

## National Trajectory Project

# The National Trajectory Project of Individuals Found Not Criminally Responsible on Account of Mental Disorder in Canada. Part 3: Trajectories and Outcomes Through the Forensic System

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**Objective:** To examine the processing and Review Board (RB) disposition outcomes of people found not criminally responsible on account of mental disorder (NCRMD) across the 3 most populous provinces in Canada. Although the Criminal Code is federally legislated, criminal justice is administered by provinces and territories. It follows that a person with mental illness who comes into conflict with the law and subsequently comes under the management of a legally mandated RB may experience different trajectories across jurisdictions.

**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 and April 2005, followed until December 2008.

**Results:** We found significant interprovincial differences in the trajectories of people found NCRMD, including time detained in hospital and time under the supervision of an RB. The odds of being conditionally or absolutely discharged by the RB varied across provinces, even after number of past offences, diagnosis at verdict, and most severe index offence (all covariates decreased likelihood of discharge) were considered.

**Conclusions:** Considerable discrepancies in the application of NCRMD legislation and the processing of NCRMD cases through the forensic system across the provinces suggests that fair and equitable treatment under the law could be enhanced by increased national integration and collaboration.



## Projet national des trajectoires des personnes déclarées non criminellement responsables pour cause de troubles mentaux au Canada. Partie 3 : Trajectoires et résultats au sein du système médico-légal

**Objectif :** Examiner les résultats du processus et des dispositions de la Commission d'examen (CE) pour les personnes déclarées non criminellement responsables pour cause de troubles mentaux (NCRMT) dans les 3 provinces les plus peuplées du Canada. Le Code criminel relève de la compétence du gouvernement fédéral, mais la justice pénale est administrée par les provinces et territoires. Il s'ensuit qu'une personne ayant un trouble mental qui a des démêlés avec la justice et qui est subséquemment placée sous la supervision d'une CE peut connaître différentes trajectoires dans différentes juridictions ou régions ou provinces.

**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 :** Nous avons constaté des différences interprovinciales significatives dans les trajectoires des personnes déclarées NCRTM, notamment le temps de détention dans un hôpital et le temps sous la supervision d'une CE. Les probabilités d'une libération conditionnelle ou absolue accordée par la CE variaient entre les provinces, même après examen du nombre d'infractions passées, du diagnostic au verdict, et des infractions répertoriées les plus graves (toutes les covariables réduisaient la probabilité d'une libération).

**Conclusions :** Les écarts considérables dans l'application de la législation NCRTM et dans le traitement des cas NCRTM au sein du système psycho-légal entre les provinces suggèrent qu'un traitement juste et équitable en vertu de la loi pourrait être amélioré par une plus grande intégration et collaboration nationale.

There have been increasing demands for forensic mental health services abroad<sup>1</sup> and in Canada,<sup>2,3</sup> though with variability across provinces.<sup>3</sup> In Canada, provincial and territorial RBs are charged with the dispositions of people found NCRMD.

Although the Criminal Code is federally legislated, criminal justice and mental health services are administered provincially. Our research revealed provincial differences in forensic patient characteristics.<sup>4</sup> It follows that the trajectories of people found NCRMD through the forensic mental health and RB systems may also vary from province to province.<sup>5</sup>

## Review Board Dispositions

### Dispositions

The dispositions of people found NCRMD are determined by the Court making the verdict or by RBs. The 3 options are as follows: detention in hospital; conditional discharge, which usually means living in the community under specified conditions; and absolute discharge. The courts tend to defer the disposition to the RB (82.2% of cases),<sup>6</sup> and the RBs tend to rely heavily on the recommendations of psychiatrists.<sup>7,8</sup> It is rare for NCRMD-accused people to receive an absolute discharge as their first disposition.<sup>6,7,9</sup> Whittemore<sup>7</sup> reported that none of the psychiatrists in her British Columbia study of 122 persons found NCRMD recommended an absolute discharge at the initial hearing. Based on their national data, Latimer and Lawrence<sup>2</sup> reported that the likelihood of receiving an absolute discharge at the initial hearing was greater for nonviolent offences (16.4%) than for sexual (9.6%) or violent offences (7.9%).

### Detention Duration

Whittemore<sup>7</sup> found the rate of absolute discharges increased from 0% at the first hearing to 11% at the second hearing. This remained fairly consistent across the next several hearings before dropping to near zero at the eighth and ninth hearings. Canadian studies have found that seriousness of

### Clinical Implications

- The findings suggest some important cross-provincial differences in the processing of people found NCRMD, indicating that the implementation of federal law by provincial services could benefit from increased national collaboration.
- Number of previous offences, psychotic disorder at verdict, more severe index offence, and being under the purview of the province of Ontario's RB all decreased the likelihood of conditional or absolute discharge for NCRMD-accused people.
- Duration under the purview of the RB has potentially important implications in the mental health system regarding patient bed-flow management, forensic population volume, and resource intensity.

### Limitations

- Our study only addressed 3 Canadian provinces and examined data from 2000 to 2008, thus generalizability to other provinces and territories and present practices may be limited.
- Future analyses will examine the risk factors brought to the RB for rendering their dispositions.
- The reliance on archival files may miss information that was not systematically recorded at the time. Prospective studies collecting data that directly address the research questions are needed.

the offence leading to the NCRMD verdict is associated with duration of detention<sup>6</sup> and total duration under RB<sup>2</sup> (including conditional discharge). Severity of index offence often has been associated with maintenance of a detention disposition in Canada and the United States.<sup>8,10-13</sup> However, jurisdictional factors may be at play,<sup>14</sup> and need to be explored across the country with a representative sample of NCRMD-accused people. As well, the types of conditions imposed by RBs for conditional discharge and detention disposition needs to be considered to better understand the trajectories of NCRMD-accused people through forensic mental health systems.

