Psychiatric Relapse and Criminal Recidivism of Individuals Found Not Criminally Responsible on Account of Mental Disorder After Absolute Discharge

Karine Forget, MD, FRCPC1,2, Pierre Gagné, MD, FRCPC1, Schriebert Staco Douyon, MD, FRCPC3, Clémente Poirier, MD, FRCPC1, Jolène LeBlanc, MD, FRCPC1, Marie-Claude Bilodeau, MD, FRCPC4 and Yann Le Corff, PhD1,2,5

Keywords
not criminally responsible, criminal recidivism, psychiatric relapse, absolute discharge

Introduction
When an accused found not criminally responsible on account of mental disorder (NCRMD) no longer poses a significant threat to the safety of the public as per the Canadian Criminal Code s. 672.54,1 an absolute discharge (AD) is granted by the Review Board (RB). Little research, however, is available on the outcomes of these individuals who mostly suffer from a serious mental illness and who will likely require long-term follow-up after AD. Data from the National Trajectory Project (NTP)2 showed that the criminal recidivism (CR) rate was relatively low 3 years following the index NCRMD verdict (INCRMDV). Also, the CR rate was twice as high in Quebec (22%) versus British Colombia (10%) and Ontario (9%). The NTP studied CR but not psychiatric relapses (PR) and concluded that information about rehospitalizations was needed considering some new offenses may result in rehospitalization rather than criminal charges. In their one-year follow-up study of absolutely discharged patients in Ontario, Simpson et al.3 found a readmission rate of 20% and 5% of CR. More data regarding the outcomes of this population could guide psychiatrists in their recommendations to the RB and assist in the planning of services. The objectives of this study were to examine PR and CR rates of individuals found NCRMD in Sherbrooke, Quebec, and who had received an AD between January 1, 2000, and December 31, 2011. The study end date (August 1, 2015) allowed for a minimum of a 3.6-year follow-up (ranging from 3.75 to 15.35 years, excluding 3 people who died less than 3.6 years following AD). Only data from the 3.6-year follow-up were used in the analyses to avoid the bias associated with different observation periods. PR was defined as an emergency room psychiatric consultation or a psychiatric hospitalization occurring after AD. CR was defined as having a conviction or an NCRMD finding for an offence occurring after AD and identified using dockets. Since some individuals assessed in Sherbrooke were followed in their regional hospital, we also reviewed charts from the Granby hospital, the Drummondville hospital, and the Clinique médico-légale de l’Université de Sherbrooke. The study was approved by our institutional ethics board.

Methods
In this retrospective longitudinal study, we reviewed the CIUSSSE-CHUS charts (including court-ordered psychiatric evaluations for the INCRMDV and annual reports submitted to the RB), as well as criminal records of 143 individuals found NCRMD in Sherbrooke, Quebec, and who had received an AD between January 1, 2000, and December 31, 2011. The study end date (August 1, 2015) allowed for a minimum of a 3.6-year follow-up (ranging from 3.75 to 15.35 years, excluding 3 people who died less than 3.6 years following AD). Only data from the 3.6-year follow-up were used in the analyses to avoid the bias associated with different observation periods. PR was defined as an emergency room psychiatric consultation or a psychiatric hospitalization occurring after AD. CR was defined as having a conviction or an NCRMD finding for an offence occurring after AD and identified using dockets. Since some individuals assessed in Sherbrooke were followed in their regional hospital, we also reviewed charts from the Granby hospital, the Drummondville hospital, and the Clinique médico-légale de l’Université de Sherbrooke. The study was approved by our institutional ethics board.

1Département de psychiatrie, Université de Sherbrooke, Sherbrooke, Quebec, Canada
2Groupe de recherche et d’intervention sur les adaptations sociales de l’enfance de l’Université de Sherbrooke, Sherbrooke, Quebec, Canada
3Département de psychiatrie, Hôpital Pierre Janet, Gatineau, Quebec, Canada
4Département de psychiatrie, Hôpital Sainte-Croix, Drummondville, Quebec, Canada
5Département d’orientation professionnelle, Université de Sherbrooke, Sherbrooke, Quebec, Canada

