive chez les personnes déclarées NCRTM à travers le Canada.

Méthode : À l'aide des données du Projet national des trajectoires, la présente étude a examiné 1800 hommes et femmes du Colombie-Britannique ($n = 222$), de l'Ontario ($n = 484$) et de le Québec ($n = 1094$) qui ont été déclarés NCRTM entre mai 2000 et avril 2005, et suivis jusqu'en décembre 2008.

Résultats : La récidive était relativement faible après 3 ans (17 %). On observe des différences interprovinciales après contrôle pour le nombre d'infractions criminelles antérieures, le diagnostic, la gravité de l'infraction répertoriée, et la supervision des Commissions d'examen (CE). Les provinces du Colombie-Britannique (10 %) et de l'Ontario (9 %) étaient semblables tandis que le Québec avait près du double de récidives (22 %). Les personnes qui avaient commis une infraction répertoriée grave étaient moins susceptibles de récidiver que celles dont les infractions étaient moins graves. Les personnes de l'échantillon étaient moins susceptibles de récidiver quand elles étaient sous la supervision de la CE, dans les 3 provinces.

Conclusion : Les résultats de cette étude, de même que ceux d'autres recherches sur les différences de traitement, suggèrent que les différences systémiques dans les trajectoires et les résultats des personnes déclarées NCRMD doivent être mieux comprises pour guider les politiques et pratiques nationales.

There is substantial variation in risk for violence among people with SMI.¹⁻⁴ Nonetheless, the general public often perceives people with SMI as being dangerous.^{5,6} Although multiple factors may influence this perception, media portrayal of people with a mental illness may be an important contributor.^{7,8} Studies show there is an overemphasis on violence in the depiction of mental illness in the media, particularly sensational cases involving brutal or multiple homicides.⁹⁻¹¹ The perception of the dangerousness of people with mental illness may foster support for the use of stricter measures in the management of people with mental illness, such as longer periods of detention or involuntary commitment.¹²

Recent attention to high-profile cases involving offenders with mental disorders and a tough-on-crime agenda has led the current Canadian government to amend Part XX.1 of the Criminal Code on mental disorder (section 672.1).¹³ This amendment establishes stricter guidelines in the management of people found NCRMD, through the identification of a new legal category of high-risk accused. People are found NCRMD if they committed a criminal offence while suffering from a mental disorder that caused them to be incapable of knowing that the offence was wrong (*mens rea*) or that prevented them from controlling their behaviour (*actus reus*). People subject to the new status of high-risk accused include those who committed a serious personal injury offence, such as homicide, attempted homicide, and sexual offences.¹³ Categorizing people as high-risk accused suggests they have a higher probability of reoffending than people found NCRMD who did not commit a serious personal injury offence, and (or) commit more serious violence if they do reoffend.

Abbreviations

NCRMD	not criminally responsible on account of mental disorder
NTP	National Trajectory Project
PD	personality disorder
RB	review board
SMI	serious mental illness
SUD	substance use disorder

Clinical Implications

- There is a relatively low rate of recidivism among NCRMD-accused people, compared with general offenders or offenders with mental disorders in correctional custody.
- Findings contradict the notion that changes to the legislation are required to protect public safety.
- Forensic mental health experts and RBs across provinces may learn from their respective practices in relation to the prediction of recidivism and release decisions.

Limitations

- Our study relied on archival files from 2000 to 2008, accessed in 3 Canadian provinces, and therefore may not generalize to other jurisdictions and present practices.
- Recidivism was recorded from a national criminal records database, and thus was limited by the information that was available (for example, new offences may result in rehospitalization or other diversion practices rather than new criminal charges).

According to a seminal meta-analysis by Bonta et al.,¹⁴ multiple factors are associated with the likelihood of general and specifically violent recidivism of offenders with mental disorders. These factors include criminal history, psychiatric diagnosis, and nature of the index offence. Their results also showed that people found not guilty by reason of insanity (equivalent to the NCRMD verdict) were less likely to reoffend than those who did not have this finding. Moreover, people with mental illness who committed a serious offence, such as homicide or sexual offences, were less likely to reoffend than those who committed less serious offences.

