

National Trajectory Project

The National Trajectory Project of Individuals Found Not Criminally Responsible on Account of Mental Disorder in Canada. Part 2: The People Behind the Label

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Objective: To examine the psychosocio-criminological characteristics of not criminally responsible on account of mental disorder (NCRMD)—accused people and compare them across the 3 most populous provinces. In Canada, the number of people found NCRMD has risen during the past 20 years. The Criminal Code is federally legislated but provincially administered, and mental health services are provincially governed. Our study offers a rare opportunity to observe the characteristics and trajectories of NCRMD—accused people.

Method: The National Trajectory Project examined 1800 men and women found NCRMD in British Columbia ($n = 222$), Quebec ($n = 1094$), and Ontario ($n = 484$) between May 2000 to April 2005, followed until December 2008.

Results: The most common primary diagnosis was a psychotic spectrum disorder. One-third of NCRMD—accused people had a severe mental illness and a concomitant substance use disorder, with British Columbia having the highest rate of dually diagnosed NCRMD—accused people. Most accused people (72.4%) had at least 1 prior psychiatric hospitalization. Two-thirds of index NCRMD offences were against the person, with a wide range of severity. Family members, followed by professionals, such as police and mental health care workers, were the most frequent victims. Quebec had the highest proportion of people with a mood disorder and the lowest median offence severity. There were both interprovincial differences and similarities in the characteristics of NCRMD—accused people.

Conclusions: Contrary to public perception, severe violent offenses such as murder, attempted murder or sexual offences represent a small proportion of all NCRMD verdict offences. The results reveal a heterogeneous population regarding mental health and criminological characteristics in need of hierarchically organized forensic mental health services and levels of security. NCRMD—accused people were well known to civil psychiatric services prior to being found NCRMD. Risk assessment training and interventions to reduce violence and criminality should be a priority in civil mental health services.



Projet national des trajectoires des personnes déclarées non criminellement responsables pour cause de troubles mentaux au Canada. Partie 2 : Les personnes derrière l'étiquette

Objectif : Examiner les caractéristiques psychologiques, sociales et criminologiques des accusés déclarés non criminellement responsables pour cause de troubles mentaux (NCRTM) et les comparer dans les 3 provinces les plus peuplées. Au Canada, le nombre de personnes déclarées NCRTM a augmenté ces 20 dernières années. Le Code criminel relève de la compétence du gouvernement fédéral mais son application relève des provinces, et les services de santé mentale sont régis par les provinces. Cette étude offre l'occasion unique d'observer les caractéristiques et la trajectoire des accusés NCRTM.

Méthode : Le Projet national des trajectoires a permis d'examiner 1800 hommes et femmes déclarés NCRTM en Colombie-Britannique ($n = 222$), au Québec ($n = 1094$) et en Ontario ($n = 484$) de mai 2000 à avril 2005, et de les suivre jusqu'en décembre 2008.

Résultats : Le diagnostic principal le plus courant était un trouble du spectre de la psychose. Un tiers des accusés NCRTM souffraient d'une maladie mentale grave et d'un trouble concomitant lié à l'utilisation de substances, la Colombie-Britannique ayant le taux le plus élevé d'accusés NCRTM ayant ces troubles concomitants. La plupart des accusés (72,4 %) avaient déjà été hospitalisés au moins une fois dans un établissement psychiatrique. Les deux tiers des infractions répertoriées des accusés NCRTM étaient des infractions contre la personne, de niveaux de gravité variables. Les membres de la famille, puis des intervenants comme les agents de police et les travailleurs de la santé mentale, étaient les victimes les plus fréquentes. C'est au Québec que la proportion de personnes souffrant d'un trouble de l'humeur était la plus élevée et que la gravité médiane des infractions était la plus basse. Les caractéristiques des accusés NCRTM entre les provinces présentent à la fois des différences et des similarités.

Conclusions : Contrairement à la perception publique, les infractions graves avec violence comme le meurtre, les tentatives de meurtre ou les agressions sexuelles représentent une faible proportion de tous les verdicts NCRTM. Les résultats révèlent une population hétérogène en termes de santé mentale et de caractéristiques criminologiques ayant besoin de services hiérarchisés et des niveaux de sécurités variables. Les personnes déclarées NCRTM étaient bien connues des services de psychiatrie générale avant d'être trouvées NCRTM. La formation et les interventions en évaluation du risque, afin de réduire la violence et la criminalité, devraient être une priorité dans les services de santé mentale civils.

Institutional mental health services are more difficult to access following the deinstitutionalization movement and a subsequent shortfall in community-based services,¹ often compelling families to report criminal acts to police to access services for their relatives with SMI, even for relatively minor offences, such as uttering threats or causing a disturbance. The criminal justice system has become a major gateway to mental health services for people with SMI.^{2,3}

International research suggests that people with SMI find themselves in forensic facilities at increasing rates.⁴ In Canada, the number of forensic clients entering the system has been growing.⁵⁻⁷ This so-called forensicization transforms mental health systems into de facto forensic systems.⁸

Criminal Responsibility Legislation

A fundamental principle of Canadian law is that an accused person must possess the capacity to understand their behaviour was wrong to be found guilty of an offence. According to the Criminal Code, section 6, people can be found NCRMD

for an act committed or an omission made while suffering from a mental disorder that rendered the person incapable of appreciating the nature and quality of the act or omission or of knowing that it was wrong.⁹

People found NCRMD are then under the jurisdiction of provincial or territorial RBs that must review NCRMD dispositions (that is, detention in hospital, conditional discharge,

or absolute discharge) on a minimum yearly basis. In Part 1 of this special issue,⁷ we described the main components of the NCRMD legislation and the role of review boards.