## Abbreviations

NCRMD not criminally responsible on account of mental disorder  
RB review board

## Objectives

Given differences in the profiles of NCRMD-accused people across the provinces,<sup>4</sup> in addition to provincial differences in criminal justice processes and organization of

forensic services,<sup>3,5</sup> our study aims to compare and contrast the processing of and disposition outcomes for people found NCRMD across provinces.

## Methods

The study methods are described in more detail in our previous paper in this special issue.<sup>3</sup> Briefly, a archival file-based retrospective longitudinal study design was used to assess the processing of a cohort of people under the purview of the provincial RBs in British Columbia, Ontario, and Quebec. The end of data collection allowed for a minimum of 3 years of post-NCRMD verdict follow-up time for all cases.

## Sample

The sample was comprised of new NCRMD-accused people entering the RB system in Quebec, British Columbia between 2000 and 2005.<sup>3</sup> Two units of analyses were used: the NCRMD people and the RB hearings. A total of 1800 people were followed (Quebec,  $n = 1094$ ; Ontario,  $n = 484$ ; British Columbia,  $n = 222$ ) to assess the initial disposition given by the Court and their trajectories. These people were the subject of 6748 RB hearings during the observation period (Quebec,  $n = 3509$ ; British Columbia,  $n = 1053$ ; Ontario,  $n = 2186$ ). These hearings were used to assess the RB decisions, associated conditions, as well the agreement between clinical recommendations and the RB decisions. The observation time from index verdict to end of observation (December 31, 2008) varied between individuals (between 0 and 8.67 years; mean 5.72, SD 1.48). Some cases were censored as a result of the participant's death ( $n = 65$ , 3.61%) or because the individual went missing ( $n = 6$ , 0.33%); that is, their whereabouts were unknown to the RB (for example, the accused left and had not returned).

## Procedure

### Fitness

Previous fitness evaluations and unfitness findings were coded from RB files. Fitness to stand trial represents the ability of a defendant to participate in a criminal proceeding in a basic way, that is, to understand the nature of the charges, the roles of the various parties, the consequences of the different plea and verdict options, and to communicate with their lawyer.<sup>1</sup> Someone who is found unfit to stand trial comes under the jurisdiction of an RB until they become fit.

### Hearing Participants

For each hearing, we coded the people who were present at the hearings into 1 or more of 9 categories: NCRMD-accused person, defence lawyer, prosecutor, hospital representative, psychiatrist, other member of clinical team, family of the accused, victim, and (or) other (for example, students, public observers, and patient representatives).

### Dispositions and Conditions

Decisions by the Court and RB at the initial and subsequent annual disposition hearings were coded. The content of the clinical reports to the RB was analyzed for each hearing. Court and RB dispositions were used to estimate the time each person spent in detention or conditional discharge up to absolute discharge or end of observation, whichever came first.

The expert recommendations and RB disposition decisions were coded, as were disposition conditions according to the following categories: permission to live in the community; live in a known place; hospital delegation—section 672.56(1) of the Criminal Code, which states:

A Review Board that makes a disposition in respect of an accused under paragraph 672.54(b) or (c) may delegate to the person in charge of the hospital authority to direct that the restrictions on the liberty of the accused be increased or decreased within any limits and subject to any conditions set out in that disposition, and any direction so made is deemed for the purposes of this Act to be a disposition made by the Review Board.<sup>15</sup>

permission to leave hospital grounds unaccompanied; permission to leave hospital grounds accompanied; abstain from alcohol and drug use; follow therapeutic recommendations; keep the peace; limited or no contact with victims; no possession of weapons; and other conditions (for example, abstain from using a motor vehicle).

## Analytic Strategy

Weights were used to ensure the regional representativeness of the Quebec sample.<sup>3</sup> Using survival analysis, courts and RB dispositions were used to estimate the time each individual spent in detention or on conditional discharge up to absolute discharge or end of observation, whichever came first. Survival curves were examined using the Kaplan-Meier method and Cox proportional hazard regression models.<sup>16</sup> Survival curves and proportional hazard models were performed using R, version 3.0.2,<sup>17</sup> and the survival package.<sup>18</sup>

## Results

### Criminal Court Practices

#### Fitness Evaluations

Forty-two per cent ( $n = 760$ ) of the accused had a fitness evaluation prior to their NCRMD finding, with a higher proportion in British Columbia (63.5%,  $n = 141$ ) than in Ontario (55.6%,  $n = 269$ ) or Quebec (32%,  $n = 350$ ) [ $\chi^2 (n = 1232) = 63.72, df = 1, P < 0.001$ ] and in Ontario than in Quebec [ $\chi^2 (n = 1800) = 123.57, df = 2, P < 0.001$ ]. Eight per cent ( $n = 152$ ) of NCRMD-accused people were found unfit to stand trial prior to their NCRMD verdict, with a higher proportion in Ontario (15%,  $n = 72$ ) than in Quebec (6.3%,  $n = 69$ ) [ $\chi^2 (n = 1568) = 30.28, df = 1, P < 0.001$ ] or British Columbia (5%,  $n = 11$ ) [ $\chi^2 (n = 701) = 14.37, df = 1, P < 0.001$ ].