Provincial and territorial RBs are mandated by Canadian law to determine a suitable disposition for people declared NCRMD, based on “the need to protect the public from dangerous persons, the mental condition of the accused, the reintegration of the accused into society and the other needs of the accused.”¹⁵ These dispositions of people found NCRMD, reviewed on at least an annual basis, are expected

to have an effect on subsequent offending. Dispositions include whether the person is detained in hospital or allowed to reside in the community, and conditions that can include travel restrictions, contact restrictions, treatment participation, and forbidding substance use.¹⁶ The RB has oversight until a person is absolutely discharged.

The number of people found NCRMD has increased steadily during the past 2 decades in Canada, paralleling increasing demands for forensic mental health services in other countries.¹⁷ This indicates that an examination of the trajectories and outcomes of NCRMD–accused people is essential to inform policies and practices in this area. Though some studies outside Canada have examined the risk of recidivism related to people found NCRMD or its equivalent,^{18–20} few Canadian studies have done so.

In this study, we addressed the following 3 research questions: How likely are NCRMD individuals to reoffend? Do individuals with serious index offences have a higher rate of recidivism than other persons found NCRMD? And, are there provincial differences in recidivism rates when taking into account criminal history, mental illness, seriousness of the index offence, and the RB disposition?

Method

Sample

Data for the current analyses were drawn from the NTP.²¹ The objective of the NTP was to provide an accurate portrait of 1800 people found NCRMD and to examine the trajectories and outcomes of people under the authority of an RB. The full NTP design and procedures are described in more detail in Crocker et al.²¹ The sample was comprised of new NCRMD–accused people entering the RB system in Quebec ($n = 1094$), British Columbia ($n = 222$), and Ontario ($n = 484$). The cases spanned between 2000 and 2005.²¹ People were followed until December 31, 2008, which allowed for 3 to 8 years of follow-up after the index NCRMD verdict. On average, people were followed for 5.7 years (SD 1.48) following their verdict. Table 1 presents the descriptive analyses of the sample. For more analyses of variation across provinces, see Crocker et al.^{16,22}

Recidivism

Based on official criminal records, all offences leading to a conviction or NCRMD finding following the index NCRMD verdict were classified as recidivism. A total of 421 people (23.5%) reoffended during the entire follow-up period (17% reoffended after 3 years of follow-up). The most serious offence associated with each recidivism event was categorized as follows: severe offences (that is, offences causing death or attempting to cause death and sex offences), other offences against a person (including assaults, threats, harassment, kidnapping, extortion, and robbery), and offences not against the person.²¹ Recidivism was determined as the first new offence following the NCRMD index verdict. Time to each type of new offence (against the person or not against the person) was calculated

Table 1 Descriptive analyses of the sample ($n = 1800$)

Characteristic	n (%) or mean (SD)
Province, n (%)	
Quebec	1094 (60.8)
Ontario	484 (26.9)
British Columbia	222 (12.3)
Observation period, years, mean (SD)	5.73 (1.48)
Type of reoffences for the whole observation period, n (%)	
Against person	257 (14.3)
Severe	13 (0.7)
Causing death or attempting	4 (0.2)
Sex offences	9 (0.5)
Other against person	244 (13.6)
Assaults	130 (7.2)
Threats	76 (4.2)
Other offences against person	39 (2.2)
Not against person	164 (9.1)
Total	421 (23.4)
Period under RB purview, years, mean (SD)	2.83 (2.17)
Past criminal convictions or NCRMD findings, mean (SD)	2.43 (4.67)
Diagnosis at the index NCRMD verdict, n (%)	
Primary diagnosis	
Psychotic spectrum disorder	1268 (70.9)
Mood spectrum disorder	414 (23.2)
Others	106 (5.9)
SUD	550 (30.8)
PD	190 (10.6)
Missing	16 (0.9)
Index verdict offence, n (%)	
Severe	164 (9.1)
Other against the person	1004 (55.8)
Not against the person	631 (35.1)
NCRMD = not criminally responsible on account of mental disorder; PD = personality disorder; RB = review board; SUD = substance use disorder	

as the time from the index NCRMD verdict to the first incident of that type of new offence. Severe offences were combined with other offences against a person for our multivariate modelling (Model II, see below) because there were only 13 cases of new severe offences during the entire follow-up period (9 cases after 3 years of follow-up).