Corresponding Author:
Karine Forget, MD, FRCPC, Département de psychiatrie, Université de Sherbrooke, 580 rue Bowen sud, Sherbrooke, Québec, Canada, J1G 2E8. Email: karine.forget@usherbrooke.ca
Results
During the 3.6-year follow-up after AD, 25.4% (n = 33; 10 MD) of the sample reoffended while 54.3% (n = 75; 2 MD) had at least one PR. Overall, 59.7% (n = 80; 6 MD) reoffended or had a PR within 3.6 years. Among individuals who had committed an offence against a person as their INCRMDV (n = 92), the CR rate was 21.7% (n = 20; 5 MD), compared to 30.2% (13/43; 4 MD) for individuals who committed an offence not against a person, but this difference was not statistically significant. Finally, individuals who had PR were more likely to be reoffenders than those who did not (40.0% vs. 6.9%; \( \chi^2 (1) = 18.538; p < 0.001; \phi = 0.381 \)). Analyses comparing individuals with and without CR and PR are presented in Table 1.

Discussion
We found a similar CR rate at 3.6 years following AD compared to 3 years following the INCRMDV in Quebec (NTP2), which is reassuring because one could have

Table 1. Comparison of Individuals With and Without Criminal Recidivism and Psychiatric Relapse.

|                        | Recidivists mean (SD) | Non-recidivists mean (SD) | t     | P      | Cohen’s d |
|------------------------|-----------------------|----------------------------|-------|--------|-----------|
| Age at NCRMD verdict (years) | 32.30 (10.14)          | 35.40 (11.66)              | 1.361 | 0.176 | 0.28      |
| Duration of RB follow-up (days) | 329.76 (312.69)        | 383.06 (425.69)            | 0.661 | 0.510 | 0.14      |
| Sex                     |                        |                            |       |        |           |
| Men                     | 27 (81.81%)            | 78 (80.41%)                | 0.031 | 0.860 | 0.016     |
| Women                   | 6 (13.04%)             | 19 (19.59%)                |       |        |           |
| Index most severe offense |                      |                            |       |        |           |
| Against a person        | 20 (60.61%)            | 67 (69.07%)                | 0.797 | 0.372 | 0.078     |
| Not against a person    | 13 (39.39%)            | 30 (30.93%)                |       |        |           |
| Diagnosis at the index NCRMD verdicta |                   |                            |       |        |           |
| Psychotic spectrum disorder | 21 (65.63%)           | 71 (73.20%)                | 0.674 | 0.412 | 0.072     |
| Mood spectrum disorder  | 11 (34.38%)            | 21 (21.65%)                | 2.089 | 0.148 | 0.127     |
| SUD                     | 12 (37.50%)            | 21 (21.65%)                | 3.176 | 0.075 | 0.157     |
| PD                      | 3 (9.38%)              | 5 (5.15%)                  | 0.737 | 0.391 | 0.076     |
| Any Medical follow-up after AD | 32 (100.00%)          | 93 (95.88%)                | 1.362 | 0.243 | 0.103     |
| Psychiatric follow-up after AD | 31 (100.00%)        | 83 (85.57%)                | 5.024 | 0.025 | 0.198     |
| Treatment order         | 10 (31.25%)            | 16 (16.49%)                | 3.255 | 0.071 | 0.159     |
| Housing order           | 6 (18.75%)             | 6 (6.19%)                  | 4.502 | 0.034 | 0.187     |
| Past criminal convictions or NCRMD findings | 25 (78.13%)          | 56 (60.22%)                | 3.348 | 0.067 | 0.164     |