**Table 1 People present at the Review Board hearing by province**

Present at the hearing	British Columbia <i>n</i> = 995 <i>n</i> (%)	Ontario <i>n</i> = 2185 <i>n</i> (%)	Quebec <i>n</i> = 3501 <i>n</i> (%)	$\chi^2$ , <i>df</i> , <i>n</i> , <i>P</i>	Total <i>n</i> = 6681 <i>n</i> (%)
Accused	937 (94.2)	2129 (97.4)	3454 (98.7)	66.64, 2, 6681, <0.001 <sup>a</sup>	6520 (97.6)
Accused's lawyer	948 (95.3)	2100 (96.1)	2279 (65.1)	975.61, 2, 6681, <0.001 <sup>b</sup>	5327 (79.7)
Hospital representative	955 (96.0)	2054 (94.0)	1827 (52.2)	1502.67, 2, 6681, <0.001 <sup>c</sup>	4836 (72.4)
Prosecutor	826 (83.0)	2185 (100)	254 (7.3)	5176.76, 2, 6681, <0.001 <sup>d</sup>	3265 (48.9)
Psychiatrist	922 (92.7)	1982 (90.7)	3223 (92.1)	4.63, 2, 6681, <0.10	6127 (91.7)
Other professionals	881 (88.5)	122 (5.6)	1556 (44.5)	2108.55, 2, 6681, <0.001 <sup>e</sup>	2559 (38.3)
Family of the accused	111 (11.2)	283 (13.0)	621 (17.7)	38.70, 2, 6681, 0.001 <sup>f</sup>	1015 (15.2)
Victim	14 (1.4)	50 (2.3)	68 (1.9)	2.78, 2, 6681, 0.25	132 (2.0)
Others	72 (7.2)	139 (6.4)	296 (8.5)	8.61, 2, 6681, 0.01 <sup>g</sup>	507 (7.6)

<sup>a</sup> Quebec > Ontario  $\chi^2$  (*n* = 5686) = 11.27, *df* = 1, *P* = 0.001; Quebec > British Columbia  $\chi^2$  (*n* = 4496) = 68.38, *df* = 1, *P* < 0.001; Ontario > British Columbia  $\chi^2$  (*n* = 3180) = 21.10, *df* = 1, *P* < 0.001

<sup>b</sup> Quebec < Ontario  $\chi^2$  (*n* = 5686) = 731.00, *df* = 1, *P* < 0.001; Quebec < British Columbia  $\chi^2$  (*n* = 4496) = 348.37, *df* = 1, *P* < 0.001

<sup>c</sup> Quebec < Ontario  $\chi^2$  (*n* = 5686) = 1085.89, *df* = 1, *P* < 0.001; Quebec < British Columbia  $\chi^2$  (*n* = 4496) = 629.97, *df* = 1, *P* < 0.001; Ontario > British Columbia  $\chi^2$  (*n* = 3180) = 5.24, *df* = 1, *P* = 0.02

<sup>d</sup> Quebec < Ontario  $\chi^2$  (*n* = 5686) = 4824.29, *df* = 1, *P* < 0.001; Quebec < British Columbia  $\chi^2$  (*n* = 4496) = 2436.58, *df* = 1, *P* < 0.001; Ontario > British Columbia  $\chi^2$  (*n* = 3180) = 391.95, *df* = 1, *P* < 0.001

<sup>e</sup> Quebec > Ontario  $\chi^2$  (*n* = 5686) = 977.12, *df* = 1, *P* < 0.001; Quebec < British Columbia  $\chi^2$  (*n* = 4496) = 606.62, *df* = 1, *P* < 0.001; Ontario < British Columbia  $\chi^2$  (*n* = 3180) = 2179.07, *df* = 1, *P* < 0.001

<sup>f</sup> Quebec > Ontario  $\chi^2$  (*n* = 5686) = 23.05, *df* = 1, *P* < 0.001; Quebec > British Columbia  $\chi^2$  (*n* = 4496) = 24.63, *df* = 1, *P* < 0.001

<sup>g</sup> Quebec > Ontario  $\chi^2$  (*n* = 5686) = 8.34, *df* = 1, *P* = 0.004

### Initial Disposition

The courts deferred the initial post-NCRMD verdict disposition to the RB in 39.3% (*n* = 705) of cases. Quebec had a distinctive practice, with only 6.8% (*n* = 74) of initial Court disposition decisions deferred to RBs, compared with 90.5% (*n* = 436) in Ontario and 87.8% in British Columbia (*n* = 195) [ $\chi^2$  (*n* = 1795) = 1235.39, *df* = 4, *P* < 0.001]. Given this difference, we imputed custody status at the time of the first hearing, when disposition had been deferred to the RB. Using this method, 62.9% (*n* = 1133) of all NCRMD accused were detained in custody at their first hearing, 37.1% (*n* = 667) were conditionally discharged and interprovincial differences remained significant [ $\chi^2$  (*n* = 1800) = 35.25, *df* = 2, *P* < 0.001]. NCRMD-accused people from Ontario were more likely to receive an initial disposition of detention (73.6%) than those in Quebec (58%) [ $\chi^2$  (*n* = 1597) = 34.94, *df* = 2, *P* < 0.001] or British Columbia (64.4%) [ $\chi^2$  (*n* = 706) = 6.13, *df* = 2, *P* = 0.01).

### Review Board Hearing Practices

#### Reasons for Hearing

Hearings occurred for the following reasons: following an NCRMD verdict (28.1%), as an annual review of disposition (57.3%), when requested by the accused (1.1%), when requested by the hospital (5.7%), when requested by the RB (3.6%), following a dual designation for people found NCRMD on at least 1 offence but convicted of another offence (0.1%), and following a hospitalization of the accused for more than 7 days (4.1%). Reasons for

the hearings were not equally distributed across provinces [ $\chi^2$  (*n* = 6700) = 767.22, *df* = 12, *P* < 0.001]. Overall, given the higher number of cases in Quebec, it also had the highest number of hearings following a verdict (33.7%), greater than Ontario (22.4%), which was higher than British Columbia (21.1%) [ $\chi^2$  (*n* = 6699) = 115.13, *df* = 2, *P* < 0.001]. Ontario had the higher proportion of its hearings occurring as an annual review (67.7%), compared with British Columbia (50.7%) and Quebec, which were equivalent (52.8%) [ $\chi^2$  (*n* = 6698) = 142.23, *df* = 2, *P* < 0.001]. Very few hearings were held at the request of the accused, and there was no variation across provinces: Quebec (1.0%), Ontario (1.1%), or (1.3%) [ $\chi^2$  (*n* = 6698) = 0.832, *df* = 2, *P* = 0.66]. The hospital requested more hearings in Quebec (7.9%), followed by Ontario (4.0%) and then by British Columbia (1.8%) [ $\chi^2$  (*n* = 6699) = 72.89, *df* = 2, *P* < 0.001]. However, more hearings were requested in British Columbia following a hospitalization of at least 7 days (9.8%), compared with Ontario (2.8%) and Quebec (3.2%) [ $\chi^2$  (*n* = 6699) = 102.78, *df* = 2, *P* < 0.001]. The British Columbia RB requested more hearings (15.2%) than the Quebec (1.3%) and Ontario boards (1.7%) [ $\chi^2$  (*n* = 6698) = 470.97, *df* = 2, *P* < 0.001]. Duration of the hearing was available for 98.9% of the hearings in Quebec and for 20.4% of the hearings in British Columbia, but it was never mentioned in the Ontario RB files. In Quebec, hearings lasted 51.07 minutes on average (SD 26.03), and, when the information was available, hearings lasted 120.23 minutes (SD 4.74) in British Columbia.