Time Under the Purview of the Review Board

The date of absolute discharge from the RB system was obtained from RB files. People are considered to be under the purview of the RB until an absolute discharge. Given that this status changes over time, it was included as a time-dependent covariate in proportional hazard models to evaluate its impact on recidivism. People were under the

purview of an RB for an average of 2.84 years (SD 2.2 years). For a more detailed analysis of the supervision by the RB, see Crocker et al.¹⁶

Control Variables

Many factors are associated with the likelihood of recidivism of people with mental illness, including criminal history, psychiatric diagnosis, and nature of the index offence.¹⁴ Given these individual characteristics vary across the provinces,²² we statistically controlled for these characteristics to conduct a fair comparison of recidivism.

Criminal history was represented by the number of prior criminal convictions and NCRMD findings. As presented in Crocker et al.,²² about one-half (51%) of the participants had no prior criminal history. For NCRMD-accused people with an official criminal history, there was a median of 3 (mean 4.99, SD 5.69) previous convictions and 1 prior NCRMD finding.

Diagnosis was coded into the following major categories²²: psychotic spectrum disorder, such as schizophrenia or schizoaffective disorder (71%); mood disorder, such as bipolar disorder or depression (23%); SUD (31%); and PD (11%). The percentages add up to more than 100% because people could have multiple diagnoses.

Seriousness of the index offence followed our categorization for recidivism: severe offences, other offences against the person, and offences not against a person. Other offences against a person accounted for 55.8% of index offences, with assaults representing one-quarter to one-third of all index offences across the 3 provinces. Severe offences accounted for 9% of all index NCRMD verdicts.²²

Analyses

Weighting was used to ensure that the Quebec sample was regionally representative.²¹ Time at risk for recidivism varied, with fewer cases under observation as the follow-up period increased; survival analysis controls for censored observations and for varying time at risk. Multivariate comparisons of survival curves were performed using Cox proportional hazard regression models.²³ Sixteen cases presented missing information about diagnosis and were removed listwise in this multivariate model, resulting in a final sample of 1784 people. Survival curves and proportional hazard models were performed using R, version 3.0.2,²⁴ and the survival package.²⁵

Results

To control for differential time at risk and censoring of observations, we first examined recidivism after a fixed follow-up period. Among the 1768 people under observation 3 years after the index verdict, 16.7% ($n = 295$) had committed a new offence, regardless of whether they were still under the purview of the RB. This rate went up to 20.3% (267/1319) 3 years following conditional discharge, and to 21.8% (207/949) 3 years following absolute discharge. In the 3 years following the index verdict, Ontario and British

Columbia had similar recidivism rates, but in Quebec the rate was more than twice as high: 21.5% (229/1063) of people from Quebec, 9.5% (21/221) of those from British Columbia, and 9.3% (45/484) of those from Ontario had perpetrated a new offence, regardless of their disposition status (Figure 1A). People who had committed a severe offence for their index NCRMD verdict had the lowest recidivism rates (Figure 1B) of all groups: 3 years following the index offence, only 6.0% (10/159) committed a new offence of any kind. The recidivism rate was higher among people who committed a less severe index offence against a person (15.3%; /151/988) or people who committed index offences that were not against a person (21.6%; 134/621).

The recidivism rate when only reoffences against a person not classified as severe were considered (8.8% after 3 years; 154/1755) was similar to the recidivism rate when only reoffences that were not against a person were considered (10.5% after 3 years; 186/1765; Figure 1C). Almost one-third (29%) of these offences against a person involved threats. The recidivism rate for a severe violent offence within 3 years was extremely low: 0.6% (9/1611).