The forensic population seems more heterogeneous today in terms of criminological and psychosocial characteristics^{5,10} as a reflection of the 1992 legislative changes making the defence of NCRMD more attractive for some (for example, to people charged with minor offences).¹¹ Forensic mental health systems must thus adjust their services to address diverse patient needs regarding mental health problems, substance use, independent living, and risk for future violence and criminality.¹²

Clinical Implications

- The mental health and criminal heterogeneity of the NCRMD population reinforces the importance of targeted evidence-based risk and need assessments to inform treatment planning.
- Given NCRMD legislation is federal and there are differences in availability of information in the review board systems, we encourage review boards and forensic mental health services to align their data and assessment protocols.
- Families are among the most common victims of crimes committed by NCRMD-accused people; further education, support, and research is needed to better understand the needs of families and how best to support them.

Limitations

- This was an archival study and thus is more likely to have missing information than a prospective design.
- We were limited to the 3 most populous provinces (Quebec, Ontario, and British Columbia), which might reduce and (or) restrict generalizability to other provinces (and internationally).
- The data reflect the population entering the review board system from the year 2000 to 2005. It is possible that the characteristics of the population may have changed.

Abbreviations

K-W	Kruskal–Wallis
NCRMD	not criminally responsible on account of mental disorder
NTP	National Trajectory Project
RB	review board
SMI	serious mental illness
SUD	substance use disorder

Interprovincial Differences

In Canada, all provinces and territories operate under the same Criminal Code. In previous papers, we¹³ and others¹⁴ reviewed some of the important interprovincial differences regarding the organization of mental health civil and forensic services in Canada. Our results indicated significant interprovincial differences in the use of the NCRMD verdict, with Quebec having a higher rate of NCRMD findings per criminal court decision than Ontario or British Columbia, and that this gap continues to grow.⁷ Evidence of continued criminalization of people with mental illness and interprovincial differences in the application of federal law suggests the need to explore the characteristics and needs of the NCRMD population across the country. In turn, this can help program planning and organization of services.

Current Study

The objective of the NTP was to provide an accurate portrait of people found NCRMD and to examine the operation of current criminal justice provisions for people under the authority of an RB (pursuant to section 672.38, Criminal Code).⁹ In this study, we examined psychosocio-criminological characteristics of the NCRMD population and compared them across 3 provinces.

Methods

The full NTP design and procedures are described in more detail in Crocker et al.⁷ The sample was comprised of 1800 men and women found NCRMD in British Columbia ($n = 222$), Quebec ($n = 1094$), and Ontario ($n = 484$) between May 2000 and April 2005 and followed until December 2008. This archival retrospective cohort study included information on sociodemographic, clinical, contextual, and criminological characteristics of the sample. Sources of information were RB files and national criminal records.

Analytic Strategy

Descriptive information is provided for the total sample and for each province. Group comparisons were carried out using chi-square for categorical variables and K-W tests for continuous variables that were not normally distributed. Post hoc pairwise comparisons were conducted for significant omnibus results. A multinomial logistic regression with 3 pairwise comparisons was then used to define NCRMD–accused profiles by province. Only variables with less than 10% missing data were included in the overall model.¹⁵

Results

Sociodemographic Characteristics

Women represented 15.6% of the sample. NCRMD–accused people were, on average, 36.56 years of age, one-half had a high school diploma, and more than three-quarters were single at the time of the index offence (Tables 1A and 1B). Two-thirds of NCRMD–accused people were Canadian born, with a slightly higher proportion of immigrants in Quebec than in British Columbia. At the time of the offence, slightly

more than one-third of the sample were living alone, less than one-half resided with family, friends, or a spouse, and 1 in 10 were homeless. Ontario had a higher proportion of people living with family and a lower proportion of homeless people than Quebec and British Columbia. Quebec had a higher proportion of accused people living independently than British Columbia and Ontario; British Columbia had fewer accused people living in supervised settings. Nearly three-quarters of the NCRMD–accused people were under some form of governmental income support, whether it be welfare, pension, or disability; Quebec had the highest proportion.

Aboriginal status (any or First Nations, Inuit, or Metis, specifically) was mentioned for 53 people (2.9%), with significant differences across provinces in the expected direction according to population base rates: 7.7% in British Columbia, 4.5% in Ontario, and 1.3% in Quebec [$\chi^2 (n = 1800) = 32.21, df = 2, P < 0.001$].

Mental Health Characteristics

Diagnosis at Verdict

Ninety-four per cent of accused people had an SMI at their index verdict. The most common diagnosis was a psychotic spectrum disorder (Table 2), with Quebec having the lowest rate. Quebec had the highest proportion of people with a mood disorder. One-third of NCRMD–accused people had an SUD, with British Columbia having the largest proportion. About 1 in 10 people had a diagnosis of personality disorder recorded at verdict, with no provincial differences. Slightly more than one-third (32.7%; $n = 588$) of NCRMD–accused people had an SMI and a concomitant personality or SUD at the time of the verdict, with British Columbia having the highest proportion of dually diagnosed accused people.

Mental State at the Time of the Offence

The mental state of the accused person at the time of the offence was clearly mentioned in 70.3% of cases ($n = 1265$; Table 2). Delusions were mentioned in less than one-half of cases and hallucinations in one-fifth of cases. Suicidal or homicidal ideation was rare, mentioned in less than 10% of cases. Alcohol or drug abuse at the time of the offence was mentioned in one-quarter of cases. There were significant interprovincial differences on all symptoms, with the exception of substance use.