|                        | Psychiatric relapse mean (SD) | No psychiatric relapse mean (SD) | T     | P      | Cohen’s d |
|------------------------|--------------------------------|----------------------------------|-------|--------|-----------|
| Age at NCRMD verdict (years) | 33.29 (10.97)                  | 37.51 (12.12)                   | 2.143 | 0.034 | 0.37      |
| Duration of RB follow-up (days) | 384.07 (371.46)             | 354.35 (424.60)                | 0.438 | 0.662 | 0.07      |
| Sex                     |                                |                                  |       |        |           |
| Men                     | 61 (81.33%)                    | 51 (80.95%)                     | 0.003 | 0.955 | 0.005     |
| Women                   | 14 (18.67%)                    | 12 (19.05%)                     |       |        |           |
| Index most severe offense |                                |                                  |       |        |           |
| Against a person        | 47 (63.51%)                    | 43 (68.25%)                     | 0.339 | 0.560 | 0.050     |
| Not against a person    | 27 (36.49%)                    | 20 (31.75%)                     |       |        |           |
| Diagnosis at the index NCRMD verdicta |                 |                                  |       |        |           |
| Psychotic spectrum disorder | 50 (68.49%)                    | 46 (73.02%)                     | 0.333 | 0.564 | 0.049     |
| Mood spectrum disorder  | 20 (27.40%)                    | 15 (23.81%)                     | 0.228 | 0.633 | 0.041     |
| SUD                     | 22 (30.14%)                    | 12 (19.05%)                     | 2.218 | 0.136 | 0.128     |
| PD                      | 6 (8.22%)                      | 2 (3.17%)                       | 1.554 | 0.212 | 0.107     |
| Any Medical follow-up after AD | 73 (97.33%)                  | 60 (96.77%)                     | 0.037 | 0.847 | 0.017     |
| Psychiatric follow-up after AD | 71 (95.95%)                  | 50 (81.97%)                     | 7.029 | 0.008 | 0.228     |
| Treatment order         | 22 (29.33%)                    | 7 (11.11%)                      | 6.850 | 0.009 | 0.223     |
| Housing order           | 11 (14.67%)                    | 1 (1.59%)                       | 7.377 | 0.007 | 0.231     |
| Past criminal convictions or NCRMD findings | 45 (61.64%)                  | 37 (63.79%)                     | 0.064 | 0.801 | 0.022     |

Note. Total sample size = 140; AD = absolute discharge; NCRMD = not criminally responsible on account of mental disorder; PD = personality disorder; \( \phi \) = phi coefficient; RB = review board; SD = standard deviation; SUD = substance use disorder; \( t \) = \( t \) statistic for independent-sample \( t \)-test; \( \chi^2 \) = chi-square statistic.

*aThe two most important diagnoses at the time of the index NCRMD were noted, thus a subject can count in more than one diagnostic category.*
hypothesized that CR would increase without RB supervision. Our 3.6-year CR and PR rates were, respectively, 5 times higher and 2.7 times higher than the 1-year rates observed in Ontario, which could be explained by our longer follow-up (CR may be lower in the first year following AD but could increase afterwards), missing data in our study (see limitations below) or a broader use of NCRMD verdict in Quebec leading to the inclusion of patients with potentially less severe diseases. Personality and substance use disorders at the INCRMDV were not associated with CR or PR, which differs from other studies, and could be explained by the low numbers of both diagnoses in our sample. The presence of psychiatric follow-up and housing order was associated with both CR and PR, potentially indicating a more disabling illness. Finally, our study showed that PR was correlated to CR. These results support the importance of maintaining adequate follow-up and tailored services after AD.

Documenting rehospitalization was a strength of this study considering some offenses may not result in criminal charges but rather in hospital visits. However, rehospitalization might have happened before an offence was committed, thus demonstrating good risk management through the prevention of the offence. Our small sample could have restrained statistical power. We had however a longer follow-up compared to similar studies, and we considered the impact of medical follow-up and treatment/housing orders on recidivism. Other limitations are the potential missing information from files and our recidivism measure that may not capture all new offenses. Finally, clinical outcomes were confined to clinical contacts in hospitals in our immediate vicinity, leaving out other potential contacts throughout Quebec and those in prison.

**Data Access**
The data that support the findings of this study are available from the corresponding author, KF, upon request.

**Author Contributions**
Karine Forget, Pierre Gagné and Schriebert Staco Douyon conceived and developed this study. Schriebert Staco Douyon, Marie-Claude Bilodeau, Clémence Poirier, Jolène LeBlanc and Karine Forget obtained the data. Karine Forget and Yann Le Corff analyzed the data. Karine Forget and Yann Le Corff were involved in the interpretation of the results and preparation of the article.

**Declaration of Conflicting Interests**
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**ORCID iD**
Karine Forget https://orcid.org/0000-0001-7281-2014

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**Abbreviations**
AD Absolute discharge
CIUSSSE-CHUS Centre intégré universitaire de santé et de services sociaux de l’Estrie – Centre hospitalier universitaire de Sherbrooke
CR Criminal recidivism
INCRMDV Index not criminally responsible on account of a mental disorder verdict
MD Missing data
NCRMD Not criminally responsible on account of a mental disorder
NTP National Trajectory Project
PR Psychiatric relapse
RB Review Board