Table 2 presents Cox regression models predicting recidivism, for all types of reoffences and for reoffences against the person specifically, controlling for the number of past criminal convictions or NCRMD findings, diagnosis at the index verdict, most severe offence related to the index verdict, and RB disposition. Results show that, when these characteristics are held constant, people from Quebec had nearly twice the probability of a reconviction or a new finding of NCRMD than people from Ontario and British Columbia for all types of reoffences. No significant differences in recidivism rates were found between British Columbia and Ontario ($b = -0.17$, $SE = 0.22$, $P = 0.43$). For reoffence against a person only, people from British Columbia were 3 times less likely, and from Ontario were 2 times less likely, to reoffend than people from Quebec. Again, no differences were observed between British Columbia and Ontario ($b = 0.40$, $SE = 0.33$, $P = 0.23$).

Being under the purview of the RB significantly reduced the risk of recidivism by 0.77 for all types of reoffences, compared with being absolutely discharged. A model with an interaction effect between provinces and the supervision of the RB showed no significant results (likelihood ratio = -1597.2 , $\chi^2 = 1.30$, $df = 2$, $P = 0.52$), suggesting that the supervision of the RB is equally efficient to prevent recidivism for all provinces. However, the supervision of the RB had no effect on likelihood of recidivism when only new offences against a person were considered.

People who had committed more criminal offences prior to the index verdict were more likely to reoffend regardless of type of reoffence. While the primary diagnosis (psychotic or mood spectrum disorders) had no influence on the risk of recidivism, a comorbid diagnosis of SUD increased the risk of recidivism by 1.41 for all type of reoffences and by 1.48 for crimes against a person only. A comorbid diagnosis of

PD also increased the risk of recidivism, by 1.38 for all type of reoffences and by 1.48 for offences against a person only.

For all types of reoffences, people who committed a severe index offence were 1.76 times less likely to reoffend than people whose index offences were categorized as other offences against a person, and 2.14 times less likely to reoffend than people whose index offences were not against a person. Severity of index offence had no significant effect on the likelihood of recidivism against the person.

Discussion

The 3-year follow-up recidivism rates for our multi-province sample of people found NCRMD was 17% following index verdict, 20% following conditional discharge and 22% following absolute discharge. These rates are lower than rates of recidivism found among a general offender population (34%)²⁶ and much lower than rates found among an inmate population treated for mental disorder (70%)²⁷ during the same observation period. The NCRMD population seems to be adequately managed through the RB system. As shown in other studies,¹⁴ and inconsistent with the introduction of a high-risk accused category in Canadian legislation, people found NCRMD for severe offences (such as those causing death, attempting to cause death, or sex offences) were actually less likely to reoffend, compared with people who had not committed severe offences against the person or offences that were not against a person (for example, theft and possession of narcotics).

In line with previous studies, the number of past criminal convictions and NCRMD findings was a good predictor of future offences. A comorbid diagnosis of PD or SUD also increased the risk of reoffending. Even if people found NCRMD were less likely to reoffend under the purview of the RB, to a similar degree across provinces, the above-mentioned predictors should be attended to more closely by treatment teams and RBs to enhance their decision making. Future research should focus on additional risk factors found in traditional risk assessment measures, as well as risk management strategies used by treatment teams.

Recidivism rates were the highest in Quebec, and remained about twice as high as Ontario and British Columbia, even after controlling for number of prior offences, diagnostic category, seriousness of the index offence, and the supervision of the RB. This interprovincial difference in recidivism rates may be related to differences in judicial processing and (or) risk assessment and management practices. The reasons for this notable difference requires further investigation.