## Hearing Participants

In British Columbia, some hearings ( $n = 57$ , 5.4%) are waived if all parties agree to the preferred outcome. This does not occur in Quebec or Ontario, thus these British Columbia cases were eliminated from subsequent comparisons. There were significant differences across provinces in the distribution of participants at hearings. Quebec had a higher presence of accused than the other 2 provinces (Table 1). Ontario had the highest presence of defence lawyers, prosecutors, and hospital representatives, and was significantly higher than Quebec but not British Columbia. Other clinical team members were more often present in British Columbia than Quebec; other professionals were rarely present in Ontario. Family members were more often present at hearings in Quebec than both British Columbia and Ontario. This could be partially explained because in Quebec, with more designated hospitals and assignment to hospital influenced by distance to family, it may simply be easier for family members to attend hearings.

## Dispositions

Decisions were usually unanimous across RB members; however, this happened more often in Quebec (99.8%) than in Ontario (96.3%) or British Columbia (88.2%) [ $\chi^2$  ( $n = 6096$ ) = 266.37,  $df = 2$ ,  $P < 0.001$ ]. In Ontario, there was almost always (98.3%) a period of deliberation between the hearing and disposition decision; this practice was less likely in Quebec (11.8%), and almost never took place in British Columbia (0.3%) [ $\chi^2$  ( $n = 6096$ ) = 266.37,  $df = 2$ ,  $P < 0.001$ ]. When deliberation was required by the RB, the decision was almost always provided to the accused the very same day (94.1%) in Quebec, compared with British Columbia (33.7%) or Ontario (0.3%) [ $\chi^2$  ( $n = 2536$ ) = 2304.53,  $df = 2$ ,  $P < 0.001$ ]. When the decision was not provided on the same day as the hearing, a median period of 8 days was required by the Ontario RB to transmit the decision to the accused, while this period was 43 days for Quebec and 15 days for British Columbia [Kruskal–Wallis test:  $\chi^2$  ( $n = 2164$ ) = 34.02,  $df = 2$ ,  $P < 0.001$ ].

Detention without specific conditions, was ordered in 4% of all hearings, conditional detention in 40%, conditional release in 37%, and unconditional discharge in 19% of hearings (Table 2). Detention with no conditions was more likely to occur in Quebec than Ontario, and in Ontario more than British Columbia. Detention with conditions were much more likely to be rendered in Ontario than in British Columbia or Quebec. Conditional discharge was more frequent in Quebec than in British Columbia or Ontario. Absolute discharge is more likely in Quebec than in British Columbia, and in British Columbia more than Ontario.

## Conditions

Significant variations in the conditions associated with detention or conditional discharge dispositions were observed (Table 2). For example, permission to live in the community was mentioned in nearly 60% of detention

with condition dispositions in Ontario, but never in British Columbia and Quebec. In 98.2% of detention with condition dispositions in British Columbia, a condition of following therapeutic recommendations is specified, compared with never being mentioned in Ontario and very rarely being mentioned in Quebec (1.4%). Conversely, hospital delegation was used in 57.7% of conditional discharge dispositions in Quebec, compared with none in Ontario and practically none (0.9%) in British Columbia. Forbidding possession of a weapon is a condition often mentioned in British Columbia, whether it be for conditional discharge or detention with conditions, compared with both Ontario and Quebec. Restrained contact with the victim or family member of the victim is rarely mentioned in Quebec, compared with British Columbia and Ontario.

## Clinician–Review Board Agreement

Most reports (86.9%,  $n = 5557$ ) included a recommended disposition; however, this was unevenly distributed across provinces [ $\chi^2$  ( $n = 6396$ ) = 267.99,  $df = 2$ ,  $P < 0.001$ ]. In Ontario, a recommendation was included in 97.1% ( $n = 1949$ ) of expert reports, higher than in Quebec (82.6%,  $n = 2770$ ) [ $\chi^2$  ( $n = 5361$ ) = 248.74,  $df = 1$ ,  $P < 0.001$ ] or British Columbia (81.0%,  $n = 838$ ) [ $\chi^2$  ( $n = 3043$ ) = 229.64,  $df = 1$ ,  $P < 0.001$ ]; Quebec and British Columbia did not differ [ $\chi^2$  ( $n = 4388$ ) = 1.47,  $df = 1$ ,  $P = 0.23$ ].

There was high (86.9%) agreement between clinician recommendations and RB decisions ( $\kappa$  [kappa] = 0.79), with differences across provinces in agreement [ $\chi^2$  ( $n = 5554$ ) = 72.36,  $df = 2$ ,  $P < 0.001$ ]. Ontario had the highest agreement rate (92.0%), followed by British Columbia (86.4%) and Quebec (83.5%). Six per cent of RB decisions were more restrictive than the clinical recommendations, and 6.9% of clinical recommendations were more restrictive than the RB decisions. The Quebec RB rendered decisions more restrictive than the clinical recommendations in 9.2% of cases, compared with 2.9% for Ontario [ $\chi^2$  ( $n = 4716$ ) = 73.76,  $df = 1$ ,  $P < 0.001$ ] and 3.6% in British Columbia [ $\chi^2$  ( $n = 3606$ ) = 28.31,  $df = 1$ ,  $P < 0.001$ ].