Psychiatric History

Seventy-two per cent of NCRMD–accused people ($n = 1051$) were noted to have had at least 1 psychiatric hospitalization prior to the index offence, with no interprovincial differences: 72.5% in Quebec, 71.8% in Ontario, and 72.4% in British Columbia [$\chi^2 (n = 1453) = 0.968, df = 2, P = 0.97$]. The median age at first psychiatric consultation [median 24.0; K-W, $\chi^2 (n = 1102) = 2.35, df = 2, P = 0.31$] and the median age at first psychiatric hospitalization were in the mid-20s [median 26.0; K-W, $\chi^2 (n = 1608) = 0.59, df = 2, P = 0.74$], with no provincial differences. The median number of psychiatric hospitalizations prior to the index verdict of NCRMD was 2.0 [K-W, $\chi^2 (n = 1585) = 1.466,$

Table 1A Sociodemographic characteristics

Sociodemographic characteristic	British Columbia	Ontario	Quebec	χ^2 , <i>df</i> , <i>n</i> , <i>P</i>	Total
Sex, <i>n</i> (%)				0.71, 2, 1799, 0.70	
Female	33 (14.9)	81 (16.7)	166 (15.2)		280 (15.6)
Male	189 (85.1)	403 (83.3)	927 (84.8)		1519 (84.4)
Age, years, mean (SD)	36.12 (12.45)	37.19 (12.01)	36.37 (12.59)	2.41, ^a 2, 1989, 0.30	36.56 (12.42)
High school completed, <i>n</i> (%)				1.71, 2, 1266, 0.42	
Yes	112 (53.3)	215 (48.3)	296 (48.4)		623 (49.2)
No	98 (46.7)	230 (51.7)	315 (51.6)		644 (50.8)
Civil or marital status, <i>n</i> (%)				5.61, 2, 1656, 0.06	
In a relationship	37 (16.7)	85 (19.9)	149 (14.8)		271 (16.4)
Single	185 (83.3)	343 (80.1)	857 (85.2)		1385 (83.6)
Language, <i>n</i> (%)				—	
English	175 (83.3)	412 (86.2)	199 (33.7)		786 (61.4)
French	2 (1.0)	20 (4.2)	323 (54.6)		345 (27.0)
Other	33 (15.7)	46 (9.6)	69 (11.7)		148 (11.6)
Country of birth, <i>n</i> (%)				6.30, 2, 1130, 0.04 ^b	
Canada	157 (73.0)	267 (65.6)	322 (63.4)		746 (66.0)
Other	58 (27.0)	140 (34.4)	186 (36.6)		384 (34.0)
Residential status, <i>n</i> (%)				95.80, 8, 1562, 0.001 ^c	
Living alone	62 (29.4)	83 (20.7)	348 (36.6)		493 (31.5)
Living with spouse, family or friends	93 (44.0)	200 (49.9)	392 (41.3)		686 (43.9)
Supervised setting	12 (5.7)	41 (10.2)	78 (8.2)		131 (8.4)
Homeless	20 (9.5)	21 (5.2)	103 (10.8)		144 (9.2)
Other	24 (11.4)	56 (14.0)	29 (3.1)		109 (7.0)
Income, <i>n</i> (%)				13.81, 4, 1374, 0.008 ^d	
Own paid work (or partner)	35 (17.1)	47 (15.3)	135 (15.7)		217 (15.8)
Pension and (or) welfare	137 (67.2)	207 (67.2)	639 (74.1)		983 (71.5)
Other	32 (15.7)	54 (17.5)	88 (10.2)		174 (12.7)
Totals do not always add up to 1800 owing to weighting of data.					
^a Kruskal-Wallis					
^b Country of birth: Quebec and British Columbia χ^2 (<i>n</i> = 723) = 6.28, <i>df</i> = 2, <i>P</i> = 0.01					
^c Residential status: Ontario and Quebec χ^2 (<i>n</i> = 1351) = 91.53, <i>df</i> = 4, <i>P</i> < 0.001; Quebec and British Columbia χ^2 (<i>n</i> = 1161) = 30.81, <i>df</i> = 4, <i>P</i> < 0.001; Ontario and British Columbia χ^2 (<i>n</i> = 612) = 13.08, <i>df</i> = 4, <i>P</i> = 0.01					
^d Income: Ontario and Quebec χ^2 (<i>n</i> = 1170) = 11.55, <i>df</i> = 2, <i>P</i> = 0.003					
— = Statistical analyses could not be conducted because <i>n</i> is too small					

df = 2, *P* = 0.48]. Among those people with a psychiatric history, the median number of psychiatric admissions was 3.0 [K-W, χ^2 (*n* = 1143) = 4.318, *df* = 2, *P* = 0.12].

Criminological Characteristics

Index Offence

There were statistically significant differences in the index offences across provinces [χ^2 (*n* = 1802) = 87.03, *df* = 22, *P* < 0.001] (Table 1B). Quebec had a lower median offence severity (median 77.38; mean 263.25; SD 886.29) than Ontario (median 88.41; mean 533.65; SD 1433.63) or British Columbia (median 88.41; mean 525.21; SD 1515.90) [K-W

χ^2 (*n* = 1989) = 31.71, *df* = 2, *P* < 0.001]. Please refer to Part 1 for a detailed explanation of the severity of offence calculation.⁷

Offences against the person accounted for 64.9% of index offences, property offences for 16.9%, and other Criminal Code violations for 18.2%. Assaults represented one-quarter to one-third of all index offences in the 3 provinces. Among all assaults, aggravated assaults accounted for 18.3%, assaults with a weapon or causing bodily harm for 51.0%. Quebec had a higher proportion of minor assaults (22.7%) than Ontario (12.6%) or British Columbia (12.3%) [χ^2 (*n* = 478) = 17.45, *df* = 4, *P* = 0.002].