Strengths and Limitations

A strength of our study is that it is the first multi-provincial, longitudinal, and representative sample of a cohort of people found NCRMD in the 3 largest Canadian provinces, using information from RB files and national criminal records. Limitations include that recidivism was based on official criminal records only, and thus must be

Figure 1 Proportion of people who did not reoffend over time, with 95% CI as a function of province, type of index offence, and type of recidivism offence

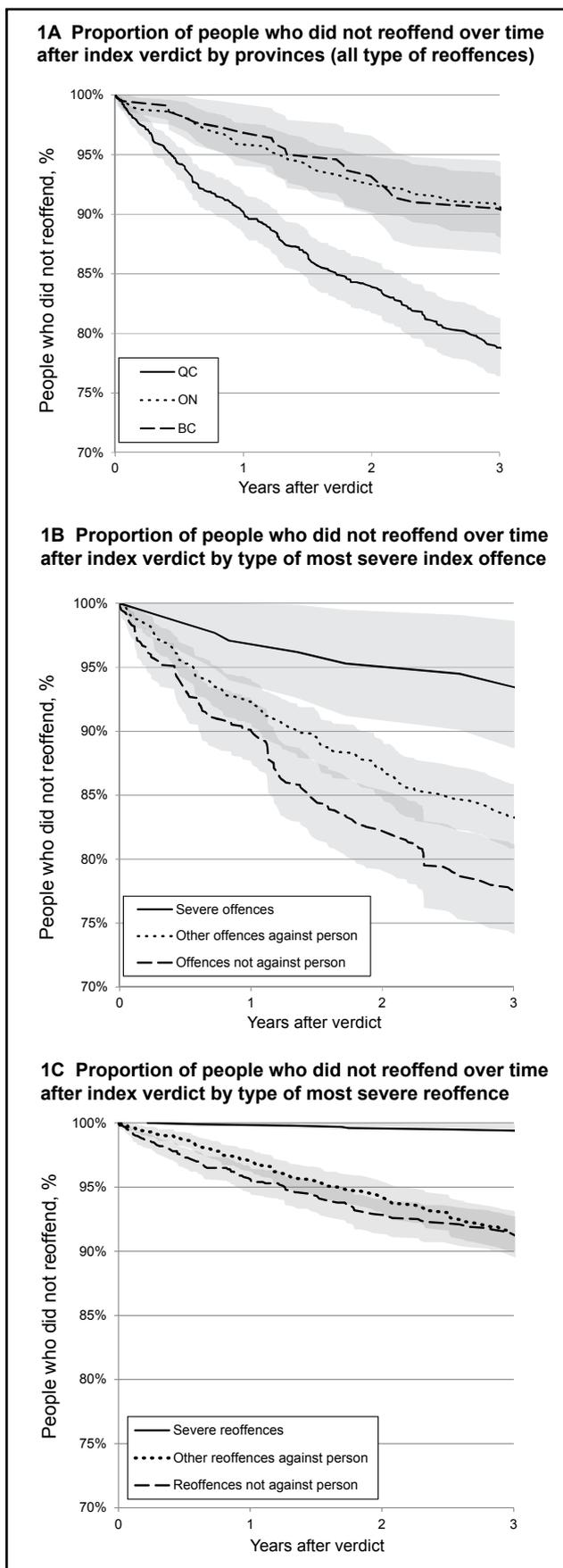


Table 2 Cox regression predicting time before reoffence by all types of offences and by offences against a person specifically