## Review Board Supervision

The survival curves presented in Figure 1 (A–D) show the proportion of people who were under the supervision of provincial RBs over time. Figure 1A shows that the Quebec RB had the fastest release rate over time, followed by British Columbia and Ontario. After 1 year, 74% of the people were still under the RB in Quebec, 82% in British Columbia, and 92% in Ontario. After 5 years, 19% of NCRMD–accused people were still under the supervision of the RB in Quebec, 31% in British Columbia and 58% in Ontario. This difference was also observed for people who were detained in custody (Figure 1B–D). After 1 year, 42% of the people still under the RB were detained in hospital in Quebec, while 57% and 90% were detained in British Columbia and Ontario, respectively; after 2 years, it was 28%, 51%, and 88%, and after 5 years it was 23%, 47%, and 79%, respectively.

**Table 2 Review Board dispositions and conditions**

Disposition and (or) conditions	British Columbia <i>n</i> = 1053 <i>n</i> (%)	Ontario <i>n</i> = 2185 <i>n</i> (%)	Quebec <i>n</i> = 3505 <i>n</i> (%)	$\chi^2$ , <i>df</i> , <i>n</i> , <i>P</i>	Total <i>n</i> = 6743 <i>n</i> (%)
Detention	4 (0.4)	63 (2.9)	233 (6.6)	93.47, 2, 6743, <0.001 <sup>a</sup>	300 (4.4)
Detention with conditions	459 (43.6)	1621 (74.2)	592 (16.9)	1855.20, 2, 6743, <0.001 <sup>b</sup>	2672 (39.6)
Permission to leave hospital grounds accompanied	3 (0.7)	1370 (84.5)	1 (0.2)	1806.85, 2, 2672, <0.001	1374 (51.4)
Permission to leave hospital grounds unaccompanied	403 (87.8)	1439 (88.8)	573 (97.0)	37.83, 2, 2672, <0.001	2415 (90.4)
Permission to live in the community	0 (0)	955 (58.9)	0 (0)	1806.85, 2, 2672, <0.001	1374 (51.4)
Live in a known place	450 (98)	1590 (98.1)	19 (3.2)	2346.06, 2, 2672, <0.001	2059 (77.1)
Abstain from using alcohol or drugs	264 (57.7)	1178 (72.7)	17 (2.9)	854.18, 2, 2672, <0.001	1459 (54.6)
Follow therapeutic recommendations	439 (95.6)	0 (0)	8 (1.4)	2477.09, 2, 2672, <0.001	447 (16.7)
Keep the peace	116 (25.3)	10 (0.6)	10 (1.7)	468.13, 2, 2672, <0.001	136 (5.1)
Limited or no contact with victim (or close relative of victim)	25 (5.4)	227 (14.0)	4 (0.7)	99.85, 2, 2672, <0.001	256 (9.6)
No possession of weapons	303 (66.0)	577 (35.6)	3 (0.5)	513.52, 2, 2672, <0.001	883 (33.0)
Other conditions	5 (1.1)	228 (14.1)	4 (0.7)	137.64, 2, 2672, <0.001	237 (8.9)
Conditional discharge	432 (41.0)	292 (13.4)	1785 (50.9)	820.63, 2, 6743, <0.001 <sup>c</sup>	2509 (37.2)
Delegation (hospital)	4 (0.9)	0 (0)	1030 (57.7)	695.05, 2, 2508, <0.001	1034 (41.2)
Live in a known place	410 (94.9)	207 (70.9)	1726 (96.7)	272.41, 2, 2508, <0.001	2343 (93.4)
Abstain from using alcohol or drugs	307 (71.1)	203 (69.5)	1064 (59.6)	26.04, 2, 2508, <0.001	1574 (62.7)
Follow therapeutic recommendations	167 (38.7)	9 (3.1)	1762 (98.8)	1751.29, 2, 2508, <0.001	1938 (77.3)
Keep the peace	420 (97.2)	276 (94.5)	1749 (98.0)	12.83, 2, 2508, <0.001	2445 (97.5)
Limited or no contact with victim (or close relative of victim)	126 (29.2)	106 (36.3)	60 (3.4)	420.70, 2, 2508, <0.001	292 (11.6)
No possession of weapons	402 (93.1)	207 (70.9)	18 (1.0)	1943.56, 2, 2508, <0.001	627 (25.0)
Other conditions	427 (98.8)	291 (99.7)	181 (10.1)	1775.78, 2, 2508, <0.001	899 (35.8)
Absolute discharge	158 (15.0)	209 (9.6)	895 (25.5)	237.10, 2, 6743, <0.001 <sup>d</sup>	1262 (18.7)

<sup>a</sup> Quebec > Ontario  $\chi^2$  (*n* = 5686) = 38.68, *df* = 1, *P* < 0.001; Quebec > British Columbia  $\chi^2$  (*n* = 4558) = 64.53, *df* = 1, *P* < 0.001; Ontario > British Columbia  $\chi^2$  (*n* = 3238) = 21.98, *df* = 1, *P* < 0.001

<sup>b</sup> Quebec < Ontario  $\chi^2$  (*n* = 5690) = 1859.25, *df* = 1, *P* < 0.001; Quebec < British Columbia  $\chi^2$  (*n* = 4558) = 325.36, *df* = 1, *P* < 0.001; Ontario > British Columbia  $\chi^2$  (*n* = 3238) = 289.58, *df* = 1, *P* < 0.001

<sup>c</sup> Quebec > Ontario  $\chi^2$  (*n* = 5690) = 819.36, *df* = 1, *P* < 0.001; Quebec > British Columbia  $\chi^2$  (*n* = 4558) = 31.78, *df* = 1, *P* < 0.001; Ontario < British Columbia  $\chi^2$  (*n* = 3238) = 313.19, *df* = 1, *P* < 0.001