Table 1B Index offence					
Most severe index offence	British Columbia <i>n</i> (%)	Ontario <i>n</i> (%)	Quebec <i>n</i> (%)	χ^2 , <i>df</i> , <i>n</i> , <i>P</i>	Total <i>n</i> (%)
Causing death and (or) attempting	18 (8.1)	56 (11.6)	50 (4.6)	26.22, 2, 1800, <0.001 ^e	124 (6.9)
Sex offences	4 (1.8)	18 (3.7)	19 (1.7)	6.18, 2, 1800, 0.045 ^f	41 (2.3)
Assaults	73 (32.9)	127 (26.2)	278 (25.4)	5.32, 2, 1800, 0.07 ^g	478 (26.5)
Deprivation of freedom	5 (2.2)	12 (2.5)	16 (1.5)	2.18, 2, 1800, 0.34	33 (1.8)
Threats and (or) other offences against person	51 (23.0)	124 (25.6)	318 (29.0)	4.57, 2, 1800, 0.10	493 (27.4)
Property offences	30 (13.5)	52 (10.7)	222 (20.2)	23.85, 2, 1800, <0.001 ^h	304 (16.9)
Offensive weapons	22 (9.9)	38 (7.9)	50 (4.6)	12.66, 2, 1800, 0.002 ⁱ	110 (6.1)
Administration of justice	2 (0.9)	26 (5.4)	55 (5.0)	8.02, 2, 1800, 0.02 ^j	83 (4.6)
Disturbing the peace	0 (0)	2 (0.4)	6 (0.5)	—	8 (0.4)
Drug possession and (or) trafficking	0 (0)	1 (0.2)	1 (0.1)	—	2 (0.1)
Dangerous driving and (or) motor vehicle	12 (5.4)	11 (2.3)	38 (3.5)	4.62, 2, 1800, 0.10 ^k	61 (3.4)
Other federal and (or) provincial statutes	5 (2.3)	17 (3.5)	43 (3.9)	1.51, 2, 1800, 0.47	65 (3.6)
Totals do not always add up to 1800 owing to weighting of data. There were no cases of prostitution or gambling as the index offence, explaining the absence of category 7 offences.					
^e Causing death or attempting: Quebec < Ontario χ^2 (<i>n</i> = 1578) = 26.24, <i>df</i> = 1, <i>P</i> < 0.001; Quebec < British Columbia χ^2 (<i>n</i> = 1316) = 4.71, <i>df</i> = 1, <i>P</i> = 0.03					
^f Sex offences: Quebec < Ontario χ^2 (<i>n</i> = 1578) = 5.76, <i>df</i> = 1, <i>P</i> = 0.02					
^g Assaults: Quebec < British Columbia χ^2 (<i>n</i> = 1316) = 5.27, <i>df</i> = 1, <i>P</i> = 0.02					
^h Property: Ontario < Quebec χ^2 (<i>n</i> = 1578) = 21.32, <i>df</i> = 1, <i>P</i> < 0.001; British Columbia < Quebec χ^2 (<i>n</i> = 1316) = 5.48, <i>df</i> = 1, <i>P</i> = 0.02					
ⁱ Offensive weapons: Quebec < Ontario χ^2 (<i>n</i> = 1578) = 6.86, <i>df</i> = 1, <i>P</i> = 0.009; Quebec < British Columbia χ^2 (<i>n</i> = 1316) = 10.17, <i>df</i> = 1, <i>P</i> = 0.001					
^j Administration of justice: British Columbia < Quebec χ^2 (<i>n</i> = 1316) = 7.58, <i>df</i> = 1, <i>P</i> = 0.006; British Columbia < Ontario χ^2 (<i>n</i> = 706) = 7.99, <i>df</i> = 1, <i>P</i> = 0.005					
^k Dangerous driving: Ontario < British Columbia χ^2 (<i>n</i> = 706) = 4.74, <i>df</i> = 1, <i>P</i> = 0.03					
— = Statistical analyses could not be conducted because <i>n</i> is too small					

Homicide and attempted murder accounted for less than 7% of all index NCRMD verdicts. These crimes represented a lower proportion of index offences in Quebec. Offences leading to death were rare, accounting for 3.2% (*n* = 58) of all index offences (5.4% in British Columbia, 5.4% in Ontario, and 1.8% in Quebec [χ^2 (*n* = 1800) = 17.38; *df* = 2/1800, *P* < 0.001]. Sex offences represented a higher proportion of NCRMD index offences in Ontario than in Quebec and British Columbia. Quebec had a higher proportion of property offences than both Ontario and British Columbia. British Columbia had a lower rate of administration of justice offences than both Ontario and Quebec.

Victims

Males were victims in slightly more than one-half of the cases involving crimes against a person (*n* = 559; 53.3%), equally so across the 3 provinces [χ^2 (*n* = 1048) = 0.80, *df* = 2, *P* = 0.67] (Table 3). Family members (including partners) were the most likely victims of index NCRMD offences against the person, followed by professionals, strangers,

and other people known to the accused. Among family members, parents were the most frequent victims, followed closely by partners or spouses. The children of NCRMD–accused people were the victims of offences against people in less than 3% of cases. There were important differences in the distribution of accused people's relationships to the victims by type of index offence [χ^2 (*n* = 1083) = 98.27, *df* = 12, *P* < 0.001]. In particular, family members or partners and ex-partners were more likely to be victims when the index offence caused or attempted to cause death (*n* = 73; 60.8%) or with offences related to deprivation of freedom (*n* = 14; 43.8%). Strangers tended to be the most likely victims for sexual offences (*n* = 22; 55.0%). For cases of assault, professionals (*n* = 30.7%) were victims one-third of the time, as were family members (*n* = 143; 31%).