Covariate	Hazards of recidivism OR (95% CI)	
	Model I All types of reoffences <i>n</i> = 1784, NR = 421	Model II Reoffences against person <i>n</i> = 1784, NR = 224
Province (Quebec as reference)		
Ontario	0.43 (0.32 to 0.58) ^a	0.44 (0.31 to 0.64) ^a
British Columbia	0.51 (0.36 to 0.74) ^a	0.30 (0.17 to 0.54) ^a
Under the purview of the RB	0.77 (0.60 to 0.98) ^b	0.87 (0.64 to 1.19)
Past criminal convictions or NCRMD findings	1.06 (1.04 to 1.07) ^a	1.06 (1.04 to 1.08) ^a
Diagnosis at the index NCRMD verdict		
Primary diagnosis (Others as reference)		
Psychotic spectrum disorder	1.16 (0.73 to 1.83)	1.44 (0.78 to 2.67)
Mood spectrum disorder	1.47 (0.92 to 2.37)	1.20 (0.62 to 2.31)
Comorbidity		
Substance use disorder	1.41 (1.14 to 1.75) ^c	1.48 (1.12 to 1.96) ^c
Personality disorder	1.38 (1.03 to 1.84) ^b	1.48 (1.03 to 2.13) ^b
Index verdict offence (Severe as reference)		
Other against person	1.76 (1.03 to 2.99) ^b	1.37 (0.73 to 2.60)
Not against person	2.14 (1.25 to 3.67) ^c	1.80 (0.94 to 3.45)
Likelihood ratio test	$\chi^2 = 143.4, df = 10, P < 0.001$	$\chi^2 = 87.4, df = 10, P < 0.001$
^a <i>P</i> < 0.001; ^b <i>P</i> < 0.05; ^c <i>P</i> < 0.01		
NCRMD = not criminally responsible on account of mental disorder; NR = number of recidivists; RB = Review Board		

interpreted with caution.²⁸ In addition, we had a limited follow-up period and we only considered the first incident of reoffending following the index offence. Because criminal justice is administered provincially, differences in criminal justice processing may influence observed recidivism rates. For example, in the general population in 2000, 75% of charges led to a conviction in Quebec, while in British Columbia and Ontario the rate is 62%.²⁹ This may reflect differences in judicial decision making, pre-trial diversion, and other decisions. These differences across jurisdictions need to be considered when comparing recidivism rates coming from official records and when drawing conclusions about cross-provincial differences in our study.

Recidivism rates were relatively low in our sample, restraining our statistical power to capture the presence of effects, despite our large initial sample size. This may underestimate the impact of some factors, for example, the influence of the supervision of the RB on recidivism against a person. This limitation would be even more pronounced if we had focused only on criminal acts that resulted or could result in physical injury.

A related limitation is that our measure of recidivism did not capture all new offences. The national criminal records database does not capture all new criminal charges or convictions, and does not capture all cases lost to follow-up as a result of death or deportation. Some new

offences, particularly those that were perceived as less serious (for example, theft, drug use, or vandalism) or that involved family members or professionals, may lead to rehospitalization instead of criminal charges for people still under the purview of the RB. Also, though we recorded new NCRMD findings resulting in a disposition under 1 of the 3 study provinces, some people may have moved to another province and been found NCRMD. This highlights the value of a broader assessment of outcomes beyond official criminal records. More discussion of strengths and limitations of the NTP is provided in Crocker et al.²¹

Conclusions and Future Directions

Careful comparisons are needed to understand observed differences in official recidivism rates, including a better understanding of judicial processing and other systemic parameters (for example, availability of community mental health services, and provision of services through civil, compared with forensic, facilities) on subsequent offending. For example, in our companion study of RB processing and trajectories, we found that the provinces differed in the total time that NCRMD–accused people spent under the purview of an RB before absolute discharge.¹⁶ Information about rehospitalizations is needed, as some new offences may result in these outcomes rather than new criminal charges and convictions. Also, though new offences are a very important outcome for policy and practice, given the central importance of public safety, evaluations of other outcomes,

including degree of rehabilitation and recovery, quality of life, and other aspects of community reintegration are also needed.

The risk to public safety that people found NCRMD pose is an important factor considered by RBs. Most people suffering from mental illness do not represent a high risk to society, and an individualized assessment of risk to reoffend is needed to balance the costs of unnecessarily restraining individual liberties (as well as health and processing costs) against the costs of new offences, particularly new offences against a person and new serious offences. Results from this study show, as others have,¹⁴ that risk to reoffend is inversely rather than positively related to the seriousness of the index offence. Criminal history, mental disorder diagnosis (more specifically comorbid SUD and PD), and level of supervision are relevant, as are various other risk factors. These findings should help shape policies rather than relying on the severity of the offence.

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