<sup>d</sup> Quebec > Ontario  $\chi^2$  (*n* = 5689) = 219.65, *df* = 1, *P* < 0.001; Quebec > British Columbia  $\chi^2$  (*n* = 4557) = 50.60, *df* = 1, *P* < 0.001; Ontario < British Columbia  $\chi^2$  (*n* = 3238) = 20.92, *df* = 1, *P* < 0.001

### Factors Related to Dispositions

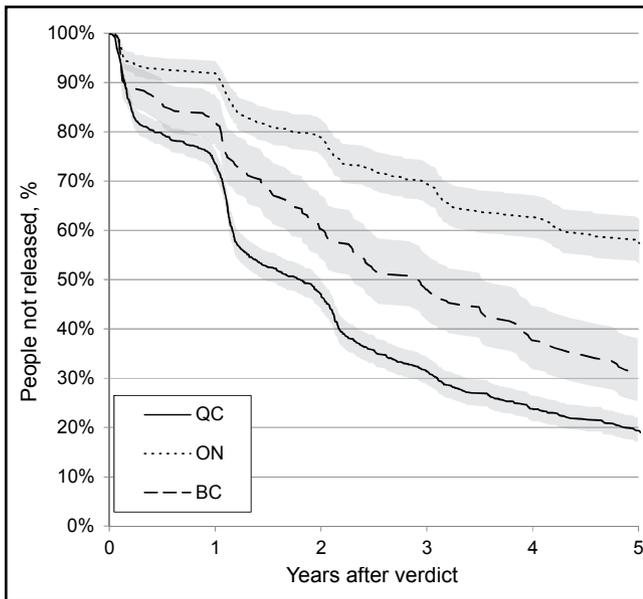
The results of the Cox regression model (Tables 3 and 4) reveal the odds of being conditionally or absolutely discharged varied across provinces, even after number of past offences, diagnosis at verdict, and most severe index offence (which all differed across provinces) were statistically controlled. People from Ontario and British Columbia have, respectively, 2.70 and 1.35 times lower chances of being absolutely discharged over time than people with an NCRMD finding from Quebec. People from Ontario are 1.99 times less likely of being absolutely discharged over time than those from British Columbia (Exp[b] = 0.50, 95% CI 0.41 to 0.62, *P* < 0.001). These

differences are even more prominent when we examine the probability of being conditionally discharged. People from Ontario and British Columbia have, respectively, 4.17 and 1.49 times lower odds of being conditionally discharged than those from Quebec. For people from Ontario, the odds of being released from detention are 2.78 lower than for those from British Columbia (Exp[b] = 0.36, 95% CI 0.30 to 0.44, *P* < 0.001).

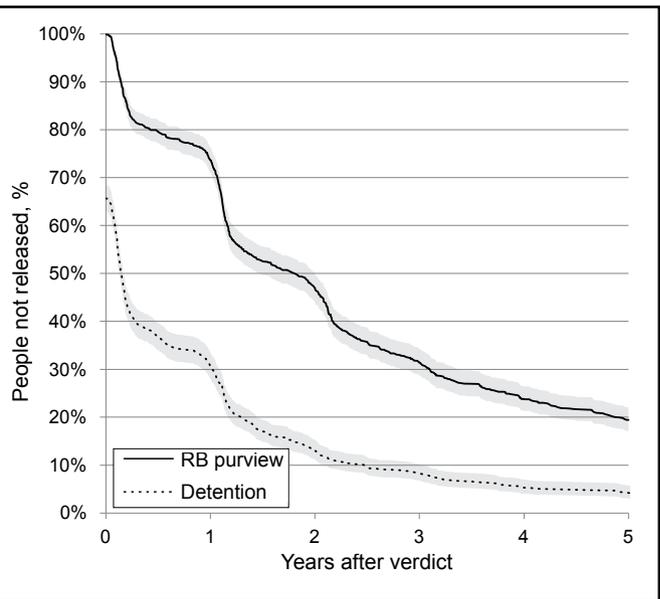
A higher number of past offences reduced the odds of being conditionally or absolutely discharged in all provinces. Having a psychotic spectrum diagnosis decreased the probability of being conditionally or absolutely discharged

**Figure 1 Proportion of people detained and under Review Board (RB) purview following not criminally responsible (NCRMD) verdict by province, with shaded areas representing 95% CI**

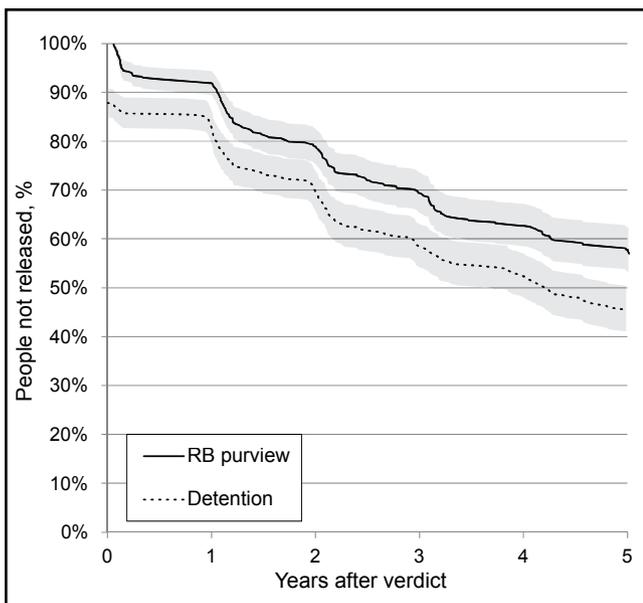
**1A Proportion of people still under the purview of the RB over time following NCRMD verdict**