Criminal History

Among the total sample, one-half had previously been convicted or found NCRMD; one-third for an offence against the person and less than one-half for other offences

Table 2 Mental health characteristics

Mental health characteristics	British Columbia <i>n</i> (%)	Ontario <i>n</i> (%)	Quebec <i>n</i> (%)	χ^2 , <i>df</i> , <i>n</i> , <i>P</i>	Total <i>n</i> (%)
Primary diagnosis					
Psychotic spectrum disorder	170 (76.5)	380 (79.7)	718 (65.9)	34.27, 2, 1788, 0.001 ^a	1268 (70.9)
Mood spectrum disorder	41 (18.5)	67 (14.0)	306 (28.1)	40.07, 2, 1787, 0.001 ^b	414 (23.2)
Others	11 (5.0)	30 (6.3)	65 (6.0)	0.49, 2, 1788, 0.78	106 (5.9)
SUD	87 (39.2)	151 (31.7)	312 (28.7)	9.80, 2, 1787, 0.007 ^c	550 (30.8)
PD	21 (9.5)	58 (12.2)	111 (10.2)	1.70, 2, 1787, 0.43	190 (10.6)
SMI + SUD	83 (37.4)	139 (29.1)	294 (27.0)	9.67, 2, 1787, 0.008 ^d	516 (28.9)
SMI + PD	20 (9.0)	52 (10.9)	97 (8.9)	1.59, 2, 1787, 0.45	169 (9.5)
Mental state at time of offence					
Any psychotic symptom	205 (92.3)	348 (71.9)	483 (44.2)	230.71, 2, 1800, <0.001 ^e	1036 (57.6)
Hallucinations—specified	83 (37.4)	115 (23.8)	159 (14.5)	67.04, 2, 1800, <0.001 ^f	357 (19.8)
Delusions—specified	174 (78.4)	257 (53.1)	399 (36.5)	143.44, 2, 1800, <0.001 ^g	830 (46.1)
Suicidal ideation	22 (9.9)	24 (5.0)	68 (6.2)	6.35, 2, 1800, 0.04 ^h	114 (6.3)
Suicide attempt	14 (6.3)	11 (2.3)	6 (0.5)	37.33, 2, 1800, <0.001 ⁱ	31 (1.7)
Self-harm	6 (2.7)	20 (4.1)	4 (0.4)	30.67, 2, 1799, <0.001 ^j	30 (1.7)
Homicidal ideation	16 (7.2)	75 (15.5)	18 (1.6)	113.74, 2, 1800, <0.001 ^k	109 (6.1)
Substance use and (or) under the influence	53 (23.9)	105 (21.7)	259 (23.6)	0.71, 2, 1800, 0.70	415 (23.1)

Weights were used to ensure the regional representativeness of the Quebec sample, thus totals will not always add to 1800 or 100%.

^a Psychotic spectrum disorder: Ontario > Quebec χ^2 (*n* = 1566) = 29.85, *df* = 1, *P* < 0.001; British Columbia > Quebec χ^2 (*n* = 1311) = 9.56, *df* = 1, *P* = 0.002

^b Mood spectrum disorder: Quebec > Ontario χ^2 (*n* = 1565) = 36.21, *df* = 1, *P* < 0.001; Quebec > British Columbia χ^2 (*n* = 1310) = 8.83, *df* = 1, *P* = 0.003

^c SUD: British Columbia > Quebec χ^2 (*n* = 1310) = 9.62, *df* = 1, *P* = 0.002; British Columbia > Ontario χ^2 (*n* = 699) = 3.83, *df* = 1, *P* = 0.05

^d SMI and SUD: British Columbia > Quebec χ^2 (*n* = 1310) = 9.67, *df* = 1, *P* = 0.002; British Columbia > Ontario χ^2 (*n* = 699) = 4.75, *df* = 1, *P* = 0.03

^e Any psychotic symptom: British Columbia > Ontario χ^2 (*n* = 706) = 37.46, *df* = 1, *P* < 0.001; British Columbia > Quebec χ^2 (*n* = 1315) = 171.50, *df* = 1, *P* < 0.001; Ontario > Quebec χ^2 (*n* = 1577) = 103.34, *df* = 1, *P* < 0.001

^f Hallucinations: British Columbia > Ontario χ^2 (*n* = 706) = 14.01, *df* = 1, *P* < 0.001; British Columbia > Quebec χ^2 (*n* = 1316) = 64.23, *df* = 1, *P* < 0.001; Ontario > Quebec χ^2 (*n* = 1578) = 19.91, *df* = 1, *P* < 0.001

^g Delusions: British Columbia > Ontario χ^2 (*n* = 706) = 40.90, *df* = 1, *P* < 0.001; British Columbia > Quebec χ^2 (*n* = 1318) = 131.84, *df* = 1, *P* < 0.001; Ontario > Quebec χ^2 (*n* = 1578) = 38.19, *df* = 1, *P* < 0.001

^h Suicidal ideation: British Columbia > Ontario χ^2 (*n* = 706) = 6.13, *df* = 1, *P* = 0.01; British Columbia > Quebec χ^2 (*n* = 1316) = 3.95, *df* = 1, *P* = 0.047

ⁱ Suicide attempt: British Columbia > Quebec χ^2 (*n* = 1316) = 40.88, *df* = 1, *P* < 0.001; Ontario > Quebec χ^2 (*n* = 1578) = 9.36, *df* = 1, *P* = 0.002

^j Self-harm: British Columbia > Ontario χ^2 (*n* = 706) = 0.88, *df* = 1, *P* = 0.35; British Columbia > Quebec χ^2 (*n* = 1318) = 13.35, *df* = 1, *P* < 0.001; Ontario > Quebec χ^2 (*n* = 1577) = 31.75, *df* = 1, *P* < 0.001

^k Homicidal ideation: Ontario > British Columbia χ^2 (*n* = 706) = 9.31, *df* = 1, *P* = 0.002; British Columbia > Quebec χ^2 (*n* = 1316) = 22.68, *df* = 1, *P* < 0.001

PD = personality disorder; SMI = serious mental illness; SUD = substance use disorder

Table 3 Relationship of victim to NCRMD–accused people for offences against a person

Victim	British Columbia <i>n</i> (%)	Ontario <i>n</i> (%)	Quebec <i>n</i> (%)	Total <i>n</i> (%)
Stranger	35 (23.8)	86 (26.6)	125 (20.4)	246 (22.7)
Professional	31 (21.1)	60 (18.5)	157 (25.6)	248 (22.9)
Police officer	20 (13.6)	32 (9.9)	78 (12.7)	130 (12.0)
Mental health worker	9 (6.1)	27 (8.3)	56 (9.1)	92 (8.5)
Other authority figure	2 (1.4)	1 (0.3)	23 (3.8)	26 (2.4)
Family	49 (33.3)	104 (32.1)	212 (34.6)	365 (33.7)
Offspring	6 (4.1)	7 (2.2)	15 (2.5)	28 (2.6)
Partner or spouse	13 (8.8)	41 (12.7)	75 (12.2)	129 (11.9)
Parent	18 (12.2)	40 (12.3)	86 (14.0)	144 (13.3)
Other family member	12 (8.2)	16 (4.9)	36 (5.9)	64 (5.9)
Other known person	32 (21.8)	74 (22.8)	119 (19.4)	225 (20.7)
Friend or acquaintance	19 (12.9)	41 (12.7)	83 (13.5)	143 (13.2)
Roommate, coresident, or copatient	4 (2.7)	15 (4.6)	25 (4.1)	44 (4.1)
Other	9 (6.1)	18 (5.6)	11 (1.8)	38 (3.5)
Total	147 (100)	324 (100)	613 (100)	1084 (100)

Statistical test conducted on the 4 main categories, $\chi^2 (n = 1084) = 10.21, df = 6, P = 0.12$

(Table 4). More specifically, 46.6% had at least 1 past conviction. Less than 1 in 10 of our sample had a previous NCRMD finding (8.2%), with significant differences across provinces. Among the 148 people with a prior NCRMD verdict, a higher proportion were male (90.4%, compared with 83.9%) [$\chi^2 (n = 1800) = 4.41, df = 1, P = 0.04$] and had a diagnosis of SMI with comorbid SUD or personality disorder (9.2%, compared with 5.1%) [$\chi^2 (n = 1787) = 4.42, df = 1, P = 0.04$], a lower proportion were homeless (9.2%, compared with 17.3%) [$\chi^2 (n = 1561) = 26.42, df = 1, P < 0.001$], and had a paid job (6%, compared with 16.6%) [$\chi^2 (n = 1254) = 9.76, df = 1, P = 0.008$] at index verdict. No differences between groups were observed as to index offence. British Columbia had the lowest rate of people with a criminal record, compared with Ontario and Quebec; Ontario had the highest rate of past convictions, significantly higher than British Columbia. Ontario also had a higher rate of prior of offences against the person, compared with British Columbia and Quebec (Table 4).

Past offenders had a median of 3 (mean 4.99, SD 5.69) previous convictions and 1 (mean 1.15, SD 0.36) prior NCRMD finding. NCRMD–accused people in Ontario had a higher overall number of previous convictions than those in Quebec [$\chi^2 (n = 926) = 6.75, df = 2, P = 0.03$].

The median age at first criminal conviction or NCRMD finding (including at index offence for people who had no prior criminal history) in adulthood was 27.0 years (mean 31.03, SD 12.39), with no differences across provinces [K-W $\chi^2 (n = 1989) = 16.0, df = 2, P = 0.92$].

Comprehensiveness of Files

There were significant differences across provinces in the availability of information in RB files. Missing data on

education were quite low in British Columbia (5.4%) and Ontario (8.1%), but quite common in Quebec (44.1%). Residential status was unavailable in less than 1 in 5 Ontario files, about 1 in 10 Quebec files and 1 in 20 British Columbia files. Similarly, source of income was unavailable in more than one-third of Ontario files, followed by one-fifth of Quebec files and only less than one-tenth of British Columbia files. British Columbia files also tended to contain more background information about NCRMD–accused people’s mental health histories than those in Ontario and Quebec. Among the 12 items surveyed in the current analyses, there was a median of 2 missing values (mean 2.35, SD 1.91), with a significant difference across provinces [K-W $\chi^2 (n = 1989) = 493.878, df = 2, P < 0.001$]. Quebec files had a higher level of unavailable information (median 3, mean 2.98, SD 1.91) than Ontario (median 2, mean 1.78, SD 1.48) [K-W $\chi^2 (n = 1767) = 174.10, df = 1, P < 0.001$] and British Columbia (median 0.0, mean 0.46, SD 0.88) [K-W $\chi^2 (n = 1505) = 372.75, df = 1, P < 0.001$]. Files from Ontario had a higher occurrence of unavailable information than British Columbia [K-W $\chi^2 (n = 706) = 178.58, df = 1, P < 0.001$].