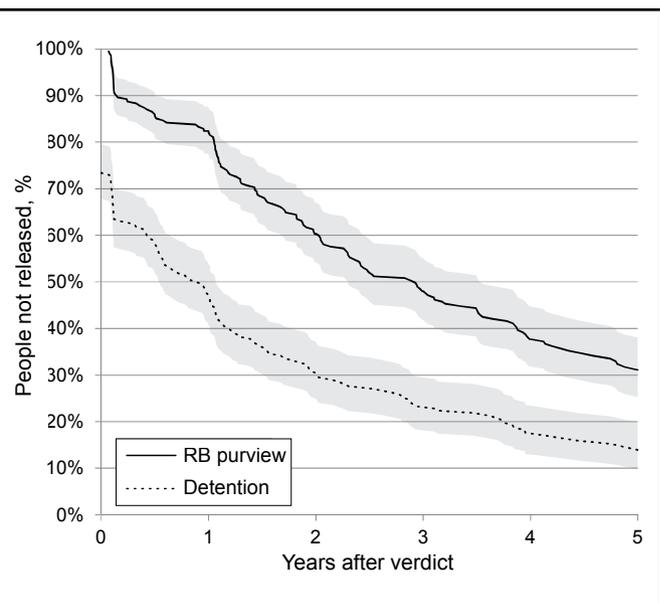
**1B Proportion of people still under the purview of the RB and detained over time following NCRMD verdict (Quebec)**



**1C Proportion of people still under the purview of the RB and detained over time following NCRMD (Ontario)**



**1D Proportion of people still under the purview of the RB and detained over time following NCRMD verdict (British Columbia)**



**Table 3 Cox regression predicting time before absolute discharge from the Review Board**

Covariates	Likelihood of being absolutely discharged			
	Total	British Columbia	Ontario	Quebec
Province (Quebec as reference), OR (95% CI)				
Ontario	0.37 (0.32 to 0.43) <sup>a</sup>			
British Columbia	0.74 (0.62 to 0.88) <sup>a</sup>			
Number of past criminal convictions, <i>ln</i> , OR (95% CI)	1.12 (0.87 to 1.43)	0.74 (0.60 to 0.92) <sup>b</sup>	0.68 (0.56 to 0.81) <sup>a</sup>	0.78 (0.72 to 0.85) <sup>a</sup>
Diagnosis at NCRMD verdict, OR (95% CI)				
Psychosis spectrum disorder	0.68 (0.54 to 0.87) <sup>b</sup>	0.34 (0.17 to 0.66) <sup>b</sup>	1.08 (0.57 to 2.06)	0.67 (0.51 to 0.88) <sup>b</sup>
Mood disorder	1.12 (0.87 to 1.43)	0.57 (0.28 to 1.17)	2.37 (1.18 to 4.75) <sup>c</sup>	1.02 (0.76 to 1.37)
Substance use disorder	0.90 (0.79 to 1.02)	0.84 (0.59 to 1.19)	0.74 (0.53 to 1.04)	0.96 (0.83 to 1.12)
Personality disorder	0.91 (0.75 to 1.11)	0.66 (0.34 to 1.27)	0.49 (0.27 to 0.89) <sup>c</sup>	1.07 (0.86 to 1.34)
Index NCRMD offence (Severe violent as reference), OR (95% CI)				
Other against person	1.89 (1.48 to 2.40) <sup>a</sup>	2.83 (1.42 to 5.67) <sup>b</sup>	2.07 (1.30 to 3.27) <sup>b</sup>	1.72 (1.26 to 2.35) <sup>a</sup>
Not against person	2.27 (1.77 to 2.91) <sup>a</sup>	3.56 (1.74 to 7.26) <sup>a</sup>	2.39 (1.46 to 3.93) <sup>a</sup>	2.09 (1.52 to 2.87) <sup>a</sup>
<i>R</i> <sup>2</sup>	0.22	0.19	0.14	0.08
Likelihood ratio test	434.2, <i>df</i> = 9, <i>P</i> < 0.001	46.1, <i>df</i> = 7, <i>P</i> < 0.001	70.9, <i>df</i> = 7, <i>P</i> < 0.001	94.8, <i>df</i> = 7, <i>P</i> < 0.001
<sup>a</sup> <i>P</i> < 0.001; <sup>b</sup> <i>P</i> < 0.01; <sup>c</sup> <i>P</i> < 0.05				
<i>ln</i> = natural logarithm; NCRMD = not criminally responsible on account of mental disorder				

by 2.6 to 2.9 times in British Columbia, and by about 1.5 times in Quebec. Having a mood disorder increased the odds of being conditionally or absolutely discharged by 2.4 in Ontario. The severity of the index offence significantly affected the duration of detention and RB supervision across all 3 provinces. Having committed a serious index offence (that is, offences causing death, attempt to cause death, and sexual offences) decreased the probability of discharge from 1.6 to 2.8 times, compared with other offences against a person, and between 2.1 and 3.6 times for other offences not against a person. Having committed other crimes against a person decreased the odds of being conditionally released by 1.2 (Exp[b] = 0.83, 95% CI 0.74 to 0.94, *P* = 0.002) and absolutely discharged by 1.25 (Exp[b] = 0.80, 95% CI 0.72 to 0.89, *P* < 0.001), compared with other offences.

## Discussion

Our results reveal similarities as well as some discrepancies in the court decision following an NCRMD finding, the characteristics of the provincial RB hearings, as well as the duration of time an NCRMD accused remains under the purview of the RB. These findings have important policy, clinical, and research implications.

Quebec courts have a distinct practice in which they rarely defer the initial disposition decision to the RB. People in Quebec are more likely to remain detained or under

RB purview longer (90 days instead of 45 days) before the RB initially determines the appropriate dispositions and conditions. However, this is offset by shorter overall stays under RB supervision. This clearly has important implications for initiating patient-centred treatment, as well as economic and bed-flow implications.

The data also suggest that the British Columbia system has a more interdisciplinary approach to RB hearings than Ontario or Quebec, with attendance by psychology staff and case managers, in addition to the psychiatrist, being the norm. This may have the benefit of providing the RB with additional insights into treatment progress and the risk presented by patients, though we could not ascertain from the files if those who attend are systematically asked for input and the psychiatrist may actually be speaking on behalf of the team. The added expense and clinical advantages or disadvantages of having the treatment team present at RB hearings needs to be evaluated. Other provinces may still have multidisciplinary input via psychological assessments, treatment updates, social work involvement with family, and community services integrated in their reports to the RBs.

NCRMD-accused people in Ontario are under a detention order for a much longer period than those in the 2 other provinces, even after controlling for criminal history, severity of index offence, and diagnosis. Speaking to stakeholders, it became quite clear that the Ontario RB sometimes uses

**Table 4 Cox regression predicting time before conditional discharge from the Review Board**

Covariate	Likelihood of being conditionally discharged			
	Total	British Columbia	Ontario	Quebec
Province (Quebec as reference), OR (95% CI)				
Ontario	0.24 (0.21 to 0.28) <sup>a</sup>			
British Columbia	0.67 (0.57 to 0.78) <sup>a</sup>			
Number of past criminal convictions, <i>ln</i> , OR (95% CI)	0.76 (0.72 to 0.81) <sup>a</sup>	0.70 (0.58 to 0.85) <sup>a</sup>	0.71 (0.61 to 0.83) <sup>a</sup>	0.81 (0.75 to 0.87) <sup>a</sup>
Diagnosis at NCRMD verdict, OR (95% CI)				
Psychosis spectrum disorder	0.67 (0.54 to 0.84) <sup>a</sup>	0.39 (0.21 to 0.73) <sup>b</sup>	1.09 (0.62 to 1.92)	0.64 (0.49 to 0.83) <sup>a</sup>
Mood disorder	1.16 (0.92 to 1.46)	0.72 (0.37 to 1.42)	2.35 (1.26 to 4.36) <sup>b</sup>	1.03 (0.79 to 1.36)
Substance use disorder	0.87 (0.77 to 0.98) <sup>c</sup>	0.79 (0.57 to 1.08)	0.83 (0.62 to 1.11)	0.93 (0.80 to 1.07)
Personality disorder	0.82 (0.69 to 0.98) <sup>c</sup>	0.69 (0.40 to 1.19)	0.61 (0.38 to 0.97) <sup>c</sup>	0.92 (0.74 to 1.14)
Index NCRMD offence (Severe violent as reference), OR (95% CI)				
Other against person	1.84 (1.50 to 2.27) <sup>a</sup>	2.63 (1.53 to 4.53) <sup>a</sup>	2.40 (1.59 to 3.61) <sup>a</sup>	1.56 (1.20 to 2.05) <sup>b</sup>
Not against person	2.30 (1.86 to 2.85) <sup>a</sup>	2.94 (1.67 to 5.15) <sup>a</sup>	2.36 (1.51 to 3.68) <sup>a</sup>	2.08 (1.58 to 2.74) <sup>a</sup>
<i>R</i> <sup>2</sup>	0.22	0.15	0.10	0.35
Likelihood ratio test	754.3, <i>df</i> = 9, <i>P</i> < 0.001	54.7, <i>df</i> = 7, <i>P</i> < 0.001	75.01, <i>df</i> = 7, <i>P</i> < 0.001	117.8, <i>df</i> = 7, <i>P</i> < 0.001

<sup>a</sup> *P* < 0.001; <sup>b</sup> *P* < 0.01; <sup>c</sup> *P* < 0.05

*ln* = natural logarithm; NCRMD = not criminally responsible on account of mental disorder

the detention disposition in the same manner as the 2 other provinces use conditional discharges. For example, Ontario uses many conditions within detention that are meant to be applied in a sequential manner at the discretion of the treatment teams, consistent with the hospital delegation option of the legislation. Therefore, RBs use a set of conditions that are likely to be adequate during a 12-month period allowing some level of hospital discretion. Under a detention disposition, NCRMD–accused people in Ontario may be first allowed to leave hospital grounds accompanied, then move to unaccompanied community outings, to then live in the community. These critical junctures are overseen by the NCRMD–accused person’s treatment team, without bringing the RB back for another hearing at each decision point.

There were also significant provincial variations in the kinds of conditions that are applied, indicating distinct provincial management patterns. Above and beyond this, when controlling for province, higher number of past offences, psychotic spectrum disorder, severity of the index offence all decreased the odds of a conditional or absolute discharge. Interestingly, severity of index offence has been the factor that has been the most consistently found to be associated with dispositions in Canada and the United States,<sup>8,10–13</sup> even though it has been found to have little predictive power for future offending.<sup>19</sup> This indicates that, despite the fact that people found NCRMD are not considered to be criminally

responsible, they continue to be detained as a function of the severity of the index offence, as if sentenced. This and other studies show that other factors may be at play, such as diagnosis and criminal history,<sup>8,10,12</sup> but future research needs to examine the role of dynamic changes of people over time.

### Strengths and Limitations

Our study reports on one of the largest samples of NCRMD–accused people followed longitudinally, and it also contributes unique insights by comparing 3 provinces. Despite these strengths, there were limitations. First, all data were gathered through files, thus some hearing information that could have been observed was not captured. For example, the duration of hearings was only systematically available in Quebec files. Second, we only sampled hearings between 2000 and 2008, and some changes in processing may have occurred during the past few years. As such, we are presently undertaking a prospective study funded by the Canadian Institutes of Health Research that will address several of these methodological issues.

### Conclusions

Our results demonstrate the trajectories of an NCRMD–accused person depends on the province. For example, an individual remains under RB supervision longer in Ontario than the other 2 provinces; does this translate to differences in recidivism? The next paper will address this question.<sup>20</sup>

Given that our study is examining federal legislation, the findings point to a need for greater national collaboration. Two large-scale initiatives are already under way. First, our colleagues have initiated a Canadian Forensic Mental Health Network of clinicians and administrators. Second, we recently brought together forensic decision makers, clinicians, researchers, and other stakeholders to work toward a national agenda for forensic systems research. A report will soon be made available.

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