Modelling Provincial Differences

A multinomial logistic regression was used as a multivariate model to explain profiles of NCRMD–accused people by province (Table 5). All variables with fewer than 10% missing data were entered: sex, age at the index offence, diagnosis, Aboriginal status, prior NCRMD finding, prior criminal history (NCRMD finding or conviction), past offence against people, age at first offence, age at first violent offence, and most severe index offence. The listwise sample had on 1575 cases (missing 12.6%). Because some offences were uncommon, only

Table 4 Criminal history

Criminal history	British Columbia n (%)	Ontario n (%)	Quebec n (%)	χ^2 , df, n, P	Total n (%)
Any prior conviction or NCRMD finding	92 (41.4)	256 (52.9)	538 (49.2)	7.99, 2, 1800, 0.02 ^a	886 (49.2)
Prior offence against person	52 (23.4)	182 (37.6)	322 (29.4)	17.10, 2, 1800, <0.001 ^b	556 (30.9)
Other prior offence	82 (36.9)	217 (44.8)	454 (41.5)	4.03, 2, 1800, 0.13 ^c	753 (41.8)
Any prior conviction	89 (40.1)	243 (50.2)	506 (46.3)	6.36, 2, 1800, 0.04 ^d	838 (46.6)
Any prior NCRMD finding	10 (4.5)	30 (6.2)	108 (9.9)	10.64, 2, 1800, 0.005 ^e	148 (8.2)

^a Any prior conviction or NCRMD finding: Ontario > British Columbia χ^2 (n = 706) = 7.98, df = 1, P = 0.005; Quebec > British Columbia χ^2 (n = 1316) = 4.43, df = 1, P = 0.04
^b Any prior conviction or NCRMD finding—offence against person: Ontario > Quebec χ^2 (n = 1578) = 10.30, df = 1, P < 0.001; Ontario > British Columbia χ^2 (n = 706) = 13.81, df = 1, P < 0.001
^c Any prior conviction or NCRMD finding—other offence: Ontario > British Columbia χ^2 (n = 706) = 3.88, df = 1, P = 0.049
^d Any prior conviction: Ontario > British Columbia χ^2 (n = 706) = 6.25, df = 1, P = 0.01
^e Any prior NCRMD finding: Quebec > British Columbia χ^2 (n = 1316) = 6.51, df = 1, P = 0.01; Quebec > Ontario χ^2 (n = 1578) = 5.67, df = 1, P = 0.02
NCRMD = not criminally responsible on account of mental disorder; PD = personality disorder

Table 5 Multinomial logistic regression for NCRMD provincial characteristics (n = 1575)

Predictor	Ontario, compared with Quebec ^a		British Columbia, compared with Quebec ^a		Ontario, compared with British Columbia ^a	
	OR	(95% CI)	OR	(95% CI)	OR	(95% CI)
Female	1.29	(0.92 to 1.80)	1.04	(0.65 to 1.68)	1.23	(0.75 to 2.03)
Aboriginal status	3.15	(1.50 to 6.59) ^b	5.20	(2.30 to 11.76) ^c	0.61	(0.29 to 1.25)
Age at the index offence	0.99	(0.96 to 1.01)	0.99	(0.95 to 1.03)	1.00	(0.96 to 1.04)
Diagnosis (nonexclusive)						
Psychosis	1.16	(0.71 to 1.92)	1.60	(0.75 to 3.40)	0.73	(0.33 to 1.61)
Mood	0.46	(0.26 to 0.80) ^b	0.56	(0.24 to 1.31)	0.81	(0.33 to 2.00)
SUD	1.21	(0.93 to 1.58)	1.87	(1.32 to 2.66) ^c	0.65	(0.44 to 0.94) ^d
PD	1.14	(0.79 to 1.66)	0.85	(0.49 to 1.47)	1.35	(0.76 to 2.40)
Presence of psychiatric history	1.05	(0.81 to 1.36)	1.18	(0.82 to 1.68)	0.89	(0.61 to 1.31)
Age at first offence against person	1.02	(0.99 to 1.05)	1.02	(0.98 to 1.06)	1.01	(0.96 to 1.05)
Presence of criminal history						
NCRMD	0.40	(0.25 to 0.64) ^c	0.33	(0.15 to 0.73) ^b	1.19	(0.51 to 2.77)
Criminal	0.91	(0.65 to 1.28)	0.81	(0.52 to 1.27)	1.13	(0.69 to 1.85)
Against person	2.01	(1.34 to 3.03) ^b	1.07	(0.59 to 1.93)	1.88	(1.00 to 3.54)
Index—most severe offence (others as reference)						
Homicides or attempted	2.08	(1.25 to 3.41) ^b	1.89	(0.91 to 3.95)	1.10	(0.52 to 2.30)
Assault and sexual assaults	0.88	(0.61 to 1.27)	1.41	(0.82 to 2.42)	0.62	(0.36 to 1.10)
Other crimes against person ^o	0.74	(0.51 to 1.06)	0.97	(0.56 to 1.70)	0.76	(0.42 to 1.35)
Property crimes	0.41	(0.25 to 0.70) ^c	0.70	(0.35 to 1.41)	0.59	(0.27 to 1.27)

–2 Log Likelihood = 2560.22; χ^2 = 169.78; df = 32, P < 0.001; Nagelkerke pseudo-R² = 12.2%; proportional chance criteria = 47.8%; model accuracy rate = 61.5%
^a Reference category; ^b P < 0.01; ^c P < 0.001; ^d P < 0.05
NCRMD = not criminally responsible on account of mental disorder

murder or attempted murder, assaults and sexual assaults, other offences against a person, and property offences were included. All other offences were collapsed into an other category, which was used as the reference for this variable.

This model resulted in an accuracy rate of 61.5%, that is 29% higher than expected by chance (47.8%; $-2 \text{ Log likelihood} = 2602.28$ [$\chi^2 (n = 1575) = 163.83, df = 32, P < 0.001$]. As was observed in the univariate analyses, there were no interprovincial differences regarding sex or age at index offence. People with an Aboriginal status were 3.15 times more likely to come from Ontario than Quebec and 5.20 times more likely to come from British Columbia than Quebec. As for diagnosis, NCRMD–accused people diagnosed with an SUD were 1.87 times more likely to come from British Columbia than Quebec and 1.54 times less likely to come from Ontario than British Columbia. People with a mood disorder were 2.17 times less likely to come from Ontario than from Quebec. No provincial differences were observed for age at first offence against a person. People with a past NCRMD verdict were 2.50 and 3.03 times more likely to come from Quebec than Ontario and British Columbia, respectively. People with a past offence against a person were twice more likely to come from Ontario, compared with Quebec. NCRMD–accused people who had committed homicide as the index offence were 2.08 times more likely to come from Ontario than from Quebec. People who committed property offences were 2.43 times less likely to come from Ontario than from Quebec.

Discussion

Characteristics of NCRMD–Accused People: Debunking a Few Myths

In stark contrast to the manner in which people with mental illness are often portrayed in the media¹⁶ and the misrepresentation of NCRMD–accused people, homicides and attempted murder account for less than 1 in 10 NCRMD index offences across provinces. Our study demonstrates that many people (about one-half) have had no prior contact with the criminal justice system. Prior NCRMD findings are particularly uncommon (8.2%). Further, rates of NCRMD–accused people from the Aboriginal population are far lower than usually found in the criminal justice system,^{17,18} suggesting the NCRMD defence is dramatically underused for this minority group. This could reflect the lower access to appropriate legal representation, a general bias in the attribution of criminal intent or the possibility that Aboriginal people with an SMI are less likely to get into the criminal justice system. Less than 1 in 10 people found NCRMD was homeless. Despite extensive histories of mental health and criminal justice contacts few were NCRMD accused were in supervised residences at the time of the offence.

Interprovincial Differences

Overall, few differences were observed between Ontario and British Columbia, the exception being that British

Columbia cases had a higher rate of SUDs. With higher rates of NCRMD verdicts and lower general provincial crime statistics,¹⁹ it is not surprising that the NCRMD population in Quebec is more heterogeneous in terms of index offences and diagnoses. In addition to those previously provided,⁷ there are at least 2 other plausible explanations to account for these interprovincial differences: first, Quebec is less likely than Ontario and British Columbia to limit the NCRMD defence to the most serious offences. This is in line with the legislation, which does not preclude any type of offence being associated with an NCRMD finding. Second, it is also in Quebec that the most variability in diagnosis is found. This may indicate clinicians and the judiciary are using a more liberal²⁰ operationalization of Section 16 of the Criminal Code than in other provinces.

The implications of these interprovincial differences are potentially wide-ranging. It can be argued that people with mental illness who come into conflict with the law are best served by the forensic system, where mental health professionals equipped with expertise in risk assessment and treatment of often comorbid SMI may have advantages over services in civil mental health settings or in correctional settings. Conversely, one may conclude we are seeing evidence of criminalization of people with mental illness. Does the variability and increasing rate of NCRMD findings point to a need for more pre-arrest diversion programs for people accused of minor offences?

Implications

What is glaringly apparent from these findings is that most people found NCRMD had been under the purview of civil psychiatric services, with a median of 2 prior psychiatric hospitalizations. Their first psychiatric consultation occurred much earlier than their index NCRMD verdict. This suggests that violence risk assessment training and interventions to reduce further mental health deterioration and criminal offending are a priority in civil psychiatric services.

As was previously observed,⁵ 2 out of 3 index offences of NCRMD accused are for offences against the person, but with a wide range of severity. Assaults represented one-quarter of all index offences. As many as one-half of all NCRMD findings are for minor assaults, property offences and (or) other nonviolent Criminal Code violations. We found that among all offences against a person, family members are the most frequent victims, in line with other studies of victims of violence perpetrated by people with a mental illness.^{21,22} This emphasizes the importance of supporting family members of people with SMI, as both potential helpers and potential victims.

Finally, the heterogeneity of the NCRMD population indicates that forensic services are seeing diverse groups of individuals who do not necessarily mix well.^{3,23} For example, we must be careful to monitor the potential victimization, bullying, and manipulation of people with

active symptoms of SMI and low antisocial traits by those with pervasive antisocial personality traits and low levels of mental health problems.²³

Strengths and Limitations

This is the first multi-provincial, longitudinal, regionally representative sample of a cohort of people found NCRMD in the 3 largest provinces in Canada. It is also the first study to delve into RB file content across jurisdictions and to obtain criminal records for a large sample of NCRMD-accused people. The most important limitation of this research relates to it being archival and thus more likely to generate more missing information than face-to-face contacts with systematic assessment tools. For instance, we were reliant on diagnostic information provided to the courts at a time when the focus is likely very much on psychotic symptoms, and thus the prevalence of other diagnoses, such as personality disorders or posttraumatic stress disorder, are perhaps underreported.²⁴ However, missing information can be treated as a result relevant to RB processing, because it is an indication of the information available to RBs.⁷ The data reflect the NCRMD population entering the RB system from the year 2000 to 2005. There may be cohort differences, despite the lack of significant legislative changes during the study period. For a more in-depth discussion of the strengths and limitations of the NTP, readers are directed to our previous publication.⁷

Future Directions

Research is needed in the courts to better understand the decision to raise an NCRMD defence and the process affecting these verdicts. Differences in availability of information across RBs point to the potential value of a national minimal data protocol. This would provide greater opportunity not only to monitor changes of the RB population over time but also to evaluate the effects of legal and mental health policy changes. Finally, as families are often the victims when violence occurs, further research is clearly needed to better understand prevention strategies and to address the needs of families following offences by people found NCRMD